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lightsource bp

GOULBURN RIVER SOLAR FARM

Temporary Workers Accommodation Facility
Amendment Report

FINAL

May 2024

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Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Lightsource bp

Project Director: Jessica Henderson- Wilson
Project Manager: Thomas Buchan
Report No. 23485/R15
Date: May 2024

This report was prepared using Umwelt's ISO 9001 certified Quality Management System.

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
V01	Jessica Henderson Wilson	10 May 2024	Jessica Henderson Wilson	10 May 2024
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Executive Summary

Goulburn River Solar Farm is a large-scale renewable energy project proposed by Lightsource bp Development Services Australia Pty Ltd to generate solar renewable energy to supply New South Wales. The Project is located within the Upper Hunter Local Government Area of NSW, approximately 28 kilometres southwest of the township of Merriwa.

The Project is located on an agricultural property which is surrounded by the Goulburn River National Park. The Project Area comprises of two freehold properties that span across multiple lots, covering an area of approximately 2,000 ha, with the Development Footprint occupying 792.19 ha.

An Environmental Impact Statement was prepared for the Project and placed on public exhibition by the former Department of Planning and Environment (now Department of Planning, Housing and Infrastructure, DPHI) from 13 June to 10 July 2023. During the public exhibition period 56 unique submissions made by the public as well as submissions from two local councils and 11 government agencies were received. A detailed response to the issues raised during the public exhibition period was provided in a Response to Submissions Report.

An Amendment Report (Amendment 1) was submitted across two parts (Part A and Part B) between December 2023 and January 2024, detailing changes made to the Project, including changes to the layout to address government agency and community submissions and an optimised Project design to enhance its efficiency while minimising associated environmental and social impacts.

Amendment 1 included a detailed assessment and review of employment and accommodation options for the proposed workforce, as described in the Goulburn River Solar Farm Accommodation and Employment Strategy, prepared to support the Amendment Report (1). This Strategy recommended the use of a custom-built workforce accommodation facility to house the non-resident workforce and identified a private development currently proposed in Merriwa.

During the Response to RFI phase following Amendment 1, Lightsource bp consulted with Upper Hunter Shire Council and DPHI and confirmed that an alternative accommodation solution was required for the Project, as the solutions proposed in the Amendment Report (1) were unlikely to be available in time to accommodate the Project workforce. Lightsource bp subsequently identified the option to construct an on-site Temporary Workers Accommodation Facility within the Project Area and Development Footprint, which would be assessed as a new amendment to the Project (i.e. Amendment 2).

This Amendment Report (Amendment 2) assesses the inclusion of the on-site TWA Facility within the Development Footprint, documents the outcomes of further assessment on key environmental features including bushfire risk, visual, noise and social issues, and provides updated mitigation measures to manage the construction and operation of the proposed TWA Facility in line with the broader Project.

The proposed Amendments to the Project outlined in this Amendment Report (2) are consistent with the relevant objectives of the *Environmental Planning and Assessment Act 1979* and do not significantly change the nature of the Project as originally proposed. The potential impacts can be avoided or managed and mitigated appropriately.

Abbreviations

Term/ Abbreviation	Definition
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEMO	Australian Energy Market Operator
AES	Accommodation and Employment Strategy
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
CEMP	Construction Environmental Management Plan
CSWMP	Construction Soil and Water Management Plan
CTMP	Construction Traffic Management Plan
EIS	Environmental Impact Statement
km	kilometres
kV	kilovolt
LEP	Local Environmental Plan
LGA	Local Government Area
Lightsource bp/LSbp	Lightsource Development Services Australia Pty Ltd
m	metres
MWRC	Mid-Western Regional Council
NEM	National Electricity Market
NPWS	NSW National Parks and Wildlife Service
OEMP	Operational Environmental Management Plan
OSOM	Oversize Overmass
PHA	Preliminary hazard analysis
PV	Photovoltaic
REZ	Renewable Energy Zone
RFI	Request for Information
RtS	Response to submissions
SAII	Serious and Irreversible Impacts
SEARs	Secretary's Environmental Assessment Requirements
SISD	Safe Intersection Sight Distance
TfNSW	Transport for NSW
TSR	Travelling Stock Reserve
TTIA	Traffic and Transport Impact Assessment
TSWA	Temporary and Seasonal Worker's Accommodation
TWA Facility	Temporary Workers Accommodation Facility
UHSC	Upper Hunter Shire Council
VPA	Voluntary Planning Agreement

Key Terms

Project- Specific Term	Description
Access route	The proposed route for transporting material and equipment via Ringwood and Wollara Road off the Golden Highway to the Project Area during construction.
Amended Project (1)	The Amended Project includes the elements of the Project as described in the EIS as well as changes which have been made in response to submissions on the EIS including: transport route amendments and road upgrades, BESS design amendments, Development Footprint modifications, construction of an additional transmission tower, and preparation of an Accommodation and Employment Strategy (AES).
Amended Project (2)	Includes the elements of the Project as described in the Project EIS, changes proposed under the Amended Project (1), and changes associated with the Temporary Workers Accommodation proposed in this Amendment Report (2).
Amendment Report	The purpose of an amendment report is to assess the economic, environmental, and social impacts of the amended project and to help the community, councils, government agencies and the consent authority to get a better understanding of the proposed amendment and their impacts so they can make informed submissions (if the report is exhibited) or decisions on the merits of the amended project (DPE, 2022).
Applicant	Lightsource bp Development Services Australia Pty Ltd, as trustee for Goulburn River Solar Farm Project Trust (Lightsource bp)
Battery Energy Storage System (BESS)	The entire battery system comprising of a power conversion system (battery storage units and inverters), either centralised or distributed (i.e. decentralised) throughout the solar farm site. The BESS is housed in a series of outdoor containers. This includes the amendments to the proposed BESS arrangements documented in the Amended Project (1), including an increased capacity of the centralised BESS to 450 MWp, the addition of a decentralised 580 MWp BESS, plus the option for both BESS configurations.
Development Footprint	The maximum extent of ground disturbance associated with construction and operation of the Goulburn River Solar Farm as presented in the EIS and Amended Project (1).
Emergency access points	Proposed at two locations along Wollara Road to facilitate emergency access and National Parks and Wildlife Services vehicle access, these access points would not be utilised for the construction of the Project.
Project Area	The total area investigated during various specialist studies and the broader property the Development Footprint will be located on. The Project Area covers approximately 2,000 ha and includes the Solar Farm Site, the BESS development area and ancillary infrastructure. This includes a 10 m set back (i.e., APZ) from the perimeter of the Site boundary. This does not include road upgrades and repairs on Wollara Road and Ringwood Road. It also comprises the proposed Biodiversity Stewardship Site.
Site	The property(ies) in which the Project Area is located.
Temporary Workers Accommodation (TWA) Facility	The temporary workers accommodation facility proposed to accommodate the peak construction workforce required to construct the Goulburn River Solar Farm project, the subject of this Amendment Report (2).
The EIS Project	The proposed Goulburn River Solar Farm. The Project includes the construction, operation and decommissioning of a solar farm with capacity of up to 550 MW, BESS and associated infrastructure. Including the various road repairs and upgrades to Ringwood Road.

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1.0 Introduction

Lightsource Development Services Australia Pty Ltd (Lightsource bp) is proposing to develop the Goulburn River Solar Farm Project (i.e., the Project) to generate solar renewable energy to supply New South Wales (NSW). An Environmental Impact Statement (EIS) (Umwelt, 2023a) was submitted to the then Department of Planning and Environment (DPE; now Department of Planning, Housing and Infrastructure; DPHI) in May 2023 and publicly exhibited for 28 days.

The Project was amended following government agency and community feedback on the Project EIS (Umwelt, 2023a), allowing further optimisation of design to enhance efficiency while minimising associated environmental and social impacts. The Project described in Amendment Report 1 (Umwelt, 2023b) (i.e. the Amended Project (1) or Amendment (1)), is as per the EIS (as described in **Section 1.2**), with the inclusion of the following key Project amendments, summarised in **Section 1.3**:

- Transport route amendments and additional road upgrades.
- Battery Energy Storage System (BESS) design amendments.
- Development Footprint modifications.
- Construction of an additional transmission tower.
- Preparation of an Accommodation and Employment Strategy (AES).

The Amended Project 1 includes the construction, operation, and decommissioning of the proposed 550 megawatt peak (MWp) solar farm, 1,030 MWp / 2,060 MW hour BESS, road repairs and upgrades and associated infrastructure (such as operations and maintenance buildings, temporary construction compound, security fencing), civil works (such as regrading, re-sheeting and culvert upgrades) and electrical infrastructure (including a new onsite substation and underground and overhead cabling) required to connect to the electricity transmission network.

Following receipt of agency advice on the Amended Project (1) in January 2024, the need to investigate and assess an alternative accommodation solution was highlighted, which forms the basis of this Amendment Report (2). Further background information is provided in **Section 1.1** below.

1.1 Background

The Project Area is located between Merriwa (to the north-east) and Coggan (to the south-east) NSW, surrounded by the Goulburn River National Park as shown in **Figure 1.1** The Project Area comprises two freehold properties that span across multiple lots, covering an area of approximately 2,000 ha with the Development Footprint occupying approximately 792.19 ha, refer to **Figure 1.2**.

Being development for the purpose of electricity generation with a capital investment value of more than $30 million, the Project is declared to be a State Significant Development (SSD) under the provisions of the State Environmental Planning Policy (Planning Systems) 2021 (Planning System SEPP).

Public exhibition of the EIS took place between 13 June 2023 and 10 July 2023 with 56 unique submissions made by the public as well as submissions from two local councils and 11 government agencies. A summary of the comments received during public exhibition of the EIS and a detailed response to these were provided in the Response to Submission (RtS) Report prepared by Umwelt (Umwelt, 2023c).

Following public exhibition of the EIS, Lightsource bp have continued to consult with landholders and stakeholders. Ongoing consultation and consideration of the submissions received on the EIS resulted in a number of proposed amendments to the Project. Amendments to the Project were described and assessed within the Amendment Report (1) (Umwelt, 2023b) which should be read in conjunction with the RtS Report (Umwelt, 2023c).

The Amendment Report (1) was submitted to DPHI in two parts, being Part A which included consideration of all standard features excluding biodiversity, and Part B which included all biodiversity considerations, including an updated Biodiversity Development Assessment Report (BDAR) (Umwelt, 2024a) and the Public Road and Culvert Upgrade Works BDAR (i.e. Road Upgrades BDAR) (Umwelt, 2024b).

During DPHI's assessment of the merits of the Project, Lightsource bp received a formal request for information (RFI) letter on 31 January 2024, in which further consideration of the following features was requested:

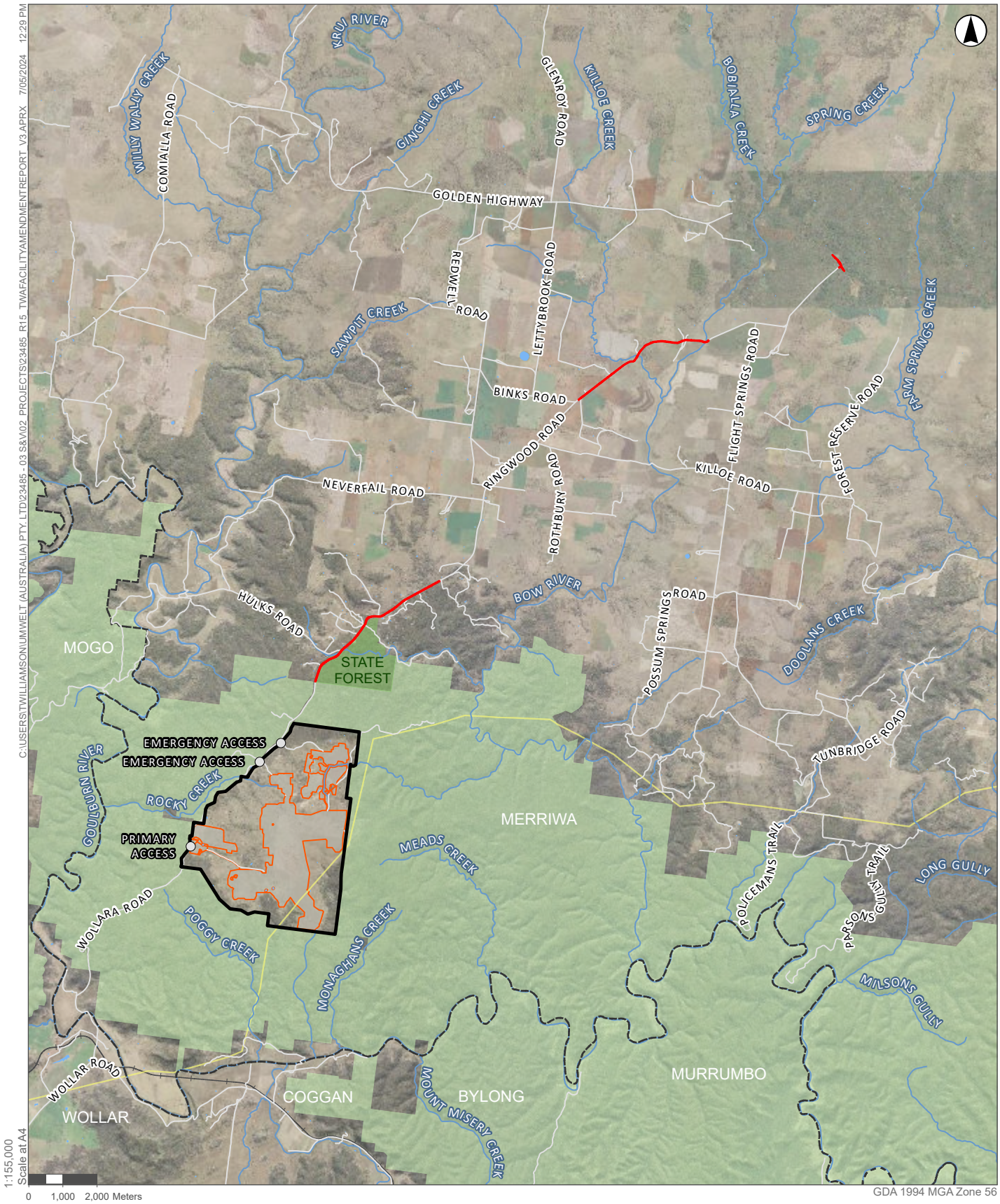
- Workforce accommodation.
- Traffic and transport.
- Hazards and risk.
- Heritage.
- Water.
- Waste.
- Other issues.

A Response to RFI letter was prepared and submitted to DPHI in March 2024 (Umwelt, 2024a).

During the Response to RFI phase, Lightsource bp consulted further with Upper Hunter Shire Council (UHSC) and DPHI and confirmed that an alternative accommodation solution is required for the Project, as the likely timelines associated with the progression of the proposed third-party Temporary Workers Accommodation Facility (TWA Facility) in Merriwa (as described in the Amendment Report (1)) meant that it was unlikely to be constructed in time to accommodate the Project workforce.

Lightsource bp subsequently identified the option to construct an on-site TWA Facility within the Development Footprint, which would be assessed as a new amendment to the Project.

As such, a second formal RFI letter was prepared by DPHI and received on 8 April 2024, requesting Lightsource bp provide further detail regarding to the proposed accommodation strategy for the Project, i.e., to assess the proposed TWA Facility. This Amendment Report (i.e. Amendment Report (2) or Amendment (2)) has been prepared to describe and assess the proposed TWA Facility.



Legend

- Access Points
- Electricity Transmission Line
- Watercourse
- Roads and Tracks
- Railway
- Local Goverment Boundary
- Road Upgrades Area
- Project Area
- Development Footprint (Amended Project)
- NSW National Parks
- NSW State Forests
- Waterbodies

FIGURE 1.1

Regional Locality

Image Source: ESRI Basemap (2022) **Data source:** NSW LPI (2022), NSW DSFI (2022); NPWS Estate (2022); Lightsource BP (2022)

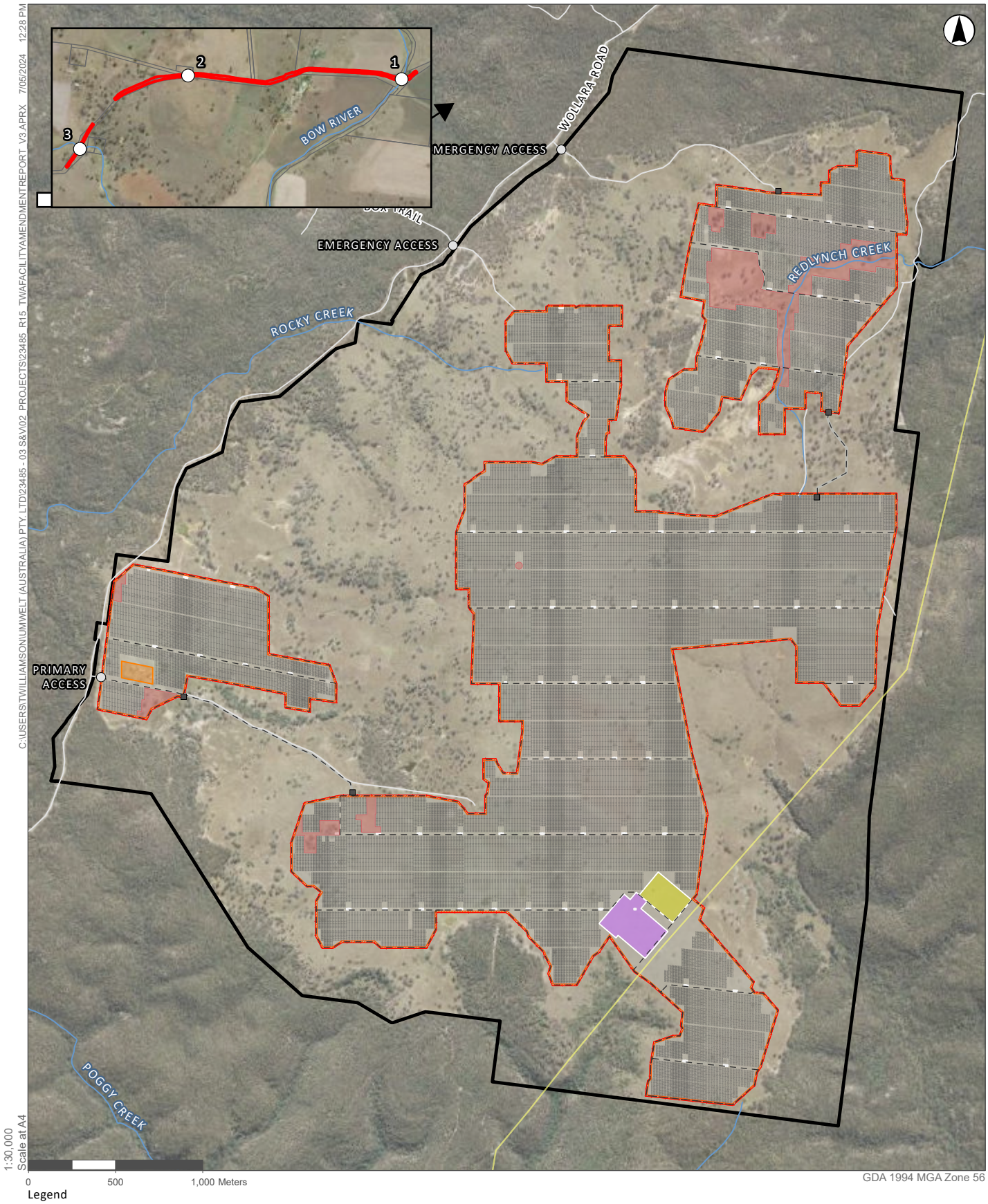
1.2 The EIS Project

The Project as proposed in the EIS (hereafter referred to as the "EIS Project") included the construction, operation, maintenance, and decommissioning of a PV solar farm with a capacity of approximately 550 MWp, which will supply electricity to the national electricity grid. The Project also included a BESS with a proposed capacity of 570 MWh and an electrical substation to connect the solar farm to the existing 500 kV transmission line that runs through the Project Area and Development Footprint. In addition to this the Project will include road repair and upgrades along Ringwood Road.

The key components of the EIS Project are shown in **Figure 1.2** and include the following. Note that components shown with italics have been superseded by the Amended Project (**Section 1.3** below).

- Approximately 1 million bifacial solar PV modules in an east-west single-axis tracking arrangement with an approximate height of 3 metres (m) with a maximum of 4 m to accommodate undulating topography above ground level.
- A BESS with an approximate 280 MWp and 570 MWh capacity, housed in a series of outdoor containers, aggregated in one central location adjacent to the substation and switchyard.
- Onsite 550 kV switchyard and substation, with underground electrical conduits and cabling leading into the yard and overhead lines reaching above to the existing transmission line.
- Telecommunications tower, up to 30 m high, providing communications, radio and cellular services to the site and the wider region.
- Internal and perimeter gravel access roads allowing for site maintenance.
- Temporary construction facilities.
- Permanent site office and operations and maintenance building with parking for the operations team.
- Primary access point from the existing driveway off Wollara Road, with two additional emergency access points proposed along the north-western boundary of the Project Area.
- Upgrades to culverts at Bow River and Killoe Creek located on Ringwood Road.
- Widening and resealing of 1.8 kilometres (km) of Ringwood Road between Bow River and Killoe Creek including 8 m bitumen-sealed formation with a minimum of 500 mm unsealed shoulders.
- Drainage line crossings (two within the part of Redlynch Creek that is in the Project Area), if and where required, to manage existing surface water flows.
- Project Area perimeter security fencing as well as across the Development Footprint.

The Project is expected to operate for 40 years or more. After the initial 40-year operating period, the solar farm would either be decommissioned, removing all above ground infrastructure, and returning the site to Its existing land capability, or repurposed with new PV equipment subject to technical feasibility and planning consents.



Legend

- Gate
- Access Points
- Electricity Transmission Line
- Proposed Access Tracks
- Watercourse
- Roads and Tracks
- Security Fence
- Project Area
- Road Upgrades Area
- Fire Break
- Battery Energy Storage System
- Substation
- Inverters
- Compound Area
- Exclusion Zones - Environmentally Sensitive Areas
- Development Footprint
- Solar Panel Footprint

FIGURE 1.2

EIS Project - Development Footprint and Internal Layout

Image Source: ESRI Basemap (2022) **Data source:** NSW LPI (2022), NSW DSFI (2022); NPWS Estate (2022); Lightsource BP (2022)

1.3 The Amended Project 1 (2023)

Following review of public and agency submissions received during the exhibition period of the Project EIS, along with detailed technical design advancements, several amendments to the Project were proposed.

An Amendment Report was submitted to DPHI in December 2023. The proposed amendments as described and assessed in the Amendment Report (1) (Umwelt, 2023b) are summarised in **Table 1.1** and illustrated on **Figure 1.3** below.

Table 1.1 Proposed Amendments (the Amended Project 1)

No.	Description
1	**Transport route amendments** – Transport route amendments to include the use of Barnett Street, and upgrade of the intersection of the Golden Highway and Ringwood Road.
2	**Wollara Road and Ringwood Road Upgrades** – Upgrades to additional parts of Wollara Road and Ringwood Road.
3	**BESS Design Amendments** – Increased centralised BESS capacity and option of a decentralised BESS as well as the option to host both centralised and decentralised BESS units.
4	**Development Footprint Modifications** – Minor modifications to the Development Footprint and internal layout including and depicted in **Figure 1.3.** • Removal of travelling stock reserve (TSR) 4481 from within the Project Area, although site access will continue to cross the TSR using the existing track. • Relocation and/or removal of solar arrays within the Development Footprint to avoid Regent Honeyeater habitat, scattered trees and Box Gum Woodland. • Increased width of selected internal access roads to accommodate subterranean power cables. • Realignment of the northern internal access road to avoid Regent Honeyeater habitat and Box Gum woodland.
5	**Additional Transmission Tower –** Construction of an additional transmission tower adjacent to the BESS/substation.
6	**Workforce Accommodation –** Preparation of an Accommodation and Employment Strategy to assess options for workforce accommodation.

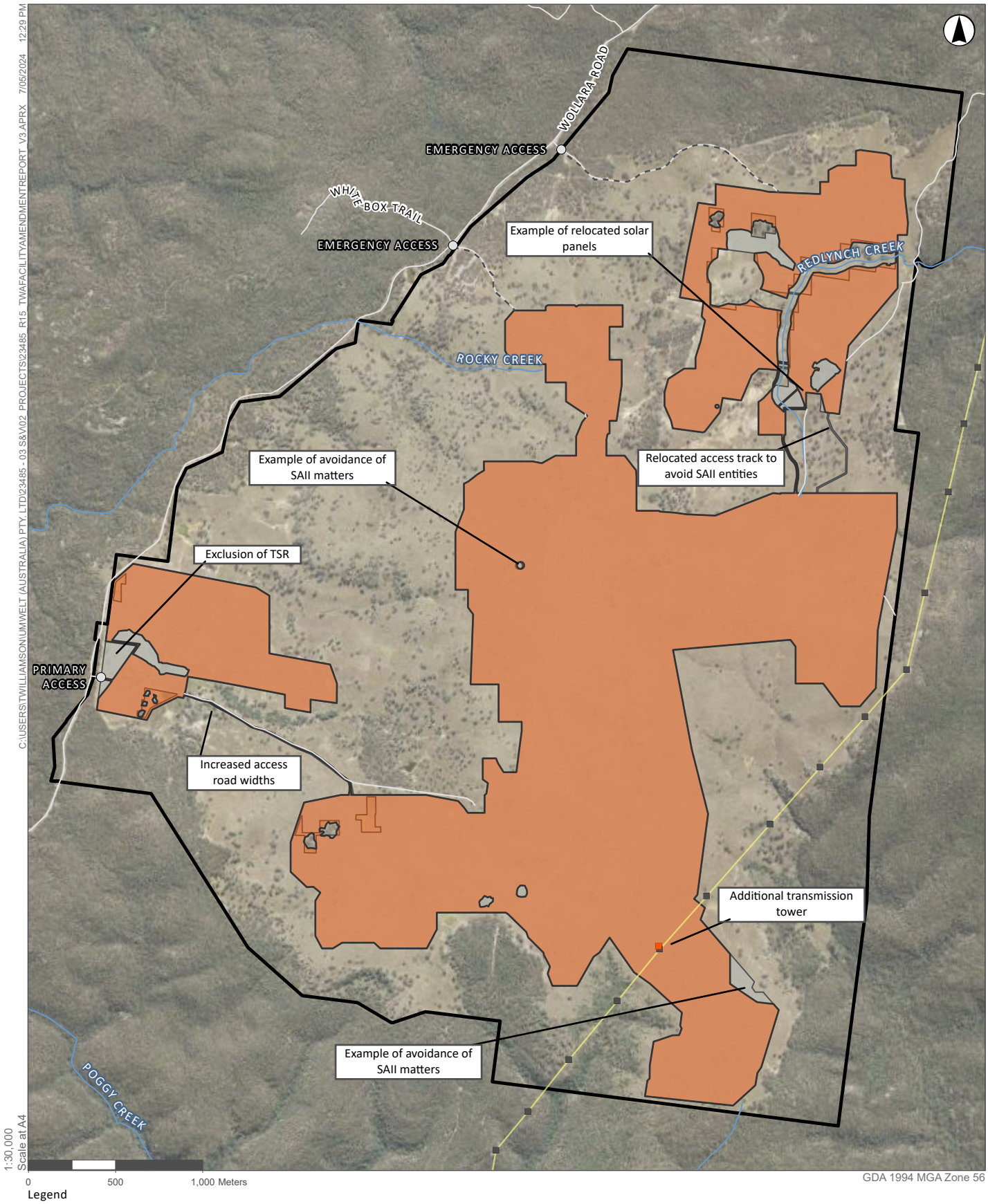


FIGURE 1.3

The Amended Project

Image Source: ESRI Basemap (2022) **Data source:** NSW LPI (2022), NSW DSFI (2022); NPWS Estate (2022); Lightsource BP (2022)

1.4 The Amended Project 2 - Temporary Workers Accommodation Facility (2024)

An on-site TWA Facility is being proposed to accommodate the anticipated peak workforce required to construct the Project. The requirement to develop an on-site TWA Facility was determined through consultation with government agencies and in response to agency submissions raised on the RtS Report (Umwelt, 2023c) and Amendment Report (1) (Umwelt, 2023a).

The TWA Facility would be designed for up to 400 workers and located within the existing Development Footprint assessed within the Project EIS (Umwelt, 2022) and Amendment Report (1) (Umwelt, 2023a) and would span an area of approximately 3.1 hectares (ha).

The proposed Amendment (2) is summarised in **Section 3.0**, and discussed in detail within **Appendix A**.

1.5 Structure of this Report

This Amendment Report (2) has been prepared in line with the NSW DPIE State Significant Development Guidelines – Preparing an Amendment Report (DPIE, 2021). The structure of this report is summarised in **Table 1.2** below.

Table 1.2 Report Structure

Section	Description
Section 1.0	Introduction
Section 2.0	Strategic Context
Section 3.0	Description of Amendments
Section 4.0	Statutory Context
Section 5.0	Stakeholder Engagement
Section 6.0	Assessment of Impacts
Section 7.0	Justification of the Proposed TWA Facility Amendment
Section 8.0	References
Appendices	• **Appendix A** – Updated Project Description • **Appendix B**– Updated Table of Mitigation Measures • **Appendix C** – Addendum Landscape and Visual Impact Assessment • **Appendix D** – Nose Impact Assessment • **Appendix E** – Bushfire Threat Assessment • **Appendix F** – Addendum Social Impact Assessment • **Appendix G** – Amended Accommodation and Employment Strategy

2.0 Strategic Context

The strategic context as described in Section 2 of both the Project EIS and Amendment Report (1) remains relevant to this Amendment (2). The broader Project continues to be aligned with the NSW and Commonwealth governments' energy and climate policies and will make a meaningful contribution to achieving the goal of net zero emissions by 2050.

The strategic context specific to a TWA Facility is described below.

2.1 Strategic Planning Framework

Currently, there are no guidelines or policies which outline environmental assessment requirements that apply specifically to proponents developing TWA facilities across NSW.

A Draft Temporary and Seasonal Workers Accommodation Guideline (Draft TSWA Guideline) (DPE, 2023) was prepared as part of the Temporary and Seasonal Workers' Accommodation Toolkit in August 2023 and intends to give councils more certainty and clarity around how to plan and deliver workers' accommodation.

Although not specifically required for this Project, consideration against the objectives and provisions of the Draft TSWA Guideline has been undertaken to support this Amendment Report (2) (**Section 2.1.1**).

2.1.1 Draft Temporary and Seasonal Workers Accommodation Guideline

The Draft TSWA Guideline was prepared to provide a new, clearer planning framework and guidelines to help regional councils plan for more and better housing to accommodate the anticipated influx of temporary and seasonal workers in regional localities across NSW. The Draft TSWA Guideline was exhibited in August/September 2023, and NSW DPHI are currently considering the submissions raised during exhibition.

Chapter 1 of the Draft TSWA Guideline relates to temporary workers accommodation specifically, and includes guidance around permissibility, development controls, and TWA considerations for major projects (i.e. SSD). Consideration against key components of the Draft TSWA Guideline is provided below.

Section 1.3 of the Draft TSWA Guideline outlines factors that may influence the permissibility of a TWA Facility, including land use zoning and associated permissible developments within land use zones. This section notes that TWA is appropriate in land zoned RU1 Primary Production and provides consideration for councils with respect to adopting 'temporary workers' accommodation' in their land-use tables.

The TWA Facility would be located on land zoned RU1 Primary Production under the Upper Hunter Local Environmental Plan 2013 (Upper Hunter LEP). Although the RU1 land use table within the Upper Hunter LEP does not specify 'temporary workers accommodation' (or similar) as development permissible with consent, the TWA Facility is considered as 'ancillary' to the solar farm development, as discussed below.

Section 1.6 of the Draft TSWA Guideline outlines TWA considerations for major projects in NSW. This section notes that in certain instances, TWA may be approved as 'ancillary' to a development that is State significant. This Amendment (2) considers the proposed TWA Facility as ancillary to the solar farm (and

BESS) development and forms part of the overarching Project, being development for the purposes of electricity generation. **Section 4.1.1** of this Amendment Report includes further consideration regarding permissibility of the TWA Facility and concludes that the TWA Facility is permissible with consent.

Section 1.6 of the Draft TSWA Guideline also notes that the provision of TWA is a key consideration in the social impact assessment for SSD. Due consideration of social-related impacts (both positive and negative) has been undertaken as part of this Amendment (2) to assess the inclusion of the proposed TWA Facility as a component the broader Project. This included specific community and stakeholder consultation, with consultation outcomes supporting the preparation of a targeted Social Impact Assessment (SIA). The SIA has been summarised in **Section 6.5** and provided in full as **Appendix F**.

2.2 Accommodation Context

Project construction is proposed to commence by late 2024 and would span approximately 27 months. A peak on-site workforce of 350 direct construction jobs is anticipated, with an average of around 250 direct jobs throughout the construction period. An ongoing operational workforce for the Solar Farm and BESS of up to 10 staff is anticipated over the next 40 years.

Construction of the proposed TWA Facility would occur in months 1-3 of the construction period and require approximately 30 workers. These workers would need to be accommodated off site. The operation of the TWA Facility would occur during months 3-27 of the construction period and require approximately 10 workers who would be accommodated on site.

There are considerable housing, accommodation, employment and procurement constraints linked to the Project's remote location and the presence of multiple concurrent projects in the broader region. The assessment of the TWA Facility has conservatively assumed that approximately 90% of the peak construction workforce will come from outside the local community, consistent with the approach adopted in the EIS and Amended Project (1). It is evident that use of existing short-term and rental accommodation would need to be sensitive to the competing demand on facilities from the local tourism and rental market.

On-site accommodation that utilises temporary or demountable accommodation is an emerging trend on renewable energy projects seeking to minimise impacts on local communities during construction. This is particularly the case in Renewable Energy Zones (REZ), where construction periods for multiple, nearby projects are anticipated over similar time periods. Whilst not within a REZ, the Project is located close to the Central West Orana REZ and has 40 projects at varying stages of the approval process within 100 km, as outlined in **Appendix G**. Without site-specific solutions, the Project would otherwise be relying on similar accommodation resources for the proposed construction workforce.

2.3 Alternatives Considered

Accommodation solutions were considered within the Accommodation and Employment Strategy (AES) (Original AES, Umwelt 2023h) prepared to support Amendment Report 1 (Umwelt, 2023b) and subsequently an Amended AES which is included as **Appendix G** of this Amendment Report.

Existing short-term accommodation providers

The Amended AES indicated that existing proximal short-term accommodation has capacity to accommodate around 14 workers. Additionally, approximately 40 additional new short-term

accommodation rooms may be established by existing accommodation providers in the social locality in response to anticipated future demand. This would not appropriately accommodate the anticipated workforce required to construct the Project, which highlighted the need to investigate alternative accommodation options for the Project. This outcome is consistent with the findings of the original AES (Umwelt, 2023h).

Purpose-built temporary workers accommodation

Given the limited capacity of existing short-term accommodation alternative options for accommodation of workers were considered. This included third party facilities, construction of new facilities on and off site.

A third-party developer is proposing a purpose-built TWA Facility in Merriwa and Lightsource bp entered into an agreement to lease appropriately 300 rooms as presented in Amendment (1) and the AES. Consultation with the provider and UHSC was undertaken following submission of Amendment (1), which determined that this option would not align with the requirements of the Project and was unlikely to be constructed in time to accommodate the Project workforce.

Alternative locations for development of a purpose-built TWA Facility were also considered within the locality and in proximity to the Project Area itself. A review of potential locations in the vicinity of the Project Area was undertaken which considered these areas largely unsuitable, particularly as all land within approximately 2 km in all directions of the Project Area is zoned for conservation and/or environmental management under the Upper Hunter LEP 2013 as either the Goulburn River National Park or Tongo State Forest. It was also anticipated that planning and assessment timeframes required to assess and approve a new TWA Facility development on surrounding land outside the Project Area would not align with the requirements of the Project, i.e., it would be unlikely to be constructed in time to accommodate the Project workforce. As such, the decision was made to proceed with siting the proposed TWA Facility within the Project Area and Development Footprint.

Numerous locations within the Project Area and Development Footprint were considered for the proposed TWA Facility, however given the presence of high biodiversity value land intended for conservation as a Biodiversity Stewardship Agreement (BSA) area occupying the Project Area outside of the Development Footprint, it was decided to site the proposed TWA Facility within the Development Footprint. It was decided that the proposed location within the western portion of the Development Footprint, as illustrated in **Figure 3.2** was preferred, given the optimal location adjacent to the main Project site access point and in an area of limited environmental constraints. Further consideration of site suitability is provided in **Section 2.4** below.

2.4 Site Context and Suitability

The proposed TWA Facility would be located within the Project Area and Development Footprint, an area well understood and assessed in detail throughout the Project EIS and Amendment (1). There will be no changes to the Development Footprint location nor to its overall size. As such, there are no changes or updates to the broader site context.

Once the solar farm is largely built, the remaining workforce is proposed to be accommodated in existing accommodation facilities off-site. It is anticipated that this workforce would be in the order of 30 workers or less, as outlined in the Amended AES (**Appendix G**). At this point, the TWA Facility would be dismantled

and re-used elsewhere, with the resulting area constructed for its intended use as solar arrays and associated infrastructure.

A site selection process was undertaken to determine suitable location(s) for the TWA Facility within the Development Footprint. The site selection process involved:

- A detailed review of the current Development Footprint to identify a broader area in which the TWA Facility could feasibility be developed, with respect to civil, engineering and environmental constraints. This area is referred to as the 'TWA Facility Feasibility Area' (i.e. the Feasibility Area) within this Amendment Report (2) and is located in the western portion of the Development Footprint, close to the site access.

- The development of a conceptual layout of a typical 400-bed TWA Facility to inform detailed specialist environmental assessments, with the intention to understand where within the Feasibility Area the proposed TWA Facility could be located and where should be avoided. The Feasibility Area and indicative TWA Facility layout are presented in **Figure 3.2.**

- Each assessment prepared to support this Amendment Report (2) has assessed the Feasibility Area to highlight a) any potential 'no-go' areas and/or b) any preferred areas, with respect to the construction and operation of the TWA Facility. Each technical assessment identified the area of the Feasibility Area with the highest potential for impacts and assumed this location for their assessment, resulting in a 'worst-case' impact assessment for landscape and visual, noise and vibration, and bushfire threat.

- Undertaking targeted community and stakeholder consultation to understand community views and any concerns with respect to the proposed TWA. A summary of the consultation effort is provided in **Section 5.0**, the results of which have informed the SIA and Amended AES prepared as **Appendix F** and **Appendix G** respectively and summarised in **Section 6.5** below.

- Consideration of the outcomes of initial constraints review and feedback from community consultation, which indicated that bushfire risk, visual, noise, and social-related issues were the most applicable to the proposed TWA Facility. These features have been assessed in detail throughout this Amendment Report (2). A qualitative assessment against each of the environmental features assessed throughout the Project EIS and Amendment Repot (1) has also been undertaken in **Section 6.1.**

This process has ultimately concluded that development of a TWA Facility is suitable anywhere within the TWA Facility Feasibility Area. Further justification of this outcome is provided in **Section 7.0.**

3.0 Description of the Amendment

This section describes the proposed Amendment and includes:

- A summary of the proposed Amendment (2).
- A summary table comparing the EIS and Amended Project (i.e. Amendment (1)) to the proposed TWA Facility Amendment (i.e. Amendment (2)).

A detailed description of the proposed Amendment (2) is provided in **Appendix A**, along with an updated description of the Project**.**

3.1 Summary of the Proposed Amendment

The TWA would consist of approximately 400 beds, covering the anticipated peak workforce and staffing required to maintain and operate the TWA Facility. It would consist of prefabricated modular accommodation units, recreational facilities and supported buildings, linked by covered walkways.

The TWA Facility would be self-sufficient, with onsite power generation, potable water storage, water treatment facilities and food storage and preparation facilities. All walkways, covers, awnings, pipes and cables will be modular, above ground and removed from the Project at the end of the hire, ready for reuse on the next project. There will be no buried services left behind, and no concrete pathways, footings, awnings or other elements sent to landfill.

The concept layout for a typical 400-bed TWA Facility is shown in **Figure 3.1** and is proposed to include the following:

- Re-fabricated rooms.
- Kitchen and dining facilities.
- Administration buildings comprised of offices and reception.
- First aid post.
- Linen and chemical storage rooms.
- Maintenance and cleaning buildings for housekeeping equipment and laundry facilities.
- Ablutions.
- Waste disposal facilities.
- Backup power generation and fuel storage.
- Water storage/supply if required.
- Car, bus and truck parking.
- Recreational facilities such as a gymnasium, a bar area and BBQ facilities.

The conceptual layout for the TWA Facility has been prepared to inform the detailed specialist assessments and will be confirmed through detailed design and once a Balance of Plant (BoP) contractor has been selected to construct the Project.

The TWA Facility has been designed to accommodate approximately 400 rooms as the maximum that will be required to accommodate the peak construction workforce of 350 workers. This total includes rooms for the peak workforce as well as rooms for the staff necessary to operate and maintain the TWA facility. The TWA Facility may be constructed progressively to align with the anticipated ramp-up of the construction workforce associated with the Project.

All buildings will have emergency lighting, smoke alarms, and firefighting capability in accordance with the Building Code of Australia. Appropriate firefighting equipment will be installed (portable fire extinguishers/ fixed fire hose reels/ fire hydrant systems and water tanks). Implementation will be subject to detailed specialist consultant design. Emergency evacuation and emergency assembly points will be established throughout the Project Area as required. A detailed description of the proposed TWA Facility is provided in **Appendix A.**

3.1.1 Location

Lightsource bp are investigating potential locations to site the TWA Facility within the western portion of the Development Footprint, an area referred to within this Amendment Report (2) as the 'TWA Facility Feasibility Area' or simply the 'Feasibility Area'. **Figure 3.2** illustrates a typical 400-bed TWA Facility layout within the TWA Facility Feasibility Area, which would span an area of approximately 3.1 hectares (ha), shown in a representative location within the TWA Facility Feasibility Area.

Consideration of a TWA Facility of this nature has been undertaken across the broader TWA Facility Feasibility Area throughout this Amendment Report (2) and relevant technical assessments. The TWA Facility Feasibility Area was chosen for its proximity to the Project site access point, and car parking and construction compound facilities (as proposed in the Project EIS). The assessment of the TWA Facility has been conducted on the positioning within the Feasibility Area with the greatest potential for impacts to assess a 'worst case' location for each environmental feature.

The final position, design and specifications of the TWA Facility will be confirmed during the detailed design. Irrespective of the final location, all components will be sited within the existing Project Area and Development Footprint assessed in the Amendment Report (1).

Once the solar farm component is largely built, the TWA Facility will be dismantled and re-used elsewhere (i.e., on another project site), with the resulting area constructed for its intended use as solar arrays and associated infrastructure.

Drawing not to scale. Layout indicative and may be customised to suit client requirements (subject to regulatory requirements).

Car parking spots: 190
Car parking spot size: 2.4m x 5.5m

Lightsource BP
Goulburn River Solar Farm
Proposed 400 Room Camp
Rev A 08/03/24

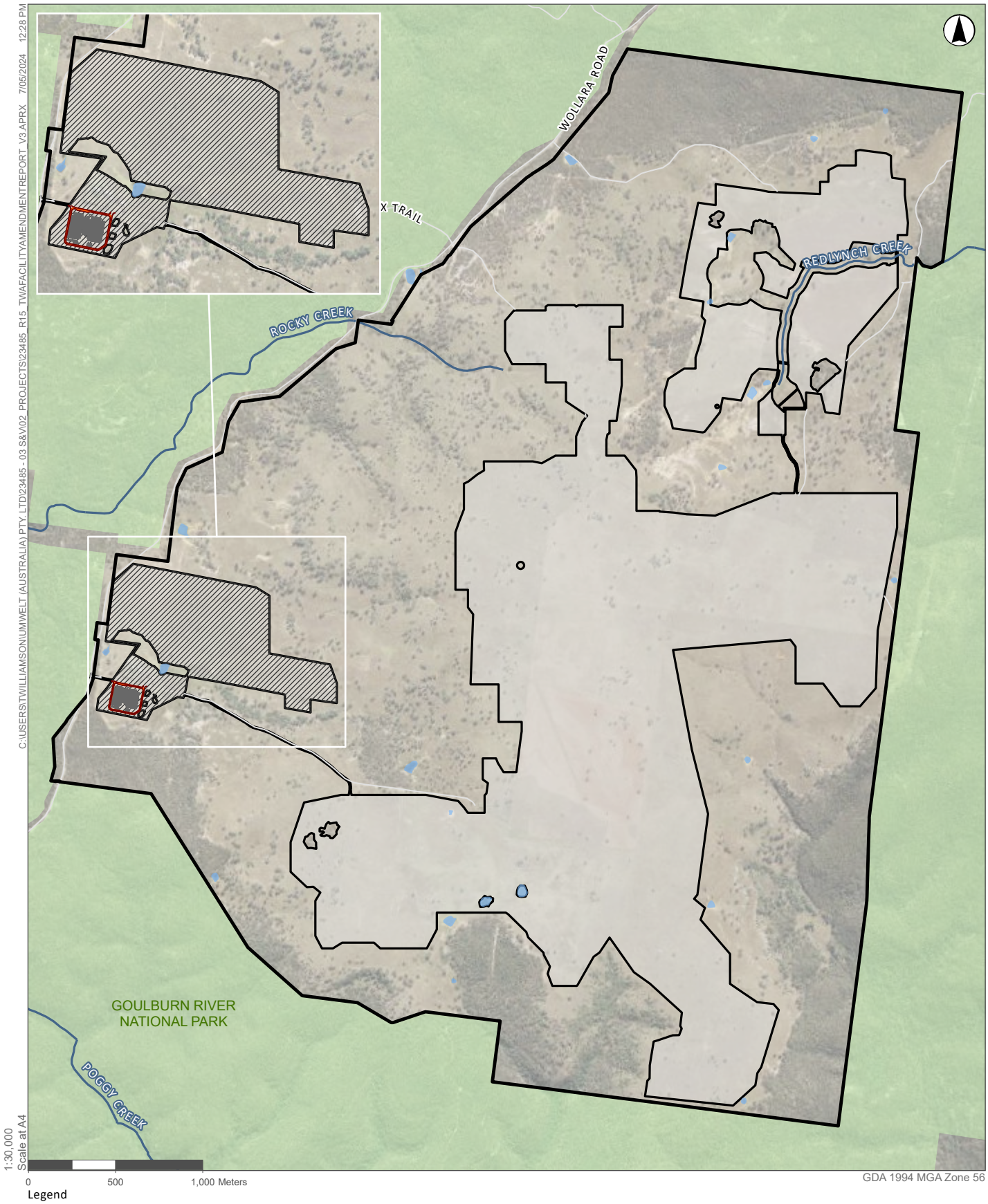


FIGURE 3.2

Indicative TWA Facility within the TWA Facility Feasibility Area

Image Source: ENSW Public Imagery (2023) **Data source:** NSW LPI (2023), NSW DSFI (2023); NPWS Estate (2023); Lightsource BP (2024)

3.2 Comparison between the EIS and Amended Projects (1 and 2)

A comparison between the EIS Project (Umwelt 2023a), the Amended Project 1 (Umwelt 2023b), and this TWA Facility Amendment (Amended Project (2), 2024) is provided in **Table 3.1**.

Table 3.1 Comparison between the EIS Project, Amendment (1), and Amendment (2)

Project Stage	EIS Project	Amended Project 1	TWA Facility Amendment (Amended Project 2)
Project Component			
Transport and Road			
Transport route to and from the Project Site	Proposed to utilise the Golden Highway, Ringwood Road, and Wollara Road from the north, and Wollar Road from the south. It is noted that a small number of light vehicles for workers who reside to the south may use Wollar Road.	Amendments to transport route to restrict construction vehicles to a left in and left out movement at the Golden Highway and Ringwood Road intersection. Amendment to distribution of trips with a larger proportion utilising the northern (and preferred) route. It is noted that a small number of light vehicles for workers who reside to the south may use Wollar Road. Note: 6-12 oversize overmass (OSOM) vehicle movements will still use a right turn movement onto Golden Highway, as they will be under traffic management.	Road upgrades to the Golden Highway and Ringwood Road intersection, as well as the proposed sealing of 30 m of Barnett Street turning area as assessed in Amendment (1) are proposed to be completed prior to construction of the TWA Facility. Upgrades to Ringwood Road and Wollara Road may occur in parallel with the installation of the TWA Facility. The proposed upgrades to the culvert bridges may be undertaken concurrent with or following commencement of site establishment works (including installation of the TWA Facility), as these upgrades are predominantly required to facilitate OSOM vehicle movement which would occur later in the construction phase.
Wollara Road	Use of 4.7 km of unsealed road network.	Realignment, widening and sealing a 4.7 km section of Wollara Road prior to use.	
Ringwood Road	1.8 km of existing sealed road network and upgrade of two (2) culvert bridges.	Realignment, widening and sealing of 3.4 km of Ringwood Road across two sections and upgrade of two (2) culvert bridges.	
Golden Highway and Ringwood Road	No works proposed in EIS.	Improvements to safe intersection sight distance (SISD) for left turn movements into and out of Ringwood Road from the Golden Highway. • Vegetation removal and minor lane widening works on the eastern side of the intersection. • Addition of an acceleration lane on the western side of the intersection including tree removal. • Formalisation of the bus stop pullover area.	

Project Stage	EIS Project	Amended Project 1	TWA Facility Amendment (Amended Project 2)
Barnett Street	No works proposed in EIS.	Diversion of construction vehicle egress west at the Golden Highway and Ringwood Road intersection to a vehicle turning area on Barnett Street, Merriwa. Note: 6-12 Oversize Overmass (OSOM) vehicles will still use a right turn movement onto Golden Highway as they will be under traffic management.	
Battery Energy Storage System (BESS)			
BESS configuration	Centralised BESS option proposed.	Centralised and decentralised BESS options proposed.	No change.
Centralised BESS capacity (MWp)	280 MWp	450 MWp	
Centralised BESS capacity (MWh)	570 MWh	900 MWh	
Decentralised BESS capacity (MWp)	Not proposed in EIS.	580 MWp	
Decentralised BESS capacity (MWh)	Not proposed in EIS.	1,160 MWh	
Centralised and Decentralised BESS capacity (MWp)	Not proposed in EIS.	1,030 MWp	
Centralised and Decentralised BESS capacity (MWh)	Not proposed in EIS.	2,060 MWh	
Transformers	4	4	
Inverters (PCS)	104	140	
Project Layout			
Project Area	Approximately 2,000 ha	Approximately 1,996.5 ha	No change.
Development Footprint (ha)	Approximately 799.5 ha.	Approximately 792.19 ha.	No change.
Internal Access Road width (m)	Four (4) m, with a six (6) m access road leading to the substation.	8 to 10 m at selected locations between Project areas to accommodate the proposed buried cable easements. Relocation of the access road connecting the northern portions of the site to cover a shorter distance.	Internal access road widths in the western portion of the Development Footprint may be adjusted slightly to provide adequate access to the proposed TWA Facility, however all roads would be situated within the existing Development Footprint and would not result in additional impacts. No changes to the access roads connecting the

Project Stage	EIS Project	Amended Project 1	TWA Facility Amendment (Amended Project 2)
			western and eastern solar array areas are proposed.
Development Footprint			
Development Footprint (physical relocation description)	Solar arrays located within the Development Footprint as per Figure 3.1 of the EIS.	Relocation and removal of solar arrays within the Development Footprint. Removal of TSR4481 from the Development Footprint and Project Area including panels, fencing and landscaping.	No change, however, a portion of the Development Footprint near the main Project site access point will be utilised for the TWA Facility prior to its intended use as solar panels, which will be constructed once the TWA Facility is removed.
Transmission Network			
Transmission tower	Not included in EIS.	Transmission tower to be constructed within south-eastern portion of the Project Area, within the existing transmission line easement.	No change.
Workforce Accommodation			
Location of Accommodation	Dispersed across nearby towns within the Upper Hunter and Mid-Western Local Government Areas (LGAs).	Largely consolidated to Merriwa Workers Accommodation (proposed development by third party).	On-site TWA Facility proposed to accommodate a peak construction workforce of up to 400 workers. The TWA Facility is to be located adjacent the main Project site access point, within the existing Development Footprint.
Construction Details			
Construction hours	• Monday to Friday 6:00 am to 6:00 pm. • Saturday 6:00 am to 6:00 pm. • No works on Sundays or Public Holidays.	No change.	No change.
Estimated construction workforce	Up to 350	No change.	No change, however the TWA Facility will be able to accommodate up to 400 workers if required, inclusive of staff required to support the operation of the TWA Facility.
Estimated construction duration	27 months	27 months	No change.

Project Stage	EIS Project	Amended Project 1	TWA Facility Amendment (Amended Project 2)
Operational Details			
Estimated operational workforce	Approximately 10 full-time equivalent (FTE) employees.	No change.	No change.
Estimated Project life	40 years	No change.	No change.

4.0 Statutory Context

The statutory context that relates to the Project has not changed from the original application, as documented in the Project EIS (Umwelt, 2023a) and Amended Project (1) (Umwelt, 2023b). A summary is provided below which relates to the proposed Amendment (2).

4.1 NSW Assessment and Approval Process

Section 37 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) allows for a development application to be amended by an applicant at any time before the application is determined, subject to acceptance by DPHI. This Amendment Report (2) supports the amended development application for the Project, and:

- Describes the Amended Project for which approval is now being sought.
- Provides a summary of the potential impacts associated with the Amended Project (2) compared to those presented in the Project EIS and Amendment Report (1).
- Presents an updated evaluation of the merits of the Project.

The NSW Planning Secretary has been advised of Lightsource bp's intention to amend the Project to include the proposed TWA Facility, with this Amendment Report (2) describing the proposed Amendment and assessing the associated impacts.

4.1.1 Permissibility

The permissibility of the solar farm and BESS components of the Project remain unchanged from that described in the EIS and Amended Project (1), being permissible under the provisions of clause 2.36(1)(b) of the *State Environmental Planning Policy (Transport and Infrastructure) 2021*.

The proposed TWA Facility is considered ancillary to the solar and BESS development and forms part of the overarching Project, being development for the purposes of electricity generation. An ancillary use or activity is one which is dependent upon a dominant use or activity and cannot exist without said dominant use or activity. For the purposes of this Project, the dominant use or activity would be classified as the solar and BESS development, and without this, the TWA Facility would not exist or function.

As such, the statutory framework presented in the EIS and Amended Project (1) still applies to this Amendment (2), and the proposed TWA Facility is considered permissible with consent.

4.2 Commonwealth Assessment

On 2 February 2022, the Project was determined to be a Controlled Action requiring approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) by the Commonwealth Minister for the Environment due to its potential impact on listed threatened species and ecological communities. A variation to the controlled action decision (EPBC 2021/9102) was successfully granted on 29 February 2024 which included the changes to the Project proposed under the Amendment (1).

No changes to the EPBC referral are anticipated as a result of the Amendment (2) as there are no additional impacts proposed outside of the Development Footprint as assessed under the EIS and Amended Project (1).

5.0 Stakeholder Engagement

This section outlines community and stakeholder engagement carried out since submission of Amendment (1), including additional engagement to support Amendment (2). Further information on consultation is presented in the Addendum SIA (**Appendix F**).

5.1 Engagement undertaken since Amendment (1)

Since the submission of the Amendment Report (1) (Umwelt, 2023b) a variety of engagement and consultation has been and continues to be undertaken with government agencies and the community, as summarised in the sections below.

5.1.1 Government Agency Consultation

A summary of the government agency consultation undertaken since submission of the Amendment Report (1) is provided in **Table 5.1.**

Table 5.1 Summary of Government and Agency Consultation throughout Amendment (2)

Who was consulted with?	Consultation date and format	Summary of consultation outcomes
DPHI	Ongoing email and phone correspondence following receipt of DPHI's RFI on the Amended Project (1) on 31 January 2024.	• Discussion and email to present Lightsource bp's approach to addressing agency commentary, particularly regarding temporary workforce accommodation and traffic and transport. • Confirmation of an on-site TWA Facility being required to support the assessment of the Project. DPHI requested the preparation of an Amendment Report (2) (i.e. this Amendment Report) to assess the TWA Facility.
TfNSW	1. 21 February 2024 2. 8 May 2024	1. Discussed Lightsource bp's approach to addressing TfNSW comments on the Amended Project (1). Attended by TfNSW, DPHI, Lightsource bp, Umwelt, and Turnbull Engineering. 2. Meeting with TfNSW, DPHI, Lightsource bp and Umwelt, to confirm that TfNSW's had no further objections to the Amended Project (1) following Lightsource bp's response to TfNSW's RFI.
NSW National Parks and Wildlife Services (NPWS)	9 May 2024	Lightsource bp provided a briefing to NPWS to discuss the Amended Project (2) and address any residual NPWS comments on the Amended Project (1).

Who was consulted with?	Consultation date and format	Summary of consultation outcomes
UHSC	1. 19 February 2024 2. 26 February 2024 3. 1 March 2024 4. 25 March 2024 5. 13 May 2024	1. Meeting with Council officers to confirm Lightsource bp's approach to addressing UHSC's comments on the Amended Project (1). 2. Lightsource bp presentation to UHSC Councillors at Ordinary Council meeting on the Amended Project (1), including a project update, responses to the issues raised in UHSC's submission, and the key issues raised by the community. 3. Meeting with Council officers and Councillor to provide UHSC technical insight into the road upgrades proposed for the Project, and a discussion on how the works might be best delivered. 4. Lightsource bp presentation to UHSC Councillors at Ordinary Council meeting on the proposed Amended Project (2), including a description of the TWA Facility, potential benefits, impacts and approach to consultation with the community. 5. Meeting with Council officers to discuss waste management and sustainability measures available to the TWA Facility.
Mid-Western Regional Council (MWRC)	Ongoing email and phone consultation from 13 February to 15 March 2024.	Email and phone correspondence to confirm Lightsource bp's approach to addressing MWRC's comments on the Amended Project (1).
Fire and Rescue NSW (FRNSW)	16 May 2024	Email correspondence to confirm NSW Fire and Rescue requirements. FRNSW note the amendment concerns the construction of a temporary accommodation facility for construction workers. It is the opinion of FRNSW that this amendment does not represent any special problems of firefighting and make no commentary at this time beyond what is applicable in current legislation, codes and standards.
NSW Rural Fire Service (RFS)	23 May 2024	Lightsource bp provided a briefing to RFS to discuss the Amended Project (2), and to seek advice from RFS with respect to any specific fire-fighting/emergency requirements for inclusion in the design of the TWA Facility.

5.1.2 Community Consultation

Consultation with the community has continued following submission of the Amendment Report (1) and has also informed the Addendum SIA prepared to support this Amendment Report (2). A summary of the consultation mechanisms used to engage with the community (since the Project EIS, Umwelt 2023a) is provided in **Table 5.2.**

Table 5.2 Mechanisms used to engage with the community

Mechanisms	Description
Information Provision	
Website, community information line and email	Platforms and tools were established in September 2021 to provide opportunity for the broader community and members of the public to receive information on the Project and to have the opportunity to contact the Project team. These has been regularly updated since establishment as required and continue to be available. The March 2024 information sheet (see below) was also made available on the Project website (https://lightsourcebp.com/au/project/goulburn-river-solar/).
Local radio advertisement	A radio advertisement was broadcasted via the Radio Hunter Valley station in March and April 2024 to advertise the April and 10 Community information sessions to the broader community.
Project information sheets via post and email	A Project information sheet was distributed in March 2024 via mail drop (to 3,202 residences) and email distribution (to 121 stakeholders including proximal residents and community members.) The information sheet included general Project updates and plans for the on-site TWA Facility.
Consultation	
Project briefings	A Project briefing meeting with Upper Hunter Shire Council was held in March 2024, to provide detail of the Project, Voluntary Planning Agreement and the proposed on-site TWA Facility.
Surveys	An online and telephone survey was conducted with local businesses and service providers between March and April 2024 to identify and assess potential social issues, impacts and opportunities relating to the Amended Project (2). The online survey was accessed through a QR code and weblink in the April community information sheet.
Community information sessions	Face-to-face community information drop-in sessions to provide an update on the Project and the plans to develop an onsite TWA Facility was conducted on 9 and 10 April 2024 in the Merriwa Country Women's Association Hall. The results of technical assessments of the Project were shared via poster boards, as well as articulate the proposed mitigation and enhancement measures under consideration to minimise negative and enhance positive impacts of the Project. This was also an opportunity for members of the community to pose questions to the Project team and provide feedback on the proposed TWA Facility.

Table 5.3 provides a breakdown of the stakeholder groups that have participated in the Project's planning and assessment process to date through the engagement mechanisms outlined above, and whose feedback and input has informed the SIA Addendum included in **Appendix F**.

Table 5.3 Summary of Consultation Mechanisms to inform the SIA Addendum (Appendix F)

Engagement Mechanism	Stakeholder Category	Total number of people engaged
Online survey	Community residents Local business Proximal landholder / resident	8 completed survey online
Telephone interviews	Accommodation Provider Community resident Community group / organisation Emergency service provider Local business Local health service provider Nearby landowner / resident	15
Community information session (April 2024)	Accommodation Provider Community group / organisation Community resident Emergency service provider Host landholder Local business Local Government Local health service provider Nearby landowner / resident	30
Email correspondence with invitation to community information session	Host landholders Proximal landholders Community group members Local businesses	178
Radio advertisement inviting listeners to the April community information session	Broader community	-
Newspaper advert including invitation to community information session	Broader community	-
Project information sheet printed and posted	Local and broader community	3,202
Website traffic (April to May 2024)	Local and broader community	161
Total		**3,594**

5.1.3 Ongoing Consultation

As outlined in the EIS and Amendment Report (1) consultation with the community and key stakeholders remains ongoing and will continue during construction and operation of the Project in accordance with the Community Engagement Strategy. This plan will build on the Projects' Community Engagement Plan for the planning and assessment phase and will be prepared prior to construction (refer to **Appendix B**).

5.2 Benefit Sharing

The proposed Voluntary Panning Agreement (VPA) with UHSC was updated during Amendment (1) to include the addition of further road upgrades as agreed with Council and as described and assessed within the Amendment Report (1). The draft VPA was placed on exhibition in January 2024, and was endorsed by UHSC at their Ordinary Meeting on Monday 29th April.

6.0 Assessment of Impacts

This section provides a summary of the revised assessments undertaken to assess the potential construction and operational impacts associated with the proposed TWA Facility.

6.1 Assessment Approach

Table 6.1 provides a summary of the qualitative assessment undertaken against relevant environmental features as assessed in the Project EIS (Umwelt, 2023a) and Amendment Report (1) (Umwelt, 2023b), and highlights where additional assessment has been undertaken to support this Amendment (2). Technical assessments undertaken to support this Amendment Report are provided in **Appendix C** to **Appendix F**.

Where required, additional or revised mitigation measures have been proposed. A consolidated summary of all proposed commitments identified in the EIS, Amendment 1, and any changes made through this Amendment Report (2), are presented in **Appendix B**.

Table 6.1 Qualitative assessment of impacts

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
Terrestrial and Aquatic Biodiversity	**EIS Project** As per the Project EIS and Amended Solar Farm Biodiversity Development Assessment Report (BDAR; Umwelt 2024b) prepared to support Amendment 1, the Project Area is comprised of two plant community types (PCTs) including: • White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Commonwealth and NSW listed community PCT 486, otherwise known as Box Gum Woodland). The total impact to this PCT is 671.37 ha of which 635.47 ha is derived native grassland (DNG) and 35.90 ha is scattered (i.e., paddock) trees. • Narrow-leaved Ironbark – Black Pine – Sifton Bush healthy open Forest on Sandstone Ranges (NSW listed community PCT 1661). The impact to this PCT is 92.63 ha of DNG and 2.66 ha of scattered trees. The road upgrades component of the Project, as assessed throughout the Public Road and Culvert Upgrade Works BDAR (Umwelt, 2024b) will result in impacts to 4.68 ha of native vegetation. There are limited records of threatened species within the Project Area, however, there is habitat present which meets the criteria of being suitable for threatened species, including for Regent Honeyeater (mapped important habitat), Large-eared Pied Bat (foraging habitat), Eastern Cave Bat (foraging habitat), and Barking Owl (breeding habitat and present on site).	The TWA Facility will be located within the Development Footprint assessed as part of the EIS and Amendment Report 1. There is a potential for unwanted light spill resulting from the operation of the TWA Facility to impact the night sky, in turn potentially impacting nocturnal fauna. Lightsource bp are proposing to design all lighting to the relevant Australian Standards (i.e. AS4282:2019 Control of the obtrusive effects of outdoor lighting) and would implement measures including appropriate light type selection to avoid excessive light spillage outside the Project Area towards the night sky and any passing nocturnal fauna. Whilst it is expected that workers will demobilise from the TWA Facility in accordance with their roster cycle, there is nonetheless potential for minor disturbance to areas outside the nominated TWA Facility i.e. the remainder of the Project Area/BSA area, or areas of the Goulburn River National Park (NP). Impacts of unmitigated access could include off-track hiking which may inadvertently involve trampling native flora, four-wheel driving, motorbike / mountain bike access, hunting, or fishing, etc. Workers associated with the solar farm construction will not be permitted to access the BSA area or the Goulburn River NP. This will be communicated to all staff via the Code of Conduct and enforced through inductions/toolbox talks, signage and spot checks, which would be further described and implemented within the	In order to manage potential environmental impacts associated with worker behaviour, Lightsource bp will prepare and implement a Code of Conduct for the resident Project workforce at the on-site TWA Facility, to ensure that all social, ecological, environmental and safety requirements are understood and adhered to by all workers. This new measure has been included in **Appendix B.**

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	Amended Project (1) Through consultation with DPHI and BCD, and in response to community and agency feedback during the RtS phase, Lightsource bp have avoided additional areas of suitable habitat for threatened species and have amended the solar farm layout to retain connectivity for wildlife across the landscape. These Project amendments are described further in the Amendment Report 1 (Umwelt, 2023b).	Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP), as outlined in **Appendix B**. Lightsource bp also commit to consulting and working with NPWS to promote the existing trail network, to assist in avoiding impacts to unformed areas as needed. Lightsource bp are also investigating opportunities to involve construction / operation workers in tree planting and general BSA area maintenance.	
Aboriginal Heritage	**EIS Project** As per the Project EIS, an Aboriginal Cultural Heritage Assessment Report (ACHAR) was prepared for the Project in collaboration with the Registered Aboriginal Parties (RAPs) to assess the Aboriginal heritage values of the Project Area and its surrounds. The ACHAR identified eleven sites including one grinding groove, four artefact scatter sites and six isolated find sites within the Project Area. Of these sites, eight are present within the Development Footprint. Seven trees of potential cultural significance were also identified within the Project Area. Five of the seven trees were also identified within the Development Footprint. The ACHAR determined that the Aboriginal sites recorded during the survey generally have a low scientific significance as they are either isolated finds or low-density artefact scatters, often in disturbed contexts. Eight Aboriginal sites within the Development Footprint will be salvaged by a surface collection. Three of the seven trees will be retained	A review of the proposed TWA Facility location and components by Ozark Environment and Heritage concluded that the facility is currently proposed within an area previously surveyed for Aboriginal heritage significance as part of the Project EIS, and that there are no implications for Aboriginal cultural heritage resulting from the construction of the proposed TWA Facility. As such, no further impacts to Aboriginal heritage items within the Project Area are anticipated as a result of the proposed Amendment, and no further assessment has been undertaken to support Amendment 2.	No further assessment undertaken, or additional mitigation measures proposed.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	whilst the remaining four located within the Development Footprint will be removed in accordance with procedures set out in an Aboriginal Cultural Heritage Management Plan (ACHMP) to be prepared in consultation with the RAPs, following Project approval. **Amended Project (1)** An Addendum ACHAR was prepared in December 2023 to support the Amended Project 1, which included revisions to the Development Footprint to optimise the design of the Project whilst improving environmental outcomes. The Addendum ACHAR noted the following: • Previously identified impacts to the grinding groove site, two isolated finds and one artefact scatter site would be avoided. • Further investigation into the grinding groove site at Killoe Creek (37-1-1033 Killoe Creek GG1) would be undertaken. • Salvage of seven Aboriginal sites within the Development Footprint, consisting of four isolated finds and three artefact scatters would be undertaken. • Two of the seven trees identified as having potential cultural significance would be retained.		
Historic Heritage	**EIS Project** No Commonwealth or State-listed historic heritage items have been identified within the Project Area. As per the Project EIS, three locally listed historical residences have been identified within the Project	The proposed TWA Facility will be located approximately 2 km from the 'Slab Hut' (O'Brien Homestead) and is unlikely to result in any impact to this historic heritage item.	No further assessment undertaken, or additional mitigation measures proposed.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	Area, being the 'Slab Hut' (O'Brien Homestead), '1900 house' (currently abandoned) and 'Post War House' (currently occupied). Lightsource bp are proposing to avoid the 'Slab Hut' (O'Brien Homestead) by implementing a 20 m exclusion zone around the item in all directions during construction and operation of the Project. **Amended Project (1)** No historic heritage features were present within the Amended Project (1) Development Footprint and as such, no further impacts to historic heritage features were anticipated. No further mitigation measures were proposed.	As such, no further impacts to historic heritage items within the Project Area are anticipated as a result of the proposed Amendment.	
Land Use	**EIS Project** A Soil, Land Use and Agricultural Impact Assessment including a detailed Land Use Conflict Risk Analysis was prepared to support the Project EIS. The outcomes of this assessment indicated the Project will impact agricultural productivity within the Project Area by removing approximately 160 ha of marginal cropping land from production and removing cattle grazing from the Project Area. The Project EIS assessed cumulative impacts in relation to land utilised for renewable energy projects compared with the land utilised for agricultural use within the Upper Hunter Region of NSW. The Development Footprint within the Project Area occupies agricultural land, accounting for less than 0.001% of the total amount of land associated with agricultural use (being ~1,081,841 ha) within the region. As such, the Project is unlikely to impact surrounding land uses and on the agricultural productivity of the broader region.	Land within the Development Footprint will be temporarily used to house the proposed TWA Facility during the bulk of construction. Towards the end of construction, the TWA Facility will be demobilised and the area where it was located will be developed to resume its intended use to site solar panels and associated infrastructure. The erosion and sediment control measures proposed in the EIS and Amendment Project (1) (refer to **Appendix B**) would be extended to manage the temporary change in land use resulting from the construction of the TWA Facility, which would form part of the CEMP and ESCP prepared following approval and prior to construction. As such, no further impacts to land use within the Project Area are anticipated as a result of the proposed Amendment.	No further assessment undertaken. Existing measures proposed to manage potential erosion and sediment impacts during construction of the solar farm site would be extended to manage the TWA Facility. Measures are provided in **Appendix B**.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	Furthermore, the Project has been designed to facilitate Agrisolar operations which allows for sheep grazing underneath the solar panels, allowing both agricultural activities and the Project to co-exist for the operational life of the Project. It was also noted that due to the presence of sodic and dispersive soils within the Project Area, the risk of erosion during construction activities is considered high. In order to manage the risk of erosion during construction, Lightsource bp will develop a Construction Environmental Management Plan (CEMP) which will include Erosion and Sediment Control Plan (ESCP) which document relevant erosion and sediment control measures in accordance with *Managing Urban Stormwater: Soils and Construction Volume 1* (i.e., "The Blue Book"). **Amended Project (1)** The amendments proposed under the Amended Project (1) did not materially change or alter the land use as assessed under the EIS. Further commitment to land management was provided in the Amendment Report (1) including progressive land rehabilitation to maintain at least 70% groundcover during construction, and the provision of a Sheep Grazing Vegetation Management Plan to be incorporated into the Operational Environmental Management Plan (OEMP), to be prepared in consultation with NSW Local Land Services, should the sheep grazing trail be undertaken during operation of the Project.		

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
Landscape Character and Visual Amenity	**EIS Project** A Landscape Character and Visual Impact Assessment (LCVIA) was prepared as part of the Project EIS which assessed the visual impacts associated with the Project. Modelling was used to visualise views from four viewpoints requiring detailed assessment, being R3, R5, R46 and Wollara Road. The highest visual impact (i.e. 'moderate') would occur at Wollara Road. With the implementation of perimeter landscaping in 3–5 years the impact would be reduced to 'very low' as a residual rating. Remaining private viewpoints were rated as having 'low' visual impact. The overall impact of the Project on landscape character was assessed as 'low' due to the Project's low built features, limited landform change, retainment of vegetation, and establishment of additional native vegetation. Glint and glare were assessed as part of the Project EIS, which considered worst case scenarios and determined that the Project could output approximately 11 hours of yellow glare per year (i.e., glare predicted with a potential for temporary after-image). The Project was also determined to create no noticeable impact on the existing night-time landscape. Cumulative impacts to viewpoints were assessed as negligible, whereas cumulative impacts to landscape character have the potential to affect the experience of rural landscape and visual amenity. A variety of mitigation measures were proposed to manage impacts to landscape and visual amenity resulting from the Project, including preparation and implementation of a Draft Landscape Plan that aims to establish a fast-growing dense	The construction and operation of the TWA Facility has not been considered as part of the Project EIS and Amendment (1) and involves temporary changes to the landscape character and visual amenity for nearby viewpoints. As such, a revised Landscape and Visual Assessment (LVIA) memo has been prepared to support this Amendment Report (2).	Updated LVIA prepared as **Appendix C** and summarised in **Section 6.2** below.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	vegetative screen to reduce views of the Project infrastructure from Wollara Road and the Development Footprint's perimeter security fence. **Amended Project (1)** An Addendum LCVIA was undertaken to assess the potential changes in landscape and visual impact resulting from the Amended Project (1). The Addendum LCVIA found all changes to visual impacts result in either a 'low' or 'very low' assessment rating at all viewpoints. The assessment of impacts to landscape character to the Amended Project (1) indicate a change from a 'very low' to 'low' rating for the dense forested landscape character zone, and a change from 'no' impacts to a 'low' impact for the Golden Highway landscape character zone. No additional cumulative impacts associated with the Amended Project (1) were identified within the Addendum LCVIA. An updated Landscape Plan was proposed as a key mitigating strategy, which would be developed through ongoing consultation with stakeholders including NPWS.		
Noise and Vibration	**EIS Project** A Noise and Vibration Impact Assessment (NVIA) was prepared as part of the Project EIS and assessed the potential for construction, operational, and cumulative noise (and vibration) impacts resulting from the Project. Construction noise levels were predicted to comply with daytime noise management levels at all sensitive receivers not involved with the Project. Construction vibration impacts are anticipated to be negligible due to the large separation distances between the Project and	The inclusion of the TWA Facility has not been considered as part of the Project EIS and Amendment (1) and may result in temporary changes to noise levels at nearby receivers during the construction and operation of the TWA Facility. As such, an Addendum NVIA has been prepared to support this Amendment Report (2).	Updated NVIA prepared as **Appendix D** and summarised in **Section 6.3** below

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	sensitive receivers. The construction noise levels for road upgrades are expected to exceed the noise management levels at some receivers for some of the work areas and scenarios. However, no receivers are predicted to be highly noise affected. Operational noise levels are predicted to comply with the day, evening and night- time noise limits at all nearby sensitive receivers not involved within the Project. No additional noise mitigation is anticipated to be required for the operation of the Project. Operational traffic movements are expected to be minimal, therefore road traffic noise from operational traffic is anticipated to be negligible and was not further assessed. In order to manage potential exceedances in construction noise management levels during road upgrades, a draft Construction Noise and Vibration Management Plan (CNVMP) for road upgrades has been prepared and will be implemented as part of the CEMP following Project approval. **Amended Project (1)** An Addendum NVIA was undertaken as part of Amendment 1 to determine the potential impacts of the Amended Project. No additional management and mitigation measures for noise and vibration were found to be required as part of the Amended Project (1).		
Traffic and Transport	**EIS Project** A Traffic and Transport Impact Assessment (TTIA) was prepared as part of the Project EIS to assess the peak and average traffic generation, the likely transport impacts along the Project access route, the capacity and condition of the roads, road safety and	Vehicle movements to the Project are predicted to be on average lower than those assessed within the Amended Project with the inclusion of the TWA Facility. Traffic movements associated with the inclusion of an on-site TWA Facility include a peak of 10	No further assessment undertaken, or additional mitigation measures proposed.

<table>
<tr><th>Environmental feature</th><th>Environmental Context (from EIS and Amended Project (1))</th><th>Qualitative assessment of impacts (Amendment 2)</th><th>Further assessment undertaken or additional mitigation measures provided</th></tr>
<tr><td></td><td>intersection performance. The TTIA also assessed the cumulative impacts of traffic from nearby developments and included measures to mitigate and/or manage potential traffic impacts. The TTIA found that traffic and transport impacts associated with the Project would primarily occur during the construction phase as a result of the increase in traffic movements associated with workforce mobilisation and delivery of materials and equipment. Impacts during the operational phase would be minimal due to the low number of workers required to operate the Project. An assessment of impacts on the road network indicated overall impacts on road network performance during construction are anticipated to be minor. Minimal impacts are anticipated on public transport, with no impacts on the pedestrian network anticipated during construction as a result of the limited pedestrian infrastructure within the area. Similarly, impacts on cyclists are minor as a result of low cyclist volumes. The TTIA concluded that cumulative impacts are anticipated to be minor given the Golden Highway is the only common construction vehicle route for the majority of the nearby relevant projects and withholds capacity to accommodate cumulative construction vehicle volumes. In order to manage traffic impacts, Lightsource bp have committed to the implementation of a range of measures to appropriately manage and mitigate traffic impacts, including development of a Construction Traffic Management Plan (CTMP) prepared in consultation with TfNSW, UHSC, NPWS and other stakeholders.
Amended Project (1)</td><td>additional trucks per day during mobilisation/demobilisation (i.e. months 1-3 and 25-27 of the construction period) reducing to four (4) trucks per day during operation of the on-site TWA Facility to facilitate delivery of water and consumables, and a reduction in light vehicles and buses as a result of the on-site TWA Facility. This reduction ranges across the construction period with up to approximately 35 less movements a day during peak construction then that assessed in the Amendment Report 1 (Umwelt, 2023b). Further discussion regarding construction of the TWA Facility is provided in Section 1.6 of Appendix A.
Estimated traffic movements per day with the inclusion of the on-site TWA Facility are presented in Table 6.2 below. While total traffic movements increase during site establishment and decommissioning, these totals do not exceed the peak traffic movements assessed within the EIS and Amendment (1).
Table 6.2 Estimated Traffic Movements per day
<table>
<tr><th>Daily One-Way Vehicle Movements</th><th>Site Establishment</th><th>Construction</th><th>Decommissioning</th></tr>
<tr><td>EIS and Amended Project 1</td><td>35</td><td>99</td><td>14</td></tr>
<tr><td>With TWA (Change)</td><td>54 (+18)</td><td>70 (-29)</td><td>32 (+18)</td></tr>
</table></td><td></td></tr>
</table>

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	An Addendum TTIA was undertaken to assess the potential traffic and transport impacts associated with the Amended Project including traffic volumes, intersection performance, warrants for intersection improvements, and further consideration of safe intersection sight distances to facilitate safer road use in response to community and agency submission. Project construction traffic combined with cumulative traffic on the network would result in minor increases in average delay at the Golden Highway and Ringwood Road intersection. The transport route for all construction vehicles was amended to address existing intersection sight distance issues for vehicles turning right out of Ringwood Road onto the Golden Highway. The amendments included: • Ingress to the site for all construction vehicles will be from the north via the Golden Highway, Ringwood Road, Wollara Road. • Egress from the site for all construction vehicles will be via a left turn at the Ringwood Rd and Golden Highway intersection and the subsequent use of the existing turnaround facility on Barnett Street to continue on the Golden Highway in the eastbound direction. • All Project vehicles (excluding OSOM) during construction will be restricted to performing a left-in and left-out turn at the Golden Highway/Ringwood Road intersection. The turn warrants assessment with cumulative construction traffic was found to be marginally above the threshold for a full auxiliary left turn lane, and on the threshold of a basic right or Channelised Right	Shuttle buses are proposed to transport workers to the township of Merriwa to replenish personal supplies and for general recreation. Although this will contribute to an increase in traffic numbers, overall traffic movements will still be lower than those assessed in the Amendment Report (1). Internal traffic movements will be minimised during operation of the TWA Facility using shuttle buses to transport workers between construction compounds and the TWA Facility. The large proportion of internal traffic movements between the TWA Facility and construction compounds would typically occur at the start and end of the working day with peak AM traffic movements expected to occur around 7 am, while peak PM traffic movements would occur around 6 pm. Due to the anticipated reduction in the peak and total vehicle numbers over the construction period, an updated TIA was not undertaken as the assessed impacts in Amendment (1) continue to represent a worse-case scenario.	

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	(short) (CHRs) lane turn treatment being warranted during AM peak. It is noted that the cumulative volumes used in the assessment are a worst-case scenario, and the likely volumes would be lower and fall under the thresholds for additional turn warrant treatment being required. **Response to Amendment Report (1)** Consultation with TfNSW was undertaken on 21 February 2024 to discuss the proposed approach to address TfNSW's response to Amendment Report 1. Outcomes of the consultation required Lightsource bp to: • Undertake a revised turn warrants assessment using a 1.6% growth factor as per TfNSW guidelines, rather than the conservative 2% previously applied. Should this result in the same outcome, consider committing to traffic movements outside of peak times. • Undertake a Turn Path Assessment for the existing BAR into Ringwood Road. The results of the revised traffic assessment indicated the same outcomes as the Amended Project (1) i.e., the Golden Highway right turn remains on the threshold of a BAR or CHRs lane turn treatment being warranted during AM peak. In response, Lightsource bp have proposed to limit Project-related vehicle movements to outside of the AM peak period when cumulative traffic levels along Golden Highway exceed the threshold for a CHRs turn treatment during the AM peak period. This would be managed through periodic collection of mid-block traffic volumes to determine whether bi-directional traffic		

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	volumes on Golden Highway exceed 380 vehicles during the Project construction period, with the 380-vehicle limit being the threshold for movements along Golden Highway. The revised Turn Path Assessment indicated that the Project design vehicle (i.e., a 19 m prime mover and semi-trailer) is able to utilise the existing BAR facility to bypass a 19 m prime mover and semi-trailer (i.e. a non-Project related design vehicle). Due to the existing design of the intersection, the design vehicle would however be within the shy line of the safety barrier and end terminal. As such, Lightsource bp have proposed to relocate the safety barrier approximately 2 m to the east from the existing starting position, which would continue for approximately 35 m south, lining back up with the existing barrier location. This would provide additional space to allow a vehicle to safely overtake a vehicle waiting to turn right onto Ringwood Road. TfNSW provided a formal response to Lightsource bp on 7 May 2024 and have no further objection to the Project.		
Water Resources	**EIS Project** A Water Resource Impact Assessment (WRIA) was prepared to support the Project EIS. The WRIA noted the non-potable water demand for the 27-month construction period is estimated to peak at 11.26 megalitres (ML) per month. During operations, average daily water use would be 3,000 L at the O&M facility, and approximately 8–16,000 L water for livestock. Approximately 10 ML per year would be required for panel cleaning and onsite works, like	The TWA Facility is anticipated to require approximately 85,000 L of potable water per day during peak occupancy (i.e. 0.085 ML per day). This will be serviced by up to three (3) truck deliveries of potable water per day. Over the course of the Project, it is estimated that 25 ML of water will be consumed by the TWA Facility at a rate of 12 ML per year. Water will be sourced from a combination of onsite bores with Water Access Licences, or by purchasing	No further assessment undertaken, or additional mitigation measures proposed.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	road maintenance. Water for construction would be sourced from commercial suppliers in the nearby region (via water trucks) and farm dams located within the Project Area. Water sources would be determined prior to the commencement of construction in consultation with suppliers and landholders, subject to availability. Lightsource BP also made commitment to the development of a water sourcing strategy to ensure there are no water supply impacts to adjacent landowners or other stakeholders. The WRIA also noted the potential for water quality impacts to arise during construction and decommissioning without adequate management. As such, Lightsource bp have committed to the preparation and implementation of a Construction Soil and Water Management Plan (CSWMP) to outline measures to manage soil and water impacts associated with the construction works. This will also include an ESCP. An OEMP will also be developed for the Project to address potentially adverse impacts on the receiving environmental surface water quality during the operational phase. **Amended Project (1)** An Addendum WRIA was prepared to support the Amended Project (1) which noted that potential surface water quality impacts may arise during construction, however these impacts can be sufficiently mitigated in accordance with the measures proposed throughout the Project EIS.	Water Access Licenses from existing producers within the Hunter subregion. At present, there are 868 production bores in the Hunter sub region and licenced Water Access Rights arrangements. Given the low potable water consumption proposed, it is unlikely that the operation of the TWA Facility would cause notable impacts on the groundwater or surface water availability in the Hunter Region, and as such no further assessment or mitigation measures are warranted or have been provided.	

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
Preliminary Hazard Analysis	**EIS Project** A Preliminary Hazard Analysis (PHA) was prepared as part of the Project EIS which assessed a number of hazardous events scenarios involving lithium-ion batteries (LIBs) and electrical transformers with the potential for harmful off- site impacts. The results of the PHA indicated that the implementation of appropriate risk management measures, including adequate separation distances between LIBs, site boundary and involved dwellings, can be applied to the Project to meet HIPAP4 risk criteria for individual fatality, injury and propagation. **Amended Project (1)** An Addendum PHA was prepared to support the Amended Project (1) which identified maximised distances to fatal impacts and injury impacts for thermal radiation, explosion overpressure and toxic gas dispersion from the modified BESS design. The potential impacts resulting from a hazardous event associated with the Amended Project were found to be no greater than that impact defined in the Project EIS.	The inclusion of the TWA Facility has potential to change the outcomes for bushfire (as discussed below and in **Section 6.4**) but will not change any aspect of the BESS or other solar infrastructure proposed in the EIS Project and/or Amended Project (1). Any potential BESS-related hazards as outlined in the Amended Project (1) are unlikely to impact upon the proposed TWA Facility given the distance of the TWA Facility to either BESS option proposed under the Amended Project (1). As such, no further hazard assessment or additional mitigation measures are proposed.	No further assessment undertaken, or additional mitigation measures proposed.
Bushfire	**EIS Project** A Bushfire Threat Assessment (BTA) was prepared as part of the Project EIS. The Project Area is identified as bushfire prone land by the NSW Rural Fire Service (RFS). Appropriate safeguards and controls were identified throughout the BTA and include establishment of 10 m APZ in accordance with NSW RFS Planning for Bushfire Protection Guideline 2019 (PBP, 2019) and the development and implementation of an Emergency Plan, which will	The inclusion of the TWA Facility within the Development Footprint has not been considered as part of the Project EIS and Amendment 1 and requires further assessment to understand the potential for bushfire risks and consideration of revised emergency response protocols and associated safeguards. As such, a BTA has been prepared to support this Amendment Report (2).	Bushfire Threat Assessment prepared as **Appendix E** and summarised in **Section 6.4** below

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	assist with the management of bushfire. Through the development and implementation of relevant bushfire management measures and identified hazards safeguards and controls, potential hazards associated with the Project including bushfire can be appropriately managed. The management and mitigation measures will be undertaken in accordance with a Bushfire Management Plan to be prepared following Project approval. **Amended Project (1)** As part of the Response to Submission process, Lightsource bp committed to additional fire management measures, including undertaking a Fire Safety Study to consider operational capabilities of local fire agencies, and on-site fire and life safety independence, fire propagation and a worst-case scenario, as well as considering the requirements of the Fire Management Plan that would be prepared in consultation with NSW Rural Fire Service. The Amended Project (1) did not result in any material changes to the bushfire risk assessment prepared for the Project EIS.		
Social	**EIS Project** A Social Impact Assessment (SIA) was prepared for the Project EIS to gain an understanding from a local community and business perspective of the issues, values and uses associated with the assessment area. The results of the SIA identified the following: • Road safety impacts were the most frequently raised issue of concern for the community in relation to the low quality of Wollara and Ringwood Road	The inclusion of the TWA Facility will result in a change to the social and economic outcomes of the Project, including a reduced reliance on existing local accommodation and other service providers. As such, updates to the SIA and AES have been undertaken to support this Amendment Report (2).	Updated SIA prepared as **Appendix F** and summarised in **Section 6.5** below

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	• Social impacts were raised in regard to the natural environment and agriculture, with many stakeholders noting that the continued management of wild dogs in the immediate Project Area may become challenging due to the Projects establishment, as well as changes in land- use. To minimise potential negative and social impacts and enhance social benefits for the community, a number of mitigation measures were developed including a commitment to prepare a Social Impact Management Plan (SIMP), Community Engagement Strategy, and Community Benefit Sharing Strategy. **Amended Project (1)** The Amended Project (1) included the preparation of an AES in response to agency and community submissions received to document the appropriate planning and management of accommodation and housing for the Project's construction workforce.		
Economic	**EIS Project** An Economic Impact Assessment was prepared as part of the Project EIS to assess the economic benefits and impacts of the Project for the region. The assessment calculated a total economic benefit of more than $250 million into the region throughout the life of the Project. During engagement programs, community responses regarding the economic impacts of the Project identified positive economic impacts most frequently, especially those relating to local livelihoods through opportunities for local employment and procurement and sharing of Project benefits at the local community level. Community	Consideration of economic changes resulting from the inclusion of the TWA Facility have been considered within the revised SIA and AES.	Further consideration of economic features included in the revised SIA (**Appendix F**) and AES.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	concerns surrounding negative economic impacts including the potential strain on local services as a result of an influx of construction workforce and the cumulative effects on local infrastructure and services across regional projects. To minimise potential Project impacts and maximise Project benefits a number of measures were proposed including the preparation of an Accommodation, Procurement and Employment Strategy (APES) in consultation with stakeholders, and the development of a Community Shared Benefit Strategy including a Community Fund to be available to the wider community. **Amended Project (1)** Relevant economic features of the Amended Project (1) were addressed within the AES prepared to support the Amendment Report (1).		
Waste	**EIS Project** The Project EIS included consideration of waste-related impacts, which noted that majority of Project-related waste would be generated during the construction and decommissioning stages, with minor quantities to be generated by the day-to-day operation of the Project. Waste generated by the Project has potential to lead to environmental and health impacts if not appropriately managed, including a reduction in aesthetic air quality and visual amenity of the locality, impacts to water quality, contamination of soils and water, and the reduction in local landfill capacity due to additional waste volumes both from the Project and cumulatively from nearby projects. Waste generated during construction, operation and decommissioning	There will be some minor changes to waste generation and management with the inclusion of the TWA Facility within the Project Area. It is noted in the detailed description of the TWA Facility (refer to **Appendix A**) that the generation of waste during its operation is estimated at 3.5 tonnes per day, and will be separated onsite into recyclable, food waste and landfill and stored in dedicated bins (i.e. skip bins). Collection of waste will occur regularly alongside the construction waste collection. Additional waste streams include cooking oil and grease which will be stored onsite in drums until a sizeable volume is reached and collected by one of the 26 recycling businesses that offer waste collection and processing services across NSW for cooking oil. Lightsource bp are also working with a	No further assessment undertaken, or additional mitigation measures proposed.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	will be managed by a Wate Management Plan prepared as part of the CEMP and OEMP and will include a breakdown of waste types and quantities in accordance with appropriate legislation and guidelines. A Decommissioning and Rehabilitation Management Framework has also been developed for the Project to ensure appropriate environmental management is undertaken during the decommissioning and rehabilitation phase and would continue to be updated as the Project progresses. **Amended Project (1)** Waste was an issue raised by the community and agencies and was addressed during the RtS phase, however no substantial changes to waste generation were anticipated as a result of the Amended Project (1), and as such no further consideration of waste was provided in the Amendment Report (1).	range of TWA Facility providers to incorporate waste minimisation and 'circular economy' strategies into the design and operation of the TWA Facility. A modular Sewerage Treatment Plant (STP), consisting of untreated sewerage storage, a treatment plant, and treated sewered storage will be housed within the TWA Facility to manage wastewater. The STP will be able to process approximately 85,000 L of brown/grey water per day and would be designed to comply with Australian Standard *AS1546.3-2017 On-site domestic wastewater treatment units, Part 3: Secondary treatment systems.* Treated water exiting the STP would be classed as 'Class A' recycled water, which is not fit for industrial purposes, but is able to be used for dust suppression and discharge. During the dry months, treated water will be used for dust suppression during construction. During wet months, treated water would be discharge onsite in nominated areas, located at least 50 m from a watercourse and on flat land. These nominated areas would be highlighted throughout the CEMP prepared for the Project, following approval. Storage and collection of biomatter is expected to occur monthly and will be discharged back to a registered waste management facility in the region.	
Air Quality	**EIS Project** The Project EIS assessed the potential air quality impacts associated with dust generation during construction whilst taking into consideration existing	Given the potential for air quality impacts will be largely in line with those impacts already anticipated as a result of the EIS Project, no further	No further assessment undertaken, or additional mitigation measures proposed.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	air quality as a result of two scheduled facilities that operate within the vicinity of the Project, including Ulan Coal Mine, and Merriwa Petroleum Depot. The Air Quality Impact Assessment found that construction activities may generate dust however the generation will be localised and small at any one time in the context of the overall scale of the Project Area. Impacts from exhaust emissions from traffic are expected to be minimal and temporary in nature. With the implementation of the management and mitigation measures such as the CEMP will manage the predicted air quality impacts during the construction, operation and decommissioning of the Project can be adequately managed. **Amended Project (1)** No further assessment of air quality impacts was undertaken to support the Amended Project (1).	consideration of air quality impacts has been undertaken in this Amendment Report (2).	
Cumulative Impacts	**EIS Project** The Project EIS included an assessment of the potential for cumulative impacts associated with the construction, operation, and decommissioning phases of the Project, given proximity of the Project to several renewables and other Stage significant projects within the region. Cumulative impacts related to biodiversity, heritage, traffic, air quality, water quality, noise, visual amenity and waste management were considered in the Project EIS, however the isolated nature of the Project Area and the minor nature of such impacts did not warrant additional assessment from a cumulative impact perspective. Environmental management measures for key issues will be	The inclusion of the proposed TWA Facility is expected to have a positive cumulative impact to the region, by reducing the number of vehicles utilising the Golden Highway and Ringwood Road, whilst reducing the demand on local services and accommodation service providers required to house the peak construction workforce. As such, no further consideration of cumulative impacts has been undertaken within this Amendment Report (2).	No further assessment undertaken, or additional mitigation measures proposed.

Environmental feature	Environmental Context (from EIS and Amended Project (1))	Qualitative assessment of impacts (Amendment 2)	Further assessment undertaken or additional mitigation measures provided
	implemented to minimise the cumulative impacts of the Project. These measures are considered adequate to address both the individual Project impacts, as well as any further cumulative impacts. **Amended Project (1)** Consideration of potential cumulative impacts was considered during preparation of the Amendment Report (1), with a particular focus on cumulative traffic, social (including accommodation and employment), noise, hazards, water, heritage and landscape and visual-related impacts. The Amendment Report (1) noted that potential increases in cumulative traffic levels near the Project, and likely cumulative impacts on housing, employment and access to services given the proximity to nearby SSD projects and overlapping construction timeframes. It is noted that all cumulative impacts are conservative in nature and assume all proposed projects in the region are approved, which is unlikely to occur. Additional mitigation measures are provided in the Amendment Report (1), and when implemented alongside the EIS Project mitigation measures, are considered effective in managing outstanding cumulative impacts to resulting from the Project.		

6.2 Landscape and Visual Impact Assessment

An Addendum Landscape Character and Visual Impact Assessment (Addendum LCVIA 2) for the proposed TWA Facility was prepared by Envisage Consulting Pty Ltd (Envisage) to provide a detailed landscape character and visual impact assessment. The Addendum LCVIA 2 is provided in full in **Appendix C**, and should be read in conjunction with the previous investigations documented in the Project EIS and associated LCVIA (Envisage, 2023a), the Amendment Report (1) and Amended LCVIA 1 (Envisage, 2023b). The results of the Addendum LCVIA 2 are provided below.

6.2.1 Existing Context

The following landscape character zones were identified in the EIS LCVIA and Addendum LCVIA 1, and remain applicable to the Amended Project (2):

- Open, agricultural landscape - distinguished by grazing pastures, rural infrastructure, and agricultural land use (including the Project Area).
- Dense, forested landscape - distinguished by tall, native vegetation (including Goulburn River National Park west of Wollara Road).
- Golden Highway landscape - dominated by the two-lane sealed highway.

The TWA Facility would be located wholly within the open, agricultural landscape of the Project Area, in the vicinity of the forested landscape of Goulburn River National Park. Images illustrating the landscape character of the TWA Facility Feasibility Area are shown in **Appendix C**.

6.2.2 Assessment Results

In accordance with the NSW DPE Technical Supplement- Landscape and Visual Impact Assessment (DPE, 2022) the methodology applied to the Addendum LCVIA 2 is consistent with that applied to the original EIS LCVIA and the Addendum LCVIA 1.

For the purposes of assessment, the Addendum LCVIA 2 assessed a 'worst-case' scenario location for the TWA Facility within the Feasibility Area. This was deemed to be in the northwest of the Feasibility Area adjacent to Wollara Road, in the location with the highest exposure to views from the road. This location is illustrated on Figure 2.2 of **Appendix C**.

The visual changes associated with the proposed TWA Facility include the following:

- Multiple demountable buildings at a location within the Feasibility Area (potentially in the north-west of the Feasibility Area, close to Wollara Road), operating 24/7 for the duration of the solar farm construction period.
- Lighting associated with the TWA Facility.
- Vehicle movements to/from the TWA Facility.
- Additional construction activities associated with construction of the TWA Facility (prior to construction of the solar farm, however concurrent with public road upgrades and general site establishment).

The Addendum LCVIA 2 included a detailed assessment of visual changes, landscape character impacts, visual impacts, lighting impacts and performance objectives, with respect to the proposed changes associated with the Amended Project (2), each of which are summarised in the subsequent sections below.

6.2.2.1 Landscape Character Impact Assessment

The results of the landscape character impact assessment for the Amended Project (2), compared to the original EIS and Addendum LCVIA 1, is provided in Table 3.1 of **Appendix C** and summarised below:

Sensitivity

- There is no change to the low rating of existing landscape sensitivity within the various landscape character zones (open-agricultural, dense forested or the Golden Highway landscape) when compared to the Amended Project (1).

Magnitude of impact within each landscape zone

- There is a temporary increase in magnitude of change to the open-agricultural landscape zone (compared to Amendment Project (1)) from 'low' to 'moderate'. After decommissioning of the TWA Facility, the Project would return to a 'low' rating.
- There is no change to the rating of magnitude of change for the dense forested or Golden Highway landscape character zones.

Landscape character impact within each landscape zone

- There is a temporary increase in impact to the open-agricultural landscape zone (compared to the Amended Project (1)) from 'low' to 'low-moderate'. Following decommissioning of the TWA Facility, the impact to landscape character would revert back to 'low' (as was determined in the assessment of the Amended Project (1)).
- There is no change to the 'low' rating of landscape character impact within the dense forested landscape (compared to the Amended Project (1)).
- There is no change to the 'low' rating of landscape character impact within the Golden Highway landscape (compared to the Amended Project (1)).

6.2.2.2 Visual Impact Assessment

The LCVIA Addendum 2 noted that proximal landscape and visual receivers are consistent between the proposed Amended Project (2) and those assessed in the LCVIA Addendum 1. The assessment for visual impact found that there would be no change to the visual impact rating for the 14 assessed viewpoints assessed as part of LCVIA Addendum 1. The TWA Facility would be visible to one viewpoint, being Wollara Road, however would not be visible to any of the identified residential viewpoints. A comparative detailed visual impact assessment of the EIS Project, LCVIA Addendum 1 and the Amended Project 2 is provided in Table 4.3 of **Appendix C**.

For residences within 4 km of the Project Area the TWA Facility would not exacerbate the previously determined grid count. For residences beyond 4 km from the Project Area, the TWA Facility would not be visible. From one public viewpoint, Wollara Road:

- The LCVIA determined the EIS Project would occupy 67 grid cells resulting in 'very high' magnitude of change to the view.
- The Amended Project (1) did not change the 'very high' magnitude of change to views from Wollara Road.
- The Amended Project (2) does not change the 'very high' magnitude of change rating and does not increase the previously determined grid cell count.

The very high' magnitude of change rating, combined with the 'low' sensitivity rating, results in a 'moderate' level of visual impact to views from Wollara Road. Therefore, the moderate level of visual impact determined during the assessment of Amended Project (1) does not change. There is no change to the residual impact rating for the 12 assessed viewpoints.

6.2.2.3 Lighting Impact Assessment

Once the construction of the TWA Facility is complete it would operate 24/7 for approximately 27 months. Lighting is proposed in the following areas:

- Internal access tracks and car parking areas.
- Pathways (a mixture of overhead lights and low-level bollards).
- External, mounted lights attached to the buildings.
- Internal lights within the buildings.

The selection of light type would be designed to avoid excessive light spillage onto the accommodation rooms and surrounding areas and would be designed to be consistent with lighting mitigation measures included in the EIS LCVIA and Addendum LCVIA 1 to reduce the impact of additional lighting. The measures are based on technical information within the NSW Dark Sky Planning Guidelines (Department of Planning and Environment, 2023), including principles for good lighting design, use of shielded, downward facing lights and selection of site-specific lighting appropriate to the Project. This is particularly relevant as the Project falls just within a 200 km radius to the Siding Spring Observatory in Coonabarabran, NSW.

Temporary Lighting

Temporary night lighting associated with Amended Project (2) is proposed to increase due to the inclusion of the TWA Facility. However, the TWA Facility would not be in direct line-of-sight from surrounding residential viewpoints. Lights would not be directly visible, and it is very unlikely that indirect light glow would be visible. Night-time lighting impacts would be contained to the immediate TWA Facility area.

Permanent Lighting

There is no change to permanent lighting associated with Amended Project (2), and no change to the assessed impact of lighting during operation.

6.2.2.4 Performance Objectives Impact

There is no change to the assessment of Amended Project (1) which determined that the Wollara Road viewpoint (with a 'moderate' visual impact rating) is the only viewpoint requiring mandatory assessment against the Technical Supplement 'performance objective. There is no change to the draft landscape plan

prepared to address those performance objectives, and there is no change to the residual visual impact rating for the 14 assessed viewpoints.

6.2.3 Management and Mitigation Measures

The Addendum LCVIA 2 suggested measures to assist in further reducing potential visual impacts associated with the proposed TWA Facility, noting that the TWA Facility would be temporary and would not exacerbate the overall visual impact of the solar farm. Where possible, Lightsource bp could consider locating the TWA Facility:

- Further from Wollara Road (compared to closer).
- On lower ground (compared to an elevated location).
- Not in direct (i.e., straight ahead) line-of-sight of Wollara Road users (compared to directly in-line-of-sight).
- In the vicinity of existing elements (such as trees and buildings) to provide screening, or a background that would reduce contrast in the landscape.

6.2.3.1 Lighting

Specific measures were included in the Addendum LCVIA 2 to manage potential impacts to the night sky, as summarised below:

- Locate common areas within the internal zone of the TWA Facility to contain light spill.
- Select and design lights to avoid excessive light spill onto surrounding areas.
- Encourage the use of the TWA Facility shuttle to reduce excessive vehicle headlights at night.

6.3 Noise and Vibration Impact Assessment

An Addendum Noise and Vibration Impact Assessment 2 (NVIA 2) has been prepared by Umwelt to assess the change in the noise and vibration impacts as a result of the Amended Project 2. The Addendum NVIA 2 is attached in **Appendix C** with a summary of the results provided below. The NVIA Addendum should be read in conjunction with the previous investigations documented in Project EIS and associated NVIA (Umwelt, 2023d), and Amendment Report (1) and associated Amended NVIA 1 (Umwelt, 2023e).

6.3.1 Existing Context

6.3.1.1 Sensitive Receivers

The nearest receivers in the area surrounding the Project are consistent with the EIS NVIA 2023, with the exception of receiver R10 (i.e. the Goulburn River National Park). Given the vastness of the National Park and available bushwalking area, a receiver point 200 m from the Project Area was adopted for noise prediction purposes. This is a worst-case location intended on representing passive recreational users of the National Park.

6.3.2 Assessment Results

Potential construction noise and vibration impacts from the TWA Facility have been assessed in accordance with the Interim Construction Noise Guideline (ICNG, 2009), in line with the approach undertaken in the EIS NVIA and NVIA Addendum 1. Construction noise levels have been predicted for the four indicative construction scenarios outlined in Table 4.2 of **Appendix D**, as summarised below:

- Scenario 1: Site establishment, access, civil and bulk earthworks.
- Scenario 2: Installation of utilities, buildings and key components roads, hardstand, carparking and landscaping.
- Scenario 3: Commissioning.
- Scenario 4: Demobilisation.

Predictions are conservative and assume all equipment for each scenario is operating simultaneously at the closest point to the receiver. Results for each construction scenario for the identified receivers are presented in **Table 6.3**.

Table 6.3 Predicted Construction Noise Levels, dB(A)

Receiver ID	Noise Management Level $L_{Aeq\ (15\ min)}$		Construction Scenario Noise Prediction, $L_{Aeq\ (15\ min)}$			
	Standard Hours	Outside Standard Hours (D/E/N)[4]	Sc.1	Sc.2	Sc.3	Sc.4
R01 (host receiver)[1]	-	-	68	67	61	62
R02	45	40/35/35	<20	<20	<20	<20
R03	45	40/35/35	<20	<20	<20	<20
R04	45	40/35/35	<20	<20	<20	<20
R05	45	40/35/35	<20	<20	<20	<20
R06	45	40/35/35	<20	<20	<20	<20
R07	45	40/35/35	<20	<20	<20	<20
R08	45	40/35/35	<20	<20	<20	<20
R09	45	40/35/35	<20	<20	<20	<20
R10 [2]	60		52	51	45	46

Notes:

[1] Residential receiver R01 is involved in the Project (host receiver) and the Noise Management Levels are not applicable.

[2] This is a worst-case representative location for passive recreational users of the National Park.

[3] Predictions below 20 dB(A) have been presented as <20.

[4] Day period is 7.00 am–6.00 pm; Evening period is 6.00 pm–10.00 pm and night period is 10.00 pm–7.00 am.

The construction noise levels are predicted to comply with the noise management levels at all sensitive receivers not involved with the Project. Due to the low predicted noise levels resulting from the construction of the TWA Facility as outlined above and in Table 4.3 of **Appendix D**, cumulative construction noise exceedances due to concurrent solar farm construction activities is not predicted.

Potential vibration impacts are consistent with the EIS NVIA, with management strategies previously described remaining relevant for this Amendment (2).

Construction traffic noise levels are predicted to comply with the NSW Road Noise Policy (RNP, 2011) criteria, consistent with the EIS NVIA 2023 and NVIA Addendum 1.

Given the construction of the proposed TWA Facility would comply with the relevant criteria in the worst-case location, it is anticipated that the proposed TWA Facility could be constructed in any location within the TWA Facility Feasibility Area and would continue to comply with the ICNG.

6.3.2.1 Operational Assessment

Noise modelling was updated with revised equipment selections and layout placement to assess the operational noise impacts associated with the Amended Project (2). Operational noise sources within the TWA Facility are primarily related to the mechanical and electrical plant for the facility, site servicing requirements, occupant noise while on site and noise associated with the workforce leaving and returning to the TWA Facility.

Noise from the sources mentioned above is expected to be relatively minor. Whilst cumulative emissions may be higher, it is expected that operational noise will be significantly lower than construction of the TWA Facility. Proposed generators (10 units) are predicted to be the loudest mechanical and electrical plant item(s). With these plant items running simultaneously, noise emissions would still approximately equate to 20dB(A) lower than the loudest construction activity, being Scenario 1 (refer to **Table 6.3**).

It is therefore expected that operational noise will achieve the NSW Noise Policy for Industry (NPfl, 2017) criteria for all periods (day, evening and night) and noise impacts at non-involved sensitive receivers is unlikely. Potential operational noise impacts from the TWA Facility are predicted to be negligible and expected to comply with the NPfI criteria.

As the construction and operation of the proposed TWA Facility would comply with the relevant criteria in the worst-case location, it is concluded that the proposed TWA Facility could be sited in any location within the TWA Facility Feasibility Area.

6.3.3 Management and Mitigation Measures

No additional noise and vibration management and mitigation measures are required to those identified in the Project EIS (Umwelt, 2023a), and Amendment Report (1) (Umwelt, 2023b).

6.4 Bushfire Threat Assessment

A Bushfire Threat Assessment has been prepared by Umwelt (Australia) Pty Limited (Umwelt) to assess the potential bushfire hazards applicable to the proposed TWA Facility, and to outline additional bushfire management methods required to mitigate potential bushfire risks. A summary of the Bushfire Threat Assessment is provided below, with the full assessment included as **Appendix E**.

6.4.1 Existing Context

The TWA Feasibility Area and the broader Project Area is identified as bushfire prone land by the NSW RFS bushfire prone land mapping (NSW RFS, 2021). Land within the Feasibility Area boundary is mapped as Category 2 vegetation characterised by grassland and remnant vegetation. The surrounding Goulburn River National Park is mapped as Category 1 vegetation which is characterised by areas of extensive forest vegetation with high fuel loads.

The TWA Facility will result in increased residential density within the locality therefore consideration of issues listed in Chapter 8.2.1 (Increased Residential Density) of NSW RFS Planning for Bushfire Protection Guideline (PBP, 2019), (RFS 2019) is required. Section 8.2.1 states that increased resident densities of existing lots that are bushfire prone may heighten the level of risk to occupants. The presence of additional dwellings can impact on the evacuation and sheltering of residents during a bushfire.

The increased density requires consideration of the principles and criteria associated with subdivisions in bushfire prone areas. This includes ensuring Asset Protection Zones (APZs) based on a radiant heat threshold of 29 kilowatts per square metre (kW/m^2) for any new dwellings, along with suitable provision for construction access, water and landscaping.

Consideration of these requirements is provided in the Bushfire Threat Assessment (**Appendix E**) and summarised below**.**

6.4.2 Assessment Results

6.4.2.1 Vegetation

The TWA Facility Feasibility Area is predominately cleared of vegetation associated with previous agricultural land use. The Feasibility Area and broader Project Area have been subject to extensive biodiversity survey. The Feasibility Area supports grassland and woodland plant community types with scattered trees. The surrounding land associated with the National Park is mapped as Dry Sclerophyll Forest. This vegetation type represents a large fuel load with the ability to sustain and spread bushfire.

6.4.2.2 Slope and Topography

The topography across the entire Feasibility Area (approximately 1,300 m) is relatively flat, with an elevation range of approximately 50 m from east to west. Within the broader Feasibility Area, vegetation will sit upslope to the south and east and downslope (i.e., 0-5 degrees) to the north and west. In relation to the worst-case location (and any location within the western portion of the Feasibility Area), slope alignment to vegetation includes:

- Grassland/woodland/forest vegetation - upslope/flat.
- Grassland/forest vegetation (vegetation within the Project Area, roadside vegetation, and vegetation within the National Park) – downslope (0-5 degrees).

6.4.3 Management and Mitigation Measures

The construction and operation of the TWA Facility will require the implementation of the following bushfire protection measures.

6.4.3.1 Risk and Emergency Plan

A Risk and Emergency Plan will be developed during the detailed design phase and will include specific bushfire protection measures for the proposed TWA Facility in accordance with PBP and in consultation with the RFS and NPWS. Detailed design of the TWA Facility and final siting will consider the requirements of PBP and provide for the implementation of appropriate bushfire protection measures. The Risk and Emergency Plan will identify all relevant bushfire risks and mitigation measures associated with the TWA Facility, including:

- Detailed measures to prevent or mitigate fires igniting, outlining:
    - APZ locations and management requirements.
    - Access locations, passing bays and any alternate emergency access.
    - Water supply and any other bush fire suppression systems.
- Work that should not be carried out during total fire bans during construction/operation.
- Availability of fire-suppression equipment.
- Storage and maintenance of fuels and other flammable materials.
- Notification of the local NSW RFS Fire Control Centre for any works that have high potential to ignite surrounding vegetation during construction/operation/maintenance, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate.
- Development of any proposed land management practices either within the Feasibility Area and more broadly within the Project Area with consideration of existing land management practices undertaken within the National Park.
- Appropriate bushfire emergency management and relevant evacuation plan.

Evacuation Response

The Risk and Emergency Plan will outline the response required should evacuation of the TWA Facility be required. This includes (but is not limited to):

- Assigning responsibility for management actions.
- Identifying the relevant contact details (RFS, FRNSW etc.) who should be contacted and when.
- Development of appropriate triggers for evacuation based on the applicable fire danger rating.
- Identification of emergency assembly points on site and appropriate safety procedures.
- Identification of safe assembly points offsite and relevant routes.
- Instructions relating to sheltering on site (if required).

In the event of a bushfire the primary action is to evacuate. However, it is acknowledged that there may be a scenario where evacuation is not possible, and the occupants of the TWA Facility may be required to

shelter on site. Given the nature of the development and large number of occupants a purpose-built bushfire shelter is not considered appropriate, and occupants would instead shelter in the TWA Facility.

The proposed bushfire attack level (BAL) is sufficient to provide shelter in the unlikely event occupants are required to shelter on site. This is consistent with the requirements applied to Ecotourism (Section 6 of PBP), which requires a refuge building constructed to BAL-12.5 or greater.

6.4.3.2 Construction Standard

Construction standards in bushfire prone areas are outlined in Australian Standard AS 3959 *Construction of buildings in bushfire prone areas* (AS, 2021) and the National Associated of Steel Framed Housing (NASH) Standard to provide various levels of protection for different building elements. The required construction standard is based on the BAL, and the BAL is determined through the distance to vegetation and effective slope as outlined in Table A1.12.5 in PBP. The relevant BALs that relate to the TWA Facility are outlined in Table 4.1 of **Appendix E.** The relevant BAL will depend on the final siting of the TWA Facility; however, the BAL level will not exceed BAL-29 and at a minimum a BAL-12.5 construction standard will be applied.

6.4.3.3 Asset Protection Zones

The required APZ distances applicable to the TWA Facility range from 12 to 29 m, depending on the slope and classification of nearby vegetation. The APZ distances were calculated utilising Table A1.12.2 of PBP to achieve compliance with the radiant heat threshold of 29 kW/m2 for dwellings, and are summarised below:

- Upslope – Grassland 10 m, Woodland 12 m, Forest 24 m.
- Downslope (0-5 degrees) – Grassland 12 m, Forest 29 m.

The TWA Facility can be appropriately located within the Feasibility Area, set back from the Project Area boundary and can achieve these required APZ distances. The current 'worst case' scenario provides for between 28 and 54 m of separation distance between the proposed infrastructure and the Development Footprint boundary, which exceeds the required APZ for the proposed TWA Facility (refer to Figure 3.4 of **Appendix E**). The APZ's will be established during the construction phase and will continue to be maintained over the life of the TWA Facility in accordance with Appendix 5 of PBP.

6.4.3.4 Emergency Access

Vehicle access will be maintained and open at all times, via internal access track from the Project Area primary access point located on Wollara Road. Internal access tracks will provide for appropriate all-weather access to the Project Area and will be designed in accordance with Chapter 5 of PBP during the detailed design phase. Emergency access and egress from the Project Area will be provided via Wollara Road (in both a north and south direction). Two additional emergency access points are proposed providing direct access to the broader Project Area from Wollara Road, as outlined in **Figure 1.2**.

The broader Project includes upgrades to Wollara and Ringwood Road (proposed under the Amended Project (1)) in order to facilitate construction which will also assist with improving access to the TWA Facility in the case of an emergency.

6.4.3.5 Water Suppply Services

The TWA Facility will be provided with an adequate supply of water in accordance with PBP. This will include the following:

- Dedicated on site firefighting water supply (a minimum of 100,000 L) – in addition to the firefighting supply required for the proposed solar farm (volume to be confirmed during the assessment process by the RFS).
- Provision of connection suitable for firefighting purposes located within the TWA Facility (65 mm Storz).
- Fire hydrant/hose reel systems and all firefighting equipment installed and maintained in accordance with relevant Australian Standards.

6.5 Social Impact Assessment

A SIA Addendum has been prepared by Umwelt to identify potential social impacts and opportunities as well as available management and mitigation measures for the Amended Project (2). The SIA Addendum is provided as **Appendix F**. The AES prepared by Umwelt (Umwelt, 2023h) to support the Amended Project (1) was also updated to address the changes proposed under the Amended Project (2) and is provided as **Appendix G**.

6.5.1 Existing Context

The social baseline for the Project's social locality (comprising the local government areas of Upper Hunter Shire, Mid-Western Regional, and Muswellbrook) is described in the Project EIS SIA Report (Umwelt, 2023g).

6.5.2 Assessment Results

The SIA Addendum has been informed by community and stakeholder engagement conducted between March and April 2024 through a variety of mechanisms including an online survey, phone calls, and two face-to-face community information drop-in sessions to provide an update on the Project and the plans to develop the Amended Project (2). A total of 52 participants were directly consulted (i.e. in person or on the phone) to inform the SIA Addendum. Outcomes from this consultation informed the impacts, opportunities, and mitigation/enhancement measures identified in the SIA Addendum.

These impacts and opportunities were evaluated and ranked according to impact characteristics, as defined in the DPIE SIA Guideline (2022). Mitigation and management strategies have been developed in response to the updated social impact assessment, including the identification of opportunities for community benefit and the maximisation of positive social outcomes as a result of the Project.

Figure 6.1 below summarises both prompted and unprompted social impacts identified by stakeholders, and the frequency with which they were raised. The figure combines responses from both the online survey and from stakeholder interviews. In summary, community-identified impacts associated with the TWA Facility were most frequently associated with perceived impacts on road traffic and safety, with 48% raising the issue of heavy vehicle traffic associated with the TWA Facility, and 35% raising the issue of additional traffic generated by the residents of the TWA Facility. This aligns with the findings from the Project's SIA in which road safety and amenity was the most frequently raised social impact of the Project at the time.

The creation of local procurement and employment opportunities related to the construction and operation of the TWA Facility were the most frequently raised positive impacts (with 44% and 37% of respondents raising these, respectively). This also aligns with the Project's SIA in which 'employment and training for local people' was a commonly cited Project opportunity. These impacts and others are described in further detail in the SIA Addendum in **Appendix F**, with key impacts summarised in the subsequent sections below.

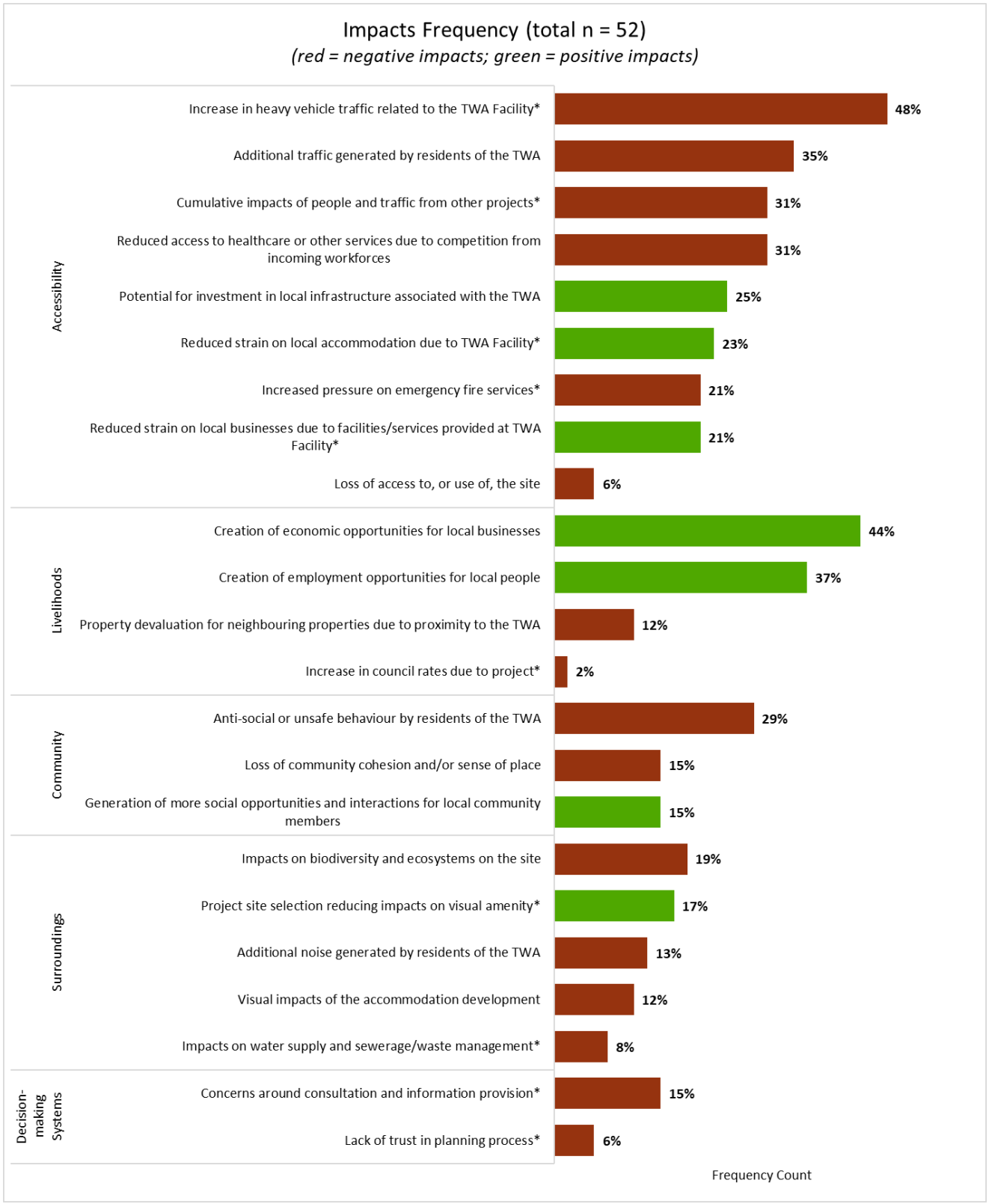


Figure 6.1 Frequency of Social Impacts as Raised through Community Consultation

**denotes unprompted impacts that were not presented in the survey.*

*Source: SIA Addendum (**Appendix F**)*

6.5.2.1 Negative Impacts

Road traffic and safety impacts for road users

Although concerns related to road traffic and safety were the most frequently raised, the assessment found that the reduction in light traffic as a result of the construction workforce residing onsite in the TWA Facility would lead to social benefits in terms of increased safety and less traffic congestion for other road users. This benefit may be enhanced by discouraging or limiting the use of personal vehicles by resident workers of the TWA Facility. The increase in heavy vehicle traffic due to the operational requirements of the TWA Facility however would potentially impact the safety of other road users, and would need to be managed accordingly.

Impacts on local health services due to resident workforce at TWA Facility

Another key impact identified was a potential reduction in access to healthcare and other services due to competition from incoming workforces (both from the Project and other proximal developments). Stakeholders indicated that health services were already constrained in the area, and emergency medical services, particularly ambulance services, were already limited to where they can travel.

Anti-social or unsafe behaviour by TWA residents impacting community cohesion

Concerns around increases in crime or anti-social behaviour due to the incoming workforce were also raised, along with the impacts this would have on community cohesion. Mandatory compliance with Lightsource bp's Code of Conduct and minimum acceptable behaviour requirements would aid in mitigating these impacts, as would the controlled management of service of alcohol onsite. Regular onsite drug and alcohol testing is also a recommended measure.

6.5.2.2 Positive Impacts

Creation of local procurement and employment opportunities for local businesses/workforce

The key social benefit identified through stakeholder engagement were the local procurement and employment opportunities created through the construction and operation of the TWA Facility. These procurement and employment opportunities may be enhanced by adherence to the strategies identified in the AES Addendum to maximise local procurement and employment (e.g. maintaining a business register, and supporting training and up-skilling), and openly communicating procurement and employment opportunities for both the TWA Facility and the wider Project.

Reduced strain on local accommodation due to housing of Project workers in the TWA Facility

A clear benefit to housing the Project's construction workforce in the purpose-built TWA Facility rather than in local short-term and long-term accommodation would be the reduced strain on these accommodation providers, and the freeing of local accommodation providers for other purposes (such as tourism). However, the SIA Addendum notes that housing the 30 workers required to construct the TWA Facility itself would still be reliant on local accommodation providers, with some providers outlining plans to expand their accommodation capacity in the near future.

The accommodation benefits of the TWA Facility may be enhanced by housing the non-local workforce in the TWA Facility to capacity, and for Lightsource bp to work closely with local accommodation providers to accommodate the Facility's construction workforce, including partnerships to expand existing capacity and early communication of accommodation needs. These strategies and others are also captured in the AES Amendment.

6.5.3 Management and Mitigation Measures

Management strategies have also been proposed for the on-site TWA Facility to mitigate the potential negative impacts and to enhance potential opportunities. Key strategies included are:

- Working closely with local accommodation providers to accommodate the workforce required to construct and install the on-site TWA Facility, including partnerships to expand existing capacity and early communication of accommodation needs.
- Implementing measures to reduce strain on local health services, such as through the provision of an onsite first aid station, telehealth GP services for the resident workforce and an onsite helipad.
- Effective scheduling and communication of heavy vehicle movements associated with construction and operation of the on-site TWA Facility to minimise disruption to other road users.
- Workforce behavioural management, and provision of constant surveillance and security
- Proactive efforts to maximise local employment and procurement in the construction and operation of the on-site TWA Facility.
- Targeting the Community Benefit Sharing Strategy to initiatives that focus on increasing community wellbeing and community participation, in consultation with Council and local stakeholders.

The assessment concludes that the identified negative social impacts of the Project can be reasonably mitigated or managed to reduce their significance, with positive impacts potentially maintaining or increasing in significance if appropriate enhancement measures are implemented.

7.0 Justification of the Proposed Amendment

The justification of the broader Project has not materially changed from that described in the Project EIS (Umwelt, 2023a) and Amended Project (1) (Umwelt, 2023b). Additional justification for the proposed Amendment (2) is summarised below.

7.1 Summary

The TWA Facility is being proposed in response to matters raised by DPHI and government agencies during assessment of the Amended Project (1) and the outcomes of ongoing engagement with the local council, the community, and stakeholders.

The proposed TWA Facility will provide temporary housing to accommodate the anticipated peak workforce required to construct the Project, which will in turn reduce the reliance on already constrained local accommodation service providers, in part due to cumulative impacts of renewable and other State significant developments within the broader Hunter Region. The inclusion of the on-site TWA Facility is also expected to reduce Project-related traffic volumes on Ringwood Road and the Golden Highway from that presented in the EIS and Amended Project (1), an issue commonly raised by the community.

The key outcomes of the proposed Amendment (2) are summarised below:

- The TWA Facility is proposed in an area already well understood and assessed as part of the EIS and Amended Project (1) and will not result in any additional impacts outside of the Development Footprint.
- The TWA Facility is proposed within the Project Area and will allow for the transportation of workers between on-site construction compounds and the on-site TWA Facility, reducing traffic movements on public roads near the Project Area, which is an issue that has commonly been raised by community.
- No additional direct impacts on heritage or ecological values are anticipated as a result of the TWA Facility. Indirect impacts can be adequately mitigated.
- There are limited sensitive receivers in proximity to the TWA Facility Feasibility Area with respect to visual and noise amenity.
- Construction and operational noise levels are predicted to comply with the relevant noise management levels at all sensitive receivers not involved with the Project.
- There is no change to the residual impact rating for the 14 assessed viewpoints when compared to the Amended Project (1).
- The TWA Facility can be appropriately located within the TWA Feasibility Area to provide separation from remnant vegetation. Appropriate APZs will be applied to provide separation between the proposed infrastructure to create appropriate defendable space for firefighting and the protection of infrastructure and occupants.

- Identified negative social impacts of the Project can be reasonably mitigated or managed to reduce their significance, with positive impacts potentially maintaining or increasing in significance if appropriate enhancement measures are implemented.
- UHSC has indicated its general support for the proposed TWA Facility, given there are limited accommodation options available for large numbers of construction staff in the Upper Hunter and Muswellbrook LGAs, and noting Lightsource bp's commitment to ensuing no workers are housed within the Mid-Western Regional LGA.
- Upon completion of construction, the TWA Facility will be demobilised and removed from the Project Area. This will ensure any outstanding impacts associated with the TWA Facility (if any) are removed, whilst allowing for the beneficial re-use of the TWA Facility and associated components elsewhere.

For each of the other environmental aspects, there would be no substantial change to impacts and/or a positive outcome as a result of the Amended Project (2), when compared with the EIS Project and Amended Project (1).

7.2 Conclusion

The Amended Project (2) complies with relevant statutory requirements, is consistent with the strategic context of the EIS Project and Amended Project (1) and continues to support NSW's transition to a more reliable, affordable and sustainable electricity future. The Amended Project (2) also remains consistent with the principles of ecologically sustainable development, as documented in the Project EIS and Amendment Report (1).

As a result, it is considered that the Project, with the inclusion of the amendments presented in this Amendment Report (2), is in the interest of the public and the State of NSW.

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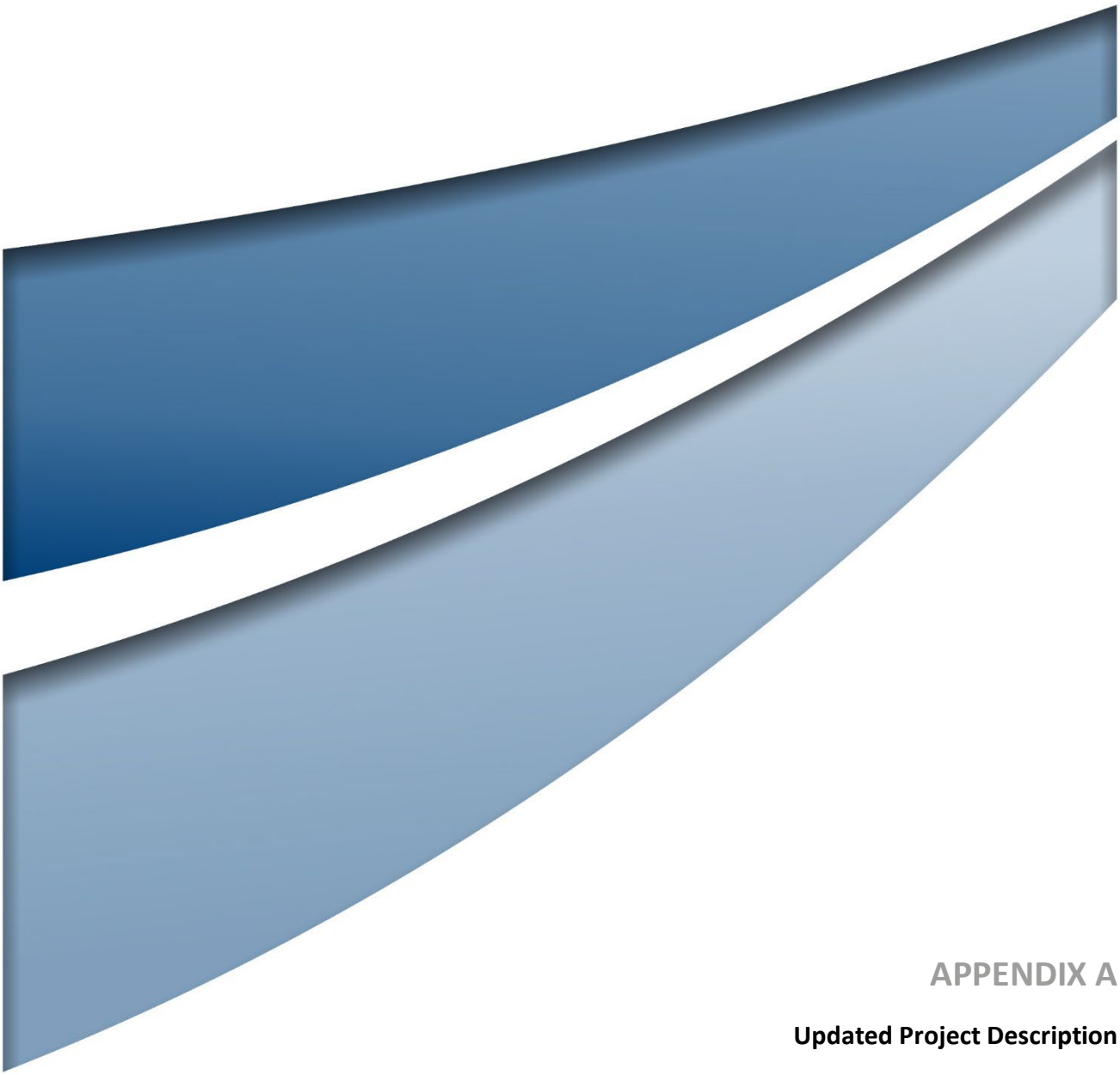

APPENDIX A

Updated Project Description

umwelt
Environmental & Social Consultants

lightsource bp

GOULBURN RIVER SOLAR FARM

Appendix A - Updated Project Description

FINAL

May 2024

lightsource bp

GOULBURN RIVER SOLAR FARM

Appendix A - Updated Project Description

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Lightsource bp

Project Director: Jessice Henderson- Wilson
Project Manager: Thomas Buchan
Report No. 23485/R15/Appendix A
Date: May 2024

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Environmental & Social Consultants

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
V01	Jessica Henderson Wilson	8 May 2024	Jessica Henderson Wilson	10 May 2024
V02	Jessica Henderson Wilson	22 May 2024	Jessica Henderson Wilson	23 May 2024
Final	Jessica Henderson Wilson	24 May 2024	Jessica Henderson Wilson	24 May 2024

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1.0 Updated Project Description

1.1 Project Summary

The Goulburn River Solar Farm Project (i.e. the Project) involves the construction, operation and decommissioning of approximately 550-megawatt peak (MWp) of solar photovoltaic (PV) generation as well as a Battery Energy Storage System (BESS) with 1,030 MWp / 2,060 megawatt hour (MWh) capacity. The Project will also include a substation and connection to an existing 500 kilovolt (kV) transmission line. The Project will include various associated infrastructure, including road repairs and upgrades to Ringwood Road, temporary construction facilities, operation and maintenance buildings, internal access roads, civil works and electrical infrastructure to connect the Project to the existing transmission line which passes through the Project Area.

This Amendment (Amendment 2) has been prepared to assess the inclusion of a Temporary Workers Accommodation Facility (TWA Facility) within the existing Development Footprint as assessed throughout Project EIS (Umwelt, 2023a) and Amendment Report 1 (Umwelt, 2023b). A summary of the Project as described in the EIS and Amendment Report 1 is provided in **Table 1.1**, along with the proposed TWA Facility amendment (Amendment 2). A description of the proposed TWA Facility amendment provided in the subsequent sections.

Table 1.1 Project Summary[1]

Project Element	Summary of the Project
Project Application Number	SSD-33964533
Project Description	The Project includes the construction, operation, and decommissioning of the proposed 550 MWp solar farm, 1,030 MWp / 2,060 MWh BESS, road repairs and upgrades and associated infrastructure (such as operations and maintenance buildings, temporary construction compound, security fencing), civil works (such as regrading, re-sheeting and culvert upgrades) and electrical infrastructure (including a new onsite substation and underground and overhead cabling) required to connect to the electricity transmission network. A 30 m telecommunications tower is also proposed. No subdivision of land is proposed as part of the Project.
Project Location	2335 Wollara Road, Merriwa NSW, approximately 28 km south-west of Merriwa, within the Upper Hunter Local Government Area.
Project Area – Solar Farm Area	Approximately 1,996.5 ha.
Development Footprint	Approximately 792.19 ha and 8.1 km of road repairs and upgrades.
Schedule of Lands	Consistent with the Amended Project (1).
Solar Arrays	Approximately 1 million bifacial solar panels on ground-mounted single axis tracking framework. Row spacing: Maximum of 5 m apart. Height: Average height approximately 3.1 m at full tilt, with a maximum of 4 m in some areas due to undulating site topography.

[1] Changes associated with this Amendment Report (2) are shown in red.

Project Element	Summary of the Project
Battery Storage	The option to construct and operate a 450MWp / 900MWh centralised BESS, a 580 MWp / 1160 MWh decentralised BESS or a combined centralised and decentralised BESS with a total capacity of 1,030 MWp / 2,060 MWh. Each proposed option has a discharge duration of two hours. There will be a 50 m APZ surrounding the centralised BESS facility security fencing.
Electrical Reticulation	Connection to existing 500 kV transmission line in south-eastern corner of Project Area. Additional cabling to be installed to existing transmission line. This would require small vehicle access along the existing transmission line easement, as well as potentially aerial installation work (via helicopter). This is not part of this EIS. Power conversion units consisting of approximately 67 inverters. On-site substation covering approximately 4 ha enclosed by security fencing.
Telecommunications Tower	Up to 30 m high, providing a secondary communications channel between the Project and Wollar and Bayswater substation. This will be capable of radio communications, located in the substation compound area.
Temporary Construction Facilities	Main construction site compound to include office amenities, parking, storage, and associated facilities. Laydown areas suitable for storing plant and equipment, solar panels and cable drums, and areas to support waste management activities. A temporary helipad for emergency response purposes during construction. Inclusion of an on-site TWA Facility within the Development Footprint.
Permanent Operational Facilities	This would include the system control building, switch room and storage facilities, and car parking.
Security Fencing, Lighting and CCTV	Perimeter security fencing around the Development Footprint to a height of approximately 2.3 m plus CCTV and security lighting.
Road repairs and Upgrades	Road upgrades are required for the safe transportation of materials and personnel to the Project Area including: Upgrades to culverts at the existing road crossings of Bow River and Killoe Creek located on Ringwood Road. Widening and resealing of 1.8 km of Ringwood Road between Bow River and Killoe Creek. Repairs will include 8 m bitumen-sealed formation with a minimum of 500 mm unsealed shoulders. A left in and left out intersection at the Golden Highway and Ringwood Road intersection for construction vehicles including vegetation removal, minor lane widening, addition of an acceleration lane and formalisation of the bus stop pullover area. Realignment, widening and sealing a 4.7 km section of Wollara Road prior to use. Realignment, widening and sealing of 3.4 km of Ringwood Road across two sections and upgrade of two culvert bridges.
Project Access	Major solar components would be delivered via the Port of Newcastle, New England Highway, Golden Highway, Ringwood Road and Wollara Road from the north. Light vehicle access would generally occur from the north via Merriwa. Three access points to be provided along the western boundary of the Project Area, off Wollara Road, one point will be a permanent site access and the remaining two are emergency access points.

Project Element	Summary of the Project
Internal Access Tracks	Approximately 49 km of unsealed access tracks of approximately 4 m width. A single main access road will be 6 m wide leading up to the substation 10 m at selected locations between Project areas to accommodate the proposed buried cable easements.
Workforce	Construction: Up to 350 direct jobs at the peak of construction with an average 250 jobs. Aspirational target of 35 workers (10%) sourced locally. Operation: Approximately 10 direct jobs. Aspirational target of all permanent roles based locally.
Workforce Accommodation	Workforce to be accommodated within an on-site TWA Facility constructed near the main Project access point within the Development Footprint. The TWA Facility will be designed to accommodate up to 400 workers and would span an area of approximately 3.1 ha.
Construction Hours	Construction hours: Monday to Friday 6:00 am to 6:00 pm. Saturday 6:00 am to 6:00 pm. No works on Sundays or Public Holidays. Approval is also sought to undertake activities which are inaudible at non-involved dwellings, emergency work, and deliveries and dispatches (where required by authorities for safety reasons) outside of standard construction hours. Road upgrades on Ringwood Road are proposed to be undertaken within standard construction hours.
Operational Hours	24 hours a day, 7 days a week.
Construction Period	27 months.
Operational Period	40 years.
Capital Investment Value	Estimated $880 million.

1.2 Description of the TWA Facility

The proposed TWA Facility will consist of prefabricated modular accommodation units, recreational facilities and support buildings interlinked with 'plug and play' services (i.e. water, sewerage and power) as well as covered walkways. The TWA Facility will be designed to accommodate up to 400 workers required to construct the Project as well as the maintenance and operation of the TWA Facility itself. The TWA Facility is temporary in nature and would be used during the construction period only. Once construction is complete, the TWA Facility would be decommissioned for re-use on other projects. The TWA Facility may be constructed progressively to align with the anticipated increase of construction workforce associated with the Project.

A summary of anticipated TWA Facility components is provided in the subsequent sections below.

1.3 Overview

The proposed TWA Facility will include the following components:

Pre-fabricated rooms.

Kitchen and dining facilities.

Administration buildings comprised of offices and reception.

First aid station.

Linen and chemical storage rooms.

Maintenance and cleaning buildings for housekeeping equipment and laundry facilities.

Ablutions.

Waste water treatment plant, inclusive of storage facility.

Electricity generating units and fuel storage.

Water storage/supply.

Car, bus and truck parking.

Recreational facilities such as a gymnasium, a bar area and BBQ facilities.

Typical features of a TWA Facility which would be adopted for this Project are shown in **Figure 1.1.**

All buildings will be fitted with emergency lighting, smoke alarms, and firefighting capability in accordance with the Building Code of Australia. Appropriate firefighting equipment will be installed in nominated locations throughout the TWA Facility, including portable fire extinguishers, fixed fore hose reels, fire hydrant systems and water tanks. Emergency evacuation and emergency assembly points will also be established throughout the Project site as required.

Further consideration of emergency and firefighting procedures, as well as Project-specific bushfire management measures has been undertaken within the Bushfire Threat Assessment, prepared as Appendix E of the Amendment Report (2).

Figure 1.1 Typical TWA Facilities

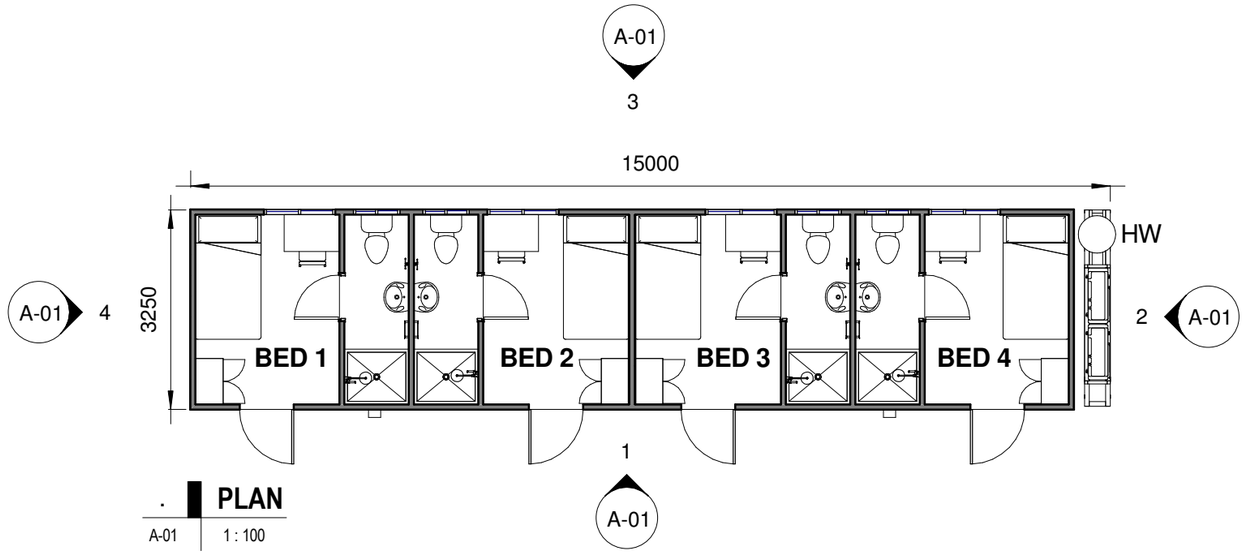
1.4 Conceptual Layout

An indicative conceptual layout of the TWA Facility is provided below as **Figure 1.2** The layout will be confirmed through detailed design, in consultation with the contractor/s selected to construct the Project. The TWA Facility will utilise a standard 4-person staff quarter buildings with ensuites as shown on **Figure 1.3.**

Drawing not to scale. Layout indicative and may be customised to suit client requirements (subject to regulatory requirements).

Car parking spots: 190
Car parking spot size: 2.4m x 5.5m

Lightsource BP
Goulburn River Solar Farm
Proposed 400 Room Camp
Rev A 08/03/24



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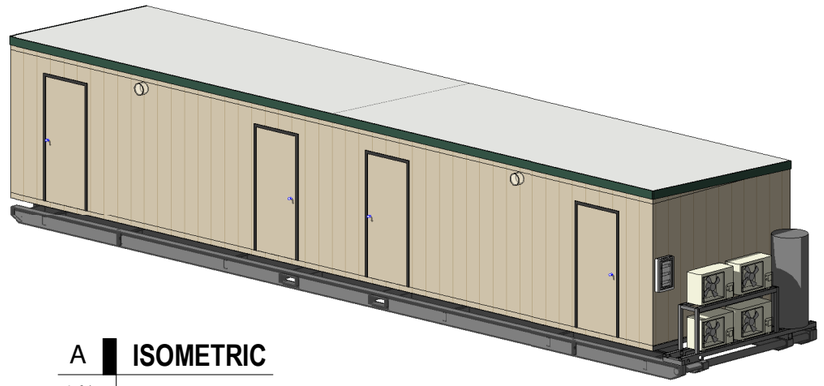

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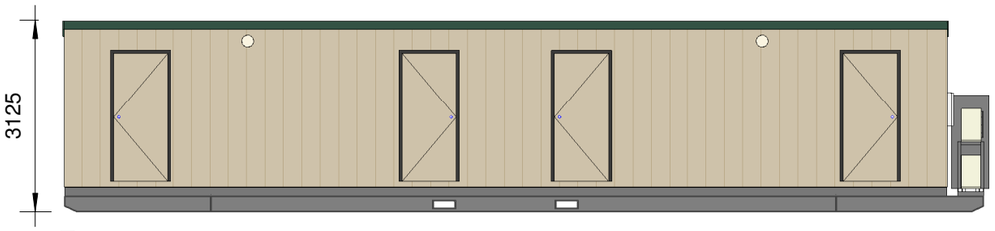

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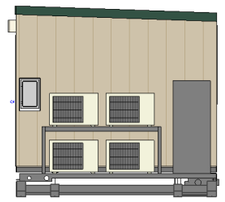

2 **End Elevation A**
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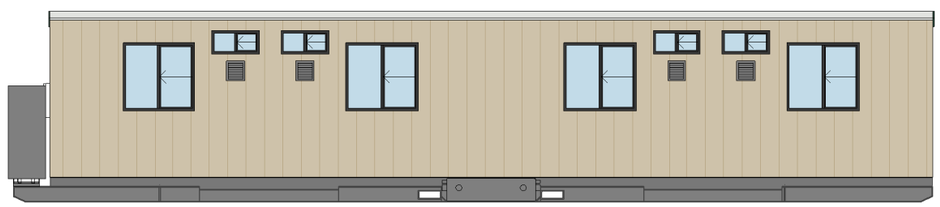

3 **Rear Elevation**
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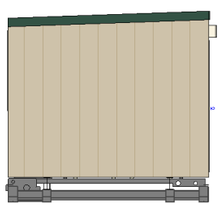

4 **End Elevation B**
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Iss.	Description	Date	By
A	ORIGINAL	AS SHOWN	

Title: **Staff Quarter Plan & Elevation**

Project: Mobile Camps

Client: Ausco Modular

Drawn By	Drawn Date	Scale	
SBP	Aug 14	1 : 100	A3
Checked By	Check Date	DIMENSIONS ARE IN MM DO NOT SCALE	

PRELIMINARY

Project No.	Order No.

Drawing No.	Issue
A-01	A

1.4.1 Location

Lightsource bp are investigating potential locations to site the TWA Facility within the western portion of the Development Footprint, an area referred to within the Amendment Report (2) as the 'TWA Facility Feasibility Area' or simply the 'Feasibility Area'. **Figure 1.4** illustrates a typical 400-bed TWA Facility layout within the TWA Facility Feasibility Area, which would span an area of approximately 3.1 hectares (ha), shown in a representative location within the TWA Facility Feasibility Area.

Consideration of a TWA Facility of this nature has been undertaken across the broader TWA Facility Feasibility Area throughout the Amendment Report (2) and relevant technical assessments. The TWA Facility Feasibility Area was chosen for its proximity to the Project site access point, car parking and construction compound facilities (as proposed in the Project EIS). The assessment of the TWA Facility has been conducted on the positioning within the Feasibility Area with the greatest potential for impacts to assess a 'worst case' location for each environmental feature.

The final position, design and specifications of the TWA Facility will be confirmed during the detailed design. Irrespective of the final location, all components will be sited within the existing Project Area and Development Footprint assessed in the Amendment Report (1).

Once the solar farm component is largely built, the remaining workforce is proposed to be accommodated in existing accommodation facilities off-site. It is anticipated that this workforce would be in the order of 30 workers or less, as outlined in the Accommodation and Employment Strategy prepared to support the Amendment Report (1) (Umwelt 2023b). At this point, the TWA will be dismantled and re-used elsewhere, with the resulting area constructed for its intended use as solar arrays and associated infrastructure.

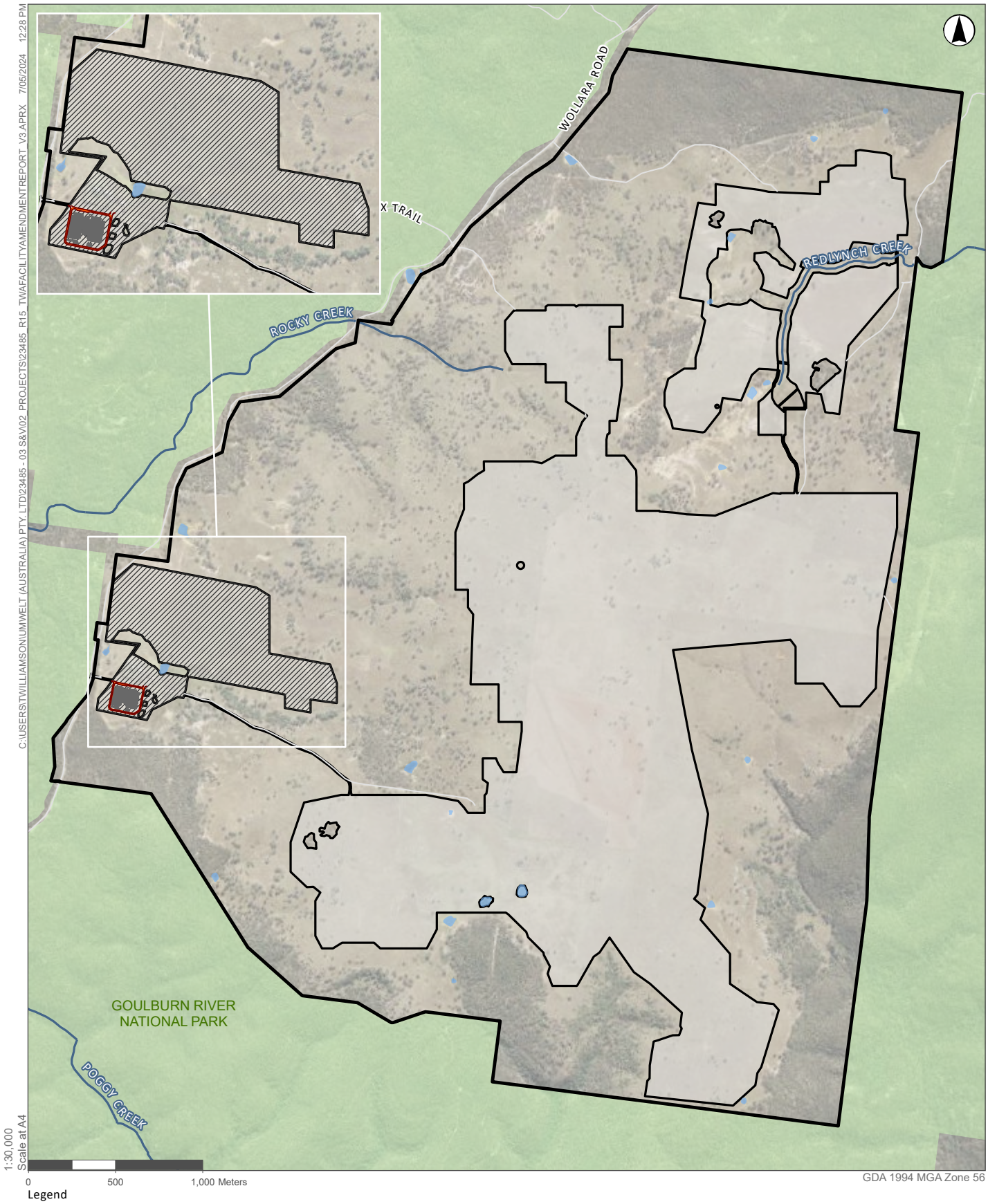


FIGURE 3.2

Indicative TWA Facility within the TWA Facility Feasibility Area

Image Source: ENSW Public Imagery (2023) **Data source:** NSW LPI (2023), NSW DSFI (2023); NPWS Estate (2023); Lightsource BP (2024)

1.5 Access and Traffic Movements

Access to the TWA Facility will be through the existing main Project access point at 2771 Wollara Road, Merriwa, as described in the EIS and Amended Project 1. Access to and from the Project Site will utilise the same traffic route identified in the Traffic and Transport Impact Assessment (TTIA) prepared to support the Project EIS (Umwelt, 2023a) and subsequently updated to support the Amendment Report 1 (Umwelt, 2023b).

The TWA Facility will be accessed through the primary security gate and an internal access road. The TWA Facility will be fenced off from the construction site and managed separately from a health and safety perspective. A shared carpark will service both the construction compound and the TWA Facility, designed to accommodate 250 vehicles and buses.

All workers associated with the TWA Facility will be limited to within fenced areas surrounding the TWA Facility. Round-the-clock security will also be provided during construction.

Traffic movements associated with the inclusion of an on-site TWA Facility include a peak of 10 additional trucks per day during mobilisation/demobilisation (i.e. during construction months 1-3 and 25-27) reducing to four (4) trucks per day during operation of the TWA Facility and a reduction in light vehicles and buses as a result of the on-site TWA Facility. This reduction ranges across the construction period with up to 35 less movements a day at peak construction.

1.6 Construction and Demobilisation

The TWA Facility construction period is expected to take 12 weeks from site preparation to commissioning. Ground preparation will be required but are a continuation of the solar farm preparation works, involving clearing and leveling a pad for temporary buildings, construction offices, carparks, laydown yards etc.

The workforce during this stage will be approximately 20-30 people, who will be housed in accommodation offsite until the TWA Facility is commissioned. Construction activities specific to the accommodation camp require minimal large equipment, with only forklifts and telehandlers required. All utilities sit above the ground and there is no requirement for ground penetrating works or permanent foundations.

The TWA Facility buildings would be modular style, fabricated off-site and transported to the Development Footprint for installation. The modules may either arrive complete or as a system of modules that can be connected together to increase internal floor area as required. The construction phase of the TWA Facility requires service connection points for sewer, water, power and communications to be constructed and in place when the modular buildings are transported to site and installed.

A high-level overview of the construction sequence of the TWA Facility is as follows:

Establishment of temporary road access.

Connection to temporary service plant.

Ground preparation works, including ongoing geotechnical investigations to confirm ground conditions.

Installation of water and sewerage treatment plants.

Installation of buildings and key components of the TWA Facility (e.g. accommodation modules, service and administration modules, and amenity facilities).

Install first stage roads, hardstand, car parking, pathways, street lighting and landscaping.

All TWA Facility buildings would be designed to meet relevant building code requirements, to address accessibility and fire rating standards.

Demobilisation will be completed in a similar timeframe, using the same equipment as the construction. All modules are designed to be re-used and there would be no buried services left behind or components (such as concrete pathways, footings, awnings) sent to landfill.

1.7 Operation and Management

Once constructed, the TWA Facility is proposed to operate 24 hours a day, 7 days a week for the duration of the construction period. A range of general activities would be undertaken to support the functions of the TWA Facility, such as general grounds maintenance, deliveries and waste removal, and worker movements. The operation and management of the TWA Facility would either be undertaken by construction contractors managed by Lightsource bp or would be outsourced to a third party that specialises in managing such a facility.

Lightsource bp proposes that deliveries to the TWA that are essential for the running of the camp (i.e., food, water, fuel, services etc.) as well as necessary maintenance works are permitted to occur outside of standard construction hours.

Employment opportunities will be available to local and regional service providers including but not limited to food delivery, handling and service, housekeeping and laundry, to support the ongoing operation of the TWA Facility.

For safety, security and maintenance purpose, all areas of the TWA Facility will require artificial lighting. The main road, internal circulation roads and all car parking will be provided with lighting designed to the relevant Australian Standards (i.e. AS4282:2019 Control of the obtrusive effects of outdoor lighting). The selection of light type will be designed to avoid excessive light spillage onto accommodation rooms, outside the Development Footprint or the night sky. Spaces between and around the accommodation units will be appropriately illuminated to avoid attracting insects and wildlife. All lighting will also comply with requirements of the former Department of Planning and Environment (DPE) Dark Sky Planning Guideline (2023).

The management of the TWA Facility will consider the safety of residents as a key consideration. As an extension of the workplace, codes of conduct and acceptable behaviour must be strictly adhered to. Any consumption of alcohol will be controlled, and should alcohol be available at the facility, responsible service of alcohol requirements will apply within designated social areas with set operating times to ensure the wellbeing of employees is appropriately managed.

As outlined in Section 5 of the Amendment Report (2), consultation was undertaken with the Hunter Valley Police District, who noted they held no particular concerns about the social impacts of the project during construction or operation, but suggested that private security should be present, particularly during construction. As noted in **Section 1.5**, 24/7 security will be provided during construction.

1.8 Services and Utilities

There are no existing services within the Project Site currently capable of supporting the proposed TWA Facility. As such, the TWA Facility will be self-sufficient, with onsite power generation, potable water storage, water treatment facilities and food storage and preparation facilities.

General service and utility features of the TWA Facility will include:

A minimum of 85 kilolitres (kL) of potable water stored onsite, replenished daily.

A Sewage/Water Treatment Plant, capable of treating up to 85 kL of wastewater per day.

1.5 MW of skid mounted generators.

26,000 L of fuel storage, appropriately stored within clearly signed and bunded areas.

The proposed TWA Facility is a proven design that has been deployed to support workforces across Australia. The services are "plug and play" with interconnecting hoses and cables running from the services to and in-between the accommodation blocks.

Utility estimates associated with the TWA Facility are provided in **Table 1.2.**

Table 1.2 Utility Estimates

Aspect	Detail	Volume (Estimate Only)
Water	Construction (dust suppression and vehicle/ equipment washdown).	In line with estimates provided for the EIS and Amended Project (1) (i.e., a maximum of 11.26 ML per month for 27-month construction period, subject to seasonal conditions).
Potable Water	Camp and office facilities.	Approximately 25 ML over 27 months.
Waste	Excavated soil (all to be reused on site).	TBC – cut and fill works optimised to reduce the volume of excess soil while re-using onsite where possible for road base and hardstands. Final location onsite will be chosen to minimise requirement for earthworks.
Sewerage	The maximum wastewater load, including sewage, for a 400-room TWA Facility.	85 kL per day during peak operation of the TWA Facility (i.e., during peak construction of the solar farm).

1.8.1 Water

The TWA Facility is anticipated to consume approximately 85 kL of potable water per day during peak operation of the TWA Facility (i.e. 0.085 ML per day). This will be serviced by two to three water truck deliveries per day of potable water (i.e., 30,000 L capacity). Over the course of the Project, it is estimated that 25 ML of water will be consumed by the TWA Facility at a rate of 12 ML per year.

Water will be sourced from a combination of on-site bores or by purchasing Water Access Licenses from existing producers within the Hunter subregion, consistent with the Project EIS and Amendment Report (1) Section 6.1 of this Amendment Report (2). Consideration of a front-end reverse osmosis (RO) water treatment plan may be required should water be sourced from on-site bore water. This would form part of the Construction Environmental Management Plan (CEMP) prepared for the Project, following approval.

1.8.2 Sewerage

A modular Sewerage Treatment Plant (STP), consisting of untreated sewerage storage, a treatment plant, and treated sewered storage will be housed within the TWA Facility. The STP will be able to process approximately 85 kL of brown/grey water per day and be designed to comply with Australian Standard AS1546.3-2017 *On-site domestic wastewater treatment units, Part 3: Secondary treatment systems*.

Treated water exiting the STP would be classed as 'Class A' recycled water, which is not fit for industrial purposes, but is able to be used for dust suppression and discharge. During the dry months, the treated water will be used for dust suppression during construction. During wet months, the treated water would be discharge in nominated areas within the Development Footprint, located at least 50 m from a watercourse and on flat land. These nominated areas would be highlighted throughout the CEMP prepared for the Project, following approval.

Discharge of the biomatter is expected to occur monthly (or as required) and will be discharged back to a registered waste management facility in the Hunter region.

1.8.3 Electricity

Four skid mounted generator units will support the TWA Facility. Each of the three units would generate up to 375 KW over three generators and have a built-in 6,500 L fuel storage tank each. Built into each of these units is an integrated switchboard and distribution board, allowing 3-phase low voltage distribution cables to be terminated at the generator skids.

Refuelling operations will be performed in designated areas, to be confirmed at detailed design.

1.8.4 Waste

Waste generated during the operation of the TWA Facility would be separated onsite into recyclable, food waste and landfill and stored in dedicated bins (i.e. skip bins). Collection of waste will occur regularly alongside the construction waste collection. Additional waste streams include cooking oil and grease which will be stored onsite in drums until a sizeable volume is reached and collected by one of the 26 recycling businesses that offer waste collection and processing services across NSW for cooking oil.

Lightsource bp are working with a range of TWA Facility providers to incorporate waste minimisation and 'circular economy' strategies into the design and operation of the TWA Facility, as well as discussing opportunities with UHSC. Some examples of these strategies which are being explored include:

Bailing cardboard and collecting soft plastics for direct delivery to recycling facilities.

Food organics and garden organics either processed on-site or through UHSC facilities.

Re-use of cooking oil used at the TWA Facility to produce biodiesel.

Collection of empty water containers through the Containers for Change program, with recovery proceeds going to local charities.

1.9 Environmental Management

Environmental Management Plans (EMPs) will include consideration of the TWA Facility and would be prepared post-approval to provide a framework for the specific environmental management of all components of the Project, including the EIS Project, Amendment 1 and 2. The EMPs would:

Incorporate a CEMP and Operational Environmental Management Plan (OEMP), including all required sub-plans, protocols, management and mitigation measures proposed in this TWA Facility Amendment Report.

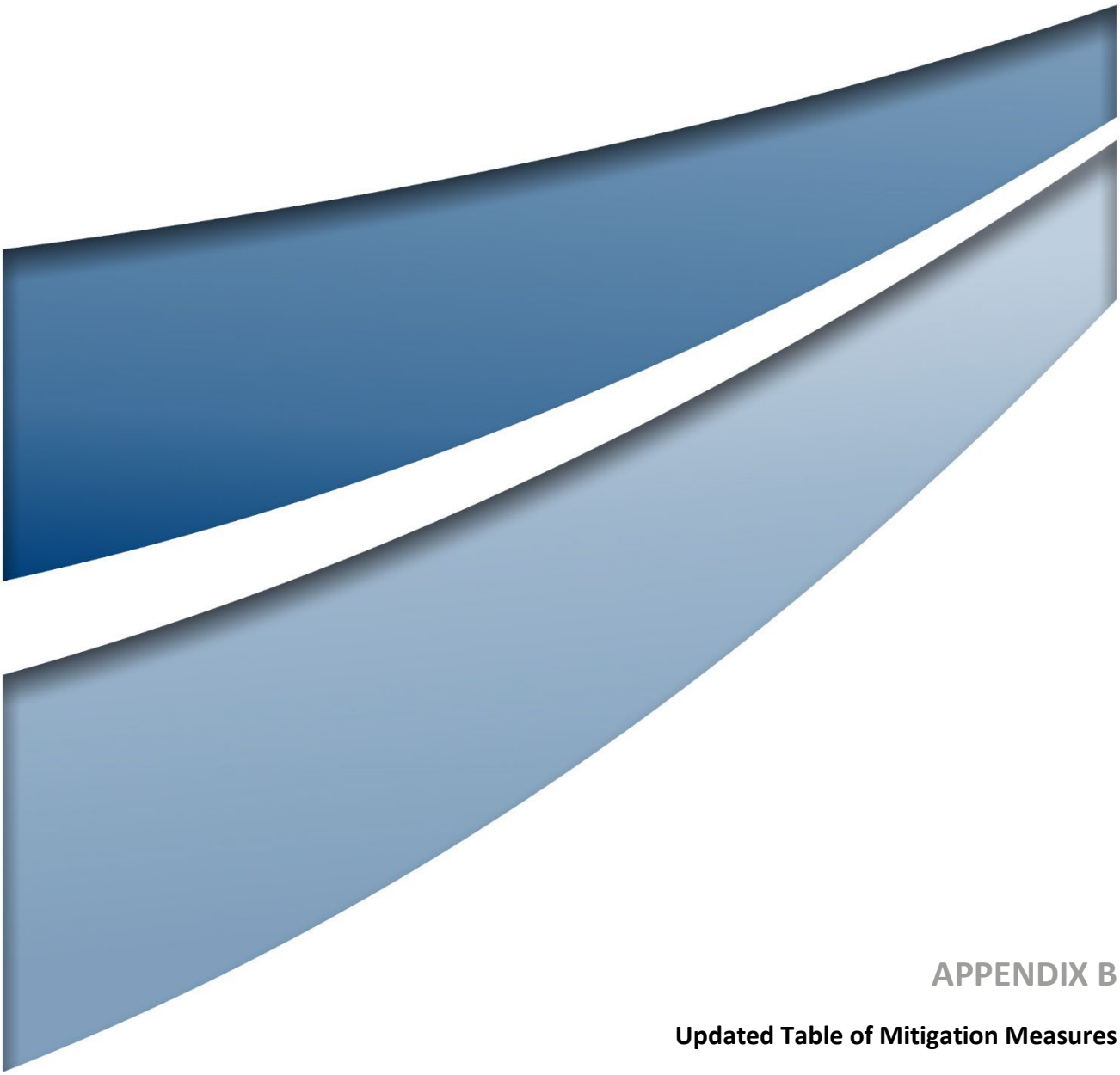
Identify all relevant statutory approvals.

Establish roles, responsibilities, authority and accountability of all key personnel involved in the environmental management of the TWA Facility.

Establish procedures for consulting with the local community and relevant stakeholders about the operation and environmental performance of the TWA Facility.

Establish procedures for handling of complaints, disputes, non- compliances and emergency response.

Details regarding licences and permits required for services and utilities associated with the construction and operation of the TWA Facility will be confirmed in detailed design and outlined in the relevant Environmental Management Plans.



APPENDIX B

Updated Table of Mitigation Measures

Appendix B Mitigation and Management Measures

Lightsource bp will be responsible for implementing the management and mitigation measures proposed in the Project EIS, Amendment (1) and this Amendment (2). The management and mitigation measures will be implemented through a Construction Environmental Management Plan (CEMP), an Operational Environmental Management Plan (OEMP) and a Decommissioning Environmental Management Plan (DEMP), as well as other targeted sub plans that may form part of these broader plans (i.e. Construction Soil and Water Management Plam, etc.). These plans will be prepared sequentially, prior to each stage of the Project by Lightsource bp and its relevant contractor(s), and in consultation with relevant government agencies.

Table B.1 provides a comprehensive list of the management and mitigation measures identified through the EIS applicable to the Project, mitigation and management measures added as a result of the RtS and outlined in the Amended Projects (1 & 2) and the relevant timing for implementation.

Additional mitigation measures proposed to manage any residual impacts associated with this Amendment (2) are *italicised and rows shaded blue.*

Table B.1 Consolidated Management/Mitigation Measures (EIS Project and Amended Project)

Aspect	Management/Mitigation Measure	Timing
Terrestrial biodiversity	Maintain a wildlife corridor across the Project Area through retention of large areas of suitable habitat for the regent honey eater (*Anthochaera phrygia*) and White Box – Yellow Box – Blakely's Red Gum Grassy woodland and derived native grassland.	Life of Project (Construction, Operation and Decommissioning)
	Implement the following specific control measures to minimise the impacts of the Project on biodiversity: • workforce education and training • implementation of vegetation protection zones for areas to be retained • ecologist pre-clearance surveys and supervision of works • erosion and sedimentation control measures • weed management • fencing, access control and fauna exclusion measures.	Life of Project (Construction, Operation and Decommissioning)
	Develop a biodiversity offset strategy (BOS) in consultation with Biodiversity Conservation Division (BCD), DPE and DCCEEW based on the credits required to be retained to offset the impacts of the Project.	Pre-construction

Aspect	Management/Mitigation Measure	Timing
	The Biodiversity Management Plan will include implementation of measures to minimise fauna strike, as follows: • Speed limits will be enforced on roads within the Project Area during construction and operation, to reduce the risk of fauna strikes. • Native fauna encountered along access tracks during construction and operation would be avoided and given an opportunity to move on.	Construction/Operation
Aquatic biodiversity	During construction: • implementation of appropriate erosion and sediment controls • avoidance of waterfront land during construction works • provision of onsite spill kits for construction works within 100 metres of a watercourse • undertaking instream construction works (for access tracks) when watercourses are dry (where practicable) • design of any instream structures using relevant guidelines (to maintain fish passage and minimise impacts to natural flow regimes), particularly on watercourses mapped as Key Fish Habitat KFH • rehabilitation of disturbed bed and banks of watercourses mapped as KFH with stabilising vegetation • implementation of pre-clearance surveys carried out prior to construction, undertaken by a suitably qualified ecologist • implementation of an unexpected species finds protocol.	Construction
	During operation and decommissioning: • routine maintenance of vehicles (to reduce the risk of oil spills etc) • routine maintenance of culverts (to ensure they are clear of debris) • minimal use of herbicides to control exotic species (to reduce pollutants entering downstream watercourses) • re-establishment of native riparian vegetation endemic to the region and aquatic habitat features within and on the banks of any watercourses directly impacted.	Operation and Decommissioning
	Sections of Redlynch Creek and the unnamed tributary of Rocky Creek containing bed and banks, are to be electronically mapped in order to identify Waterfront land. Waterfront land is measured as 40 m from the top of bank and any waterfront land disturbed is to be revegetated following completion of works.	Pre-construction
Aboriginal cultural	Following development consent, the proponent will develop an Aboriginal Cultural Heritage Management Plan (ACHMP) which is to be agreed to by the RAPs and DPE (with input from Heritage NSW). The ACHMP will include an unanticipated finds protocol,	Pre-construction

Aspect	Management/Mitigation Measure	Timing
heritage	unanticipated skeletal remains protocol, protocols related to heritage inductions for work crews, and long-term management of any Aboriginal sites being impacted.	
	Four of the seven trees of community interest will be retained. The three trees of community of community interest located within the Development Footprint will be removed in accordance with a methodology set out in the ACHMP.	Life of Project (Construction, Operation and Decommissioning)
	The ruins of the O'Brien homestead slab hut will be avoided from all ground disturbing impacts by a 20 metre buffer.	Life of Project (Construction, Operation and Decommissioning)
	The two identified sites of cultural significance that lie outside the Project access route/Development Footprint will be retained. The sites will be included on all applicable construction plans and the locations made known to all work crews working in the vicinity of the site to ensure the sites are not inadvertently harmed.	Pre-construction
	A reassessment and detailed mapping of the AHIMS site #37-1-0053 will be conducted in accordance with the provisions outlined in the ACHMP.	Pre-construction
	Four known Aboriginal sites, 37-1-1027 (Redlynch Creek IF1), 37-1-1032 (Ringwood Gully IF6), 37-1-1033 (Killoe Creek GG1), and 37-1-1037 (Rocky Creek Gully OS4) will not be harmed by the Project as they are located outside the Access route and the Development Footprint.	Pre-construction
	Seven known Aboriginal sites, 37-1-1028 (Rocky Creek Slope IF2), 37-1-1029 (Wollara Road IF3), 37-1-1030 (Monaghans Creek IF4), 37-1-1031 (Rocky Creek Gully IF5), 37-1-1034 (Redlynch Creek OS2), 37-1-1035 (Redlynch Creek OS1), and 37-1-1036 (Redlynch Creek OS3) will be salvaged by a surface collection of visible artefacts. The recommended methodology for the salvage will be set out in the ACHMP and will include the measures outlined in Section 9.2.1 of the ACHAR.	Pre-construction
	Further recording and investigation of the grinding groove site (Killoe Creek GG1) will be conducted. The methodology of this investigation will be set out in the ACHMP but will include detailed mapping and photography of the site.	Pre-construction
	All land-disturbing activities must be confined to within the Addendum study area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment will be required.	Life of Project (Construction, Operation and Decommissioning)
Historic heritage	Impacts to the areas of high historical archaeological potential should be avoided wherever possible. An exclusion zone of at least 20 m should be established around identified areas of high historical archaeological potential (e.g. slab hut).	Life of Project (Construction, Operation and Decommissioning)

Aspect	Management/Mitigation Measure	Timing
	If impacts to areas of high historical archaeological potential cannot be avoided through design changes, further assessment and investigation would be required prior to the commencement of construction activities. This would include the preparation of an archaeological research design and test excavation methodology to confirm the extent of historical archaeological remains present, and the likely significance level of any historical archaeological remains on the site.	Pre-construction
	All contractors and project team for the Project should be made aware of the archaeological potential and heritage sensitivity of the site, through a heritage-specific induction which outlines their requirements under the *Heritage Act 1977* and the Project Approvals.	Life of Project (Construction, Operation and Decommissioning)
	An unexpected heritage finds protocol should be implemented for the construction works in the unlikely event that historical archaeological remains should be encountered during construction works.	Construction
Land	A CEMP will be prepared by Lightsource bp that identifies erosion and sediment control measures prior to works commencing.	Pre-construction
	An ESCP will be developed as part of the CEMP, in accordance with the Managing Urban Stormwater: Soils and Construction Volume 1 (NSW DPIE, 2004) "The Blue Book". The ESCP will be implemented, and particular consideration of the dispersive soils identified within the Project Area will be considered.	Pre-construction
	Areas outside of the Developmental Footprint but within the Project Area may be established as a Biodiversity Stewardship Site. If determined to be compatible, cattle grazing will be facilitated throughout this area during operation.	Pre-construction
	If a sheep grazing trial is undertaken, the OEMP will incorporate a Sheep Grazing Vegetation Management Plan (SGVMP) that will outline measures for solar grazing in line with the Agrisolar Guide (2021) and other animal and welfare standards and guidelines. This will include measures to manage the stock appropriately, including a requirement to keep the stock in good health, ensuring frequent shearing (to keep wool growth low), ensure mustering is conducted in an agreed safe manner, and that any fatalities are managed. As a part of the OEMP a Wild Dog Management Plan will also be prepared for sheep grazing management.	Operation
	The OEMP will be developed in consultation with the host landholders and DPI Agriculture and will be implemented post construction.	Operation
	The Project Area will be rehabilitated to a condition as close as practicable to the condition that existed prior to construction of the Project and in consultation with the landowner. This will be achieved through the implementation of a Rehabilitation Management Plan as part of the OEMP for the Project.	Decommissioning
	The OEMP will detail the management requirements, including: • inspection of all vehicles and machinery entering the Project Area, and cleaning if applicable to remove weeds including seeds	Life of Project (Construction, Operation

Aspect	Management/Mitigation Measure	Timing
	• appropriate weed management practices to be adopted, including regular weed spraying • appropriate pest management practices to be adopted • limit vehicle access to the established internal road network.	and Decommissioning)
	All areas disturbed by the Project during construction will be rehabilitated to maintain a groundcover (minimum of 70%) to prevent soil erosion following completion of construction and during operation.	Operation
	In the event that a sheep grazing trial is conducted, a Sheep Grazing Vegetation Management Plan will be prepared in consultation with DPI Agriculture.	Operation
	The local Land Services office will be contacted in the design of the OEMP with regard to the grazing and biosecurity content.	Operation
Visual	Retention of as much existing vegetation within the Project Area as possible.	Design
	Setback of the construction compound, vehicle parking and equipment storage areas from Wollara Road by a minimum of 50 m and partially screened from view (from Wollara Road) via existing and new vegetation screening.	Design
	Signage (if required) would be of sufficient size to contain only information sufficient for the basic facility and company identification, for safety, navigation, and delivery purposes.	Construction
	Where soil disturbance is required, wind erosion controls would be implemented including the use of water carts, covering of stockpiles and avoiding ground disturbance during windy conditions.	Construction
	Lighting would be installed in accordance with AS4228-1997 – Control of Obtrusive Effects of Outdoor Lighting and designed and installed to best practice principles identified within the Dark Sky Planning Guidelines.	Construction
	Where possible colour treat ancillary components of the Project.	Construction
	Landscaping in accordance with the draft Landscape Plan (prepared as part of the VIA) to screen views of the Project Area. The plan illustrates proposed tree and shrub planting on-site, along the western perimeter of the Project Area to screen views from Wollara Road.	Construction
	Monitor visual impacts. If social issues experienced, discuss possible remedies.	Operation
	Subsequent to Project approval, refine the landscape plan to encompass the Amended Project. The aim of the detailed landscape plan is to establish a quick growing, dense screen to reduce public views of the solar panels from Wollara Road, as well as providing additional ecological benefits.	Pre-construction

Aspect	Management/Mitigation Measure	Timing
	The detailed landscape plan is to be prepared prior to landscape implementation and, be guided by ongoing consultation with NP&WS and TfNSW (particularly regarding plant species, spacing, and whether soil improvement is required and road safety measures/tree clearance zones and TFNSW relevant policy).	Pre-construction
	Progressively stabilise surfaces as construction is completed.	Construction
	Monitor road upgrades to ensure the stabilisation of verges.	Construction
	Implement correctional measures if erosion occurs or dust is an issue.	Life of Project (Construction, Operation and Decommissioning)
	Include retention of trees where possible within/near the road upgrade construction zone.	Construction
	Include protection of trees within/near the road upgrade construction zone. Monitor disturbed trees that have been heavily impacted within their root zone for stability and longevity.	Construction
	Where possible, Lightsource bp consider locating the TWA Facility: • *further from Wollara Road (compared to closer).* • *on lower ground (compared to an elevated location).* • *not in direct (i.e. straight ahead) line-of-sight of Wollara Road users (compared to directly in-line-of- sight).* • *in the vicinity of existing elements (such as trees and buildings) to provide screening, or a background that would reduce contrast in the landscape.*	*Design*
	Where possible, Lightsource bp will aim to manage potential night lighting impacts by: • *Locating common areas within the internal zone of the TWA Facility to contain light spill.* • *Selecting and designing lights to avoid excessive light spill onto surrounding areas.* • *Encouraging the use of the TWA Facility shuttle to reduce excessive vehicle headlights at night.*	*Design*
Noise and vibration	All sensitive receivers likely to be affected should be notified at least 7 days prior to commencement of any works associated with the activity that may have an adverse noise or vibration impact. The notification should include: • details of the Project • the construction period and construction hours	Construction

Aspect	Management/Mitigation Measure	Timing
	• contact information for Project management staff • complaint and incident reporting • how to obtain further information.	
	All employees, contractors and subcontractors are to receive an environmental induction. The induction must include at a minimum, all applicable mitigation measures; hours of works; any limitations on high noise-generating activities; location of nearest sensitive receivers; designated parking areas; relevant approval conditions and incident procedures.	Construction
	Contractors should keep noise to a minimum, including limiting the use of loud stereos/radios, shouting on site and car door slams.	Construction
	Where practical, no dropping of materials from height or throwing of metal items.	Construction
	The noise levels of plant and equipment should have operating sound power levels consistent with those nominated in the NVIA.	Construction
	Noise emitting plant to be directed away from sensitive receivers and to be throttled down or shut down when not in use.	Construction
	Non-tonal reversing beepers could be fitted and used on construction vehicles and mobile plant used regularly on site and for any out of hours work.	Construction
	Limit the use of engine compression brakes.	Construction
	In the unlikely event that any vibration-generating equipment would be used within the recommended safe working distances nominated in Table 6.11 of the EIS, the following is recommended: • An independent specific structural assessment is undertaken on the structure to ascertain the structural integrity and its ability to withstand vibration, and establishment of an appropriate vibration criterion. • A dilapidation survey is undertaken on the structure prior to works commencing, and regular inspection of the structure throughout the construction activities. • Site specific vibration minimum working distances are established for the nominated equipment on site. • Where appropriate, continuous vibration monitoring is conducted on the structure for the duration of the period of construction while vibration generating equipment is used. The vibration logger should be equipped with the facility to remotely alert the site to reduce or cease construction activities if vibration levels are approaching the criterion threshold.	Construction
	Prior to the commencement of construction, finalise and implement the mitigation measures/controls outlined in the Draft Construction Noise and Vibration Management Plan (DCNVMP), which has been prepared for the management of potential noise and vibration impacts associated with Ringwood Road upgrade works.	Construction

Aspect	Management/Mitigation Measure	Timing
Traffic and Transport	Prior to the commencement of construction, a Construction Traffic Management Plan (CTMP) would be prepared in accordance with relevant guidelines and in consultation with TfNSW, Upper Hunter Shire Council, National Parks and Wildlife Service and any other relevant stakeholders. The CTMP would outline how construction activities would avoid, mitigate and manage risks involving construction activities, users of the traffic and transport network and residents.	Pre-construction
	As part of the Construction Traffic Management Plan (CTMP) to be prepared post-approval, a Vehicle Movement Plan will be included that clearly shows the construction vehicle routes and permitted movements, including restriction at the Ringwood Road/Golden Highway intersection (left in/left out movement permitted). The CTMP will also encompass a Drivers Code of Conduct that all construction phase vehicle drivers (including of light vehicles) would need to read and sign to confirm their responsibilities and reinforce correct behaviour.	Pre-construction
	Osborn's Transport, Merriwa Pre School, Scone Grammar School and Scone High School would be consulted on the proposed formalisation of the bus stop on Ringwood Road at the Golden Highway intersection and informed of the additional construction traffic that would be generated by the Project.	Pre-construction
	Additional signage and line marking is recommended at the Golden Highway and Barnett Street intersection and installation of warning signs ("Symbolic Truck") are recommended near the primary site access point.	Pre-construction
	The community would be notified in advance of proposed road and transport network changes through appropriate media and other forms of community liaison.	Construction
	Where relevant, Road Occupancy Licences (ROLs) and crane permits would be submitted and approved prior to the closure of any roads.	Construction
	Construction workers would be encouraged to carpool or use the shuttle buses to travel to and from the construction site.	Construction
	Parking requirements for the Project during construction and operation would be provided on-site, and parking would not be provided on public roads adjacent to the Project Area.	Life of Project (Construction, Operation and Decommissioning)
	Additional warning signs are recommended along sections of Ringwood Road and Wollara Road where the road narrows and near the site access points.	Construction
	Swept paths of the proposed site access points with high resolution surveys/aerials would be developed as the project progresses to determine the most appropriate site access arrangements.	Construction
	A detailed Oversized Over Mass (OSOM) vehicle route assessment would be undertaken by the construction contractor and	Pre-Construction

Aspect	Management/Mitigation Measure	Timing
	outlined in the Transport Management Plan. The Plan will detail OSOM route, duration, road closures, traffic closures, traffic detours, notifications and any required Traffic Guidance Schemes.	
Water Resources	Solar panels will be designed to provide a minimum of 300 mm freeboard for the lowest edge above the maximum 1% AEP flood level.	Design
	Solar panel piles will be designed to withstand the 1% AEP flood velocities expected in the Project Area.	Design
	No sensitive infrastructure (e.g., substation, BESS, etc.) will be placed within 20 m of any Strahler 3 or above order streams.	Design
	All waterway crossings will be designed and constructed in compliance with DPI Water Guidelines.	Design and Construction
	Further flood investigations will be carried out where required during detailed design to confirm the flood immunity objectives and design criteria for the Project are met.	Design
	A Construction Soil and Water Management Plan (CSWMP) will be prepared to outline measures to manage soil and water impacts associated with the construction works.	Pre-construction
	Debris will be cleared from fencing following flood events.	Life of Project (Construction, Operation and Decommissioning)
	An Operational Environmental Management Plan (OEMP) will be developed for the Project to address potentially adverse impacts on the receiving environment surface water quality during the operational phase. This will include the development and appropriate maintenance of suitable ground cover around solar panels, and grassed table drains near access tracks to minimise the potential for erosion and export of sediment. Additional measures for the treatment of stormwater quality are not considered necessary.	Operation
	Water sources would be confirmed during the detailed design phase and in consultation with suppliers and landholders and be subject to availability.	Design
	Post-construction, disturbed areas will be stabilised by the establishment and maintenance of a vegetated groundcover consisting of low-growing grasses.	Post-construction
	Road repairs and upgrades to Ringwood Road and culvert upgrades will include: • Appropriate scour protection will be designed for the road repairs and culvert upgrades • Road and culvert upgrades will be designed to maximise afflux at an acceptable level	Pre-construction

Aspect	Management/Mitigation Measure	Timing
	• Culverts will be designed to accommodate a 5% AEP event • Culverts will be constructed at existing invert levels or similar to maintain low flow conveyance in channel.	
	Works will be setback from the mapped watercourses in accordance with the Guidelines for Controlled Activities on Waterfront Land – Riparian Corridors (DPE 2022).	Construction/Operation
	A Construction Soil and Water Management Plan and an Erosion and Sediment Control Plan will be developed in consultation with and in accordance with industry standards including the guideline, Managing Urban Stormwater: Soils and Construction (Landcom 2004).	Pre-construction
	In the event of fish kills within the vicinity of the Project, DPI and the Environment Protection Authority will be contacted. All works other than emergency response procedures will cease until the issue is rectified.	Life of Project (Construction, Operation and Decommissioning)
Hazard, Risk and Bushfire Threat	Lightsource bp will implement a range of technical and non-technical risk mitigation and management measures including rigorous design standards and maintenance practices. Compliance with HIPAP 4 criteria is conditional on these technical and non-technical risk mitigation and management measures being implemented.	Design
	Electrical transformers to be designed, installed, operated and maintained in accordance with relevant Australian Standards.	Life of Project (Construction, Operation and Decommissioning)
	A Final Hazard Analysis and Emergency Plan will be developed as the Project design progresses toward completion to ensure the final Project design adheres to the risk management measures outlined in the PHA and that the separation distances to the site boundary/involved dwellings are appropriate for the specific battery cell type (i.e. chemistry and capacity) to be used.	Pre-construction
	Asset protection zones will be implemented and maintained for the life of the Project.	Life of Project (Construction, Operation and Decommissioning)
	Roads and access points will be maintained throughout the Project life to allow for safe and accessible travel for emergencies (if required).	Life of Project (Construction, Operation and Decommissioning)
	An appropriate dedicated water supply for bushfire protection will be provided.	Life of Project (Construction, Operation

Aspect	Management/Mitigation Measure	Timing
		and Decommissioning)
	All project infrastructure will be designed in accordance with relevant industry standards to manage any EMF risks.	Design
	All relevant procedures in relation to a high voltage installation will be adhered to throughout the life of the Project.	Life of Project (Construction, Operation and Decommissioning)
	Public access will be restricted throughout the life of the Project.	Life of Project (Construction, Operation and Decommissioning)
	The solar farm development footprint will be managed as an Asset Protection Zone in accordance with Appendix 4 of 'Planning for Bush Fire Protection 2019'.	Construction/Operation
	A dedicated water supply for bushfire protection will include a 10,000 litre water supply (tank) fitted with a 65mm storz fitting.	Construction/Operation
	APZ's will be maintained around the perimeter of the solar farm and associated infrastructure. All APZ's / defendable spaces will be in the order of at least 10m.	Construction/Operation
	A Fire Safety Study (FSS) will be developed in accordance with the requirements of Hazardous Industry Planning Advisory Paper (HIPAP) No.2 and will meet the operational requirements of FRNSW. The FSS will consider: • The operational capability of local fire agencies and the need for the facility to achieve an adequate level of on-site fire and life safety independence. • A worst-case fire scenario including a full BESS unit fire. It will demonstrate no fire propagation within the facility. • the requirements of the Fire Management Plan (FMP) that would be prepared in consultation with NSW Rural Fire Service. • It is noted the FSS will also inform the requirements of the FMP including: • the methods and resources needed to manage and extinguish lithium battery fires • the management of a defendable Asset Protection Zone (APZ) as described in Planning for Bush Fire Protection 2019. The FSS will inform the requirements of an Emergency Response Plan (ERP) that will be prepared in accordance with HIPAP 2 prior to commencing construction of the BESS. The ERP will inform the requirements of an Emergency Services Information Package (ESIP) that would be prepared in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans. Both the ERP and the ESIP will: • inform first responders of site-specific features and safety measures required to ensure they are able to undertake their duties	Pre-construction

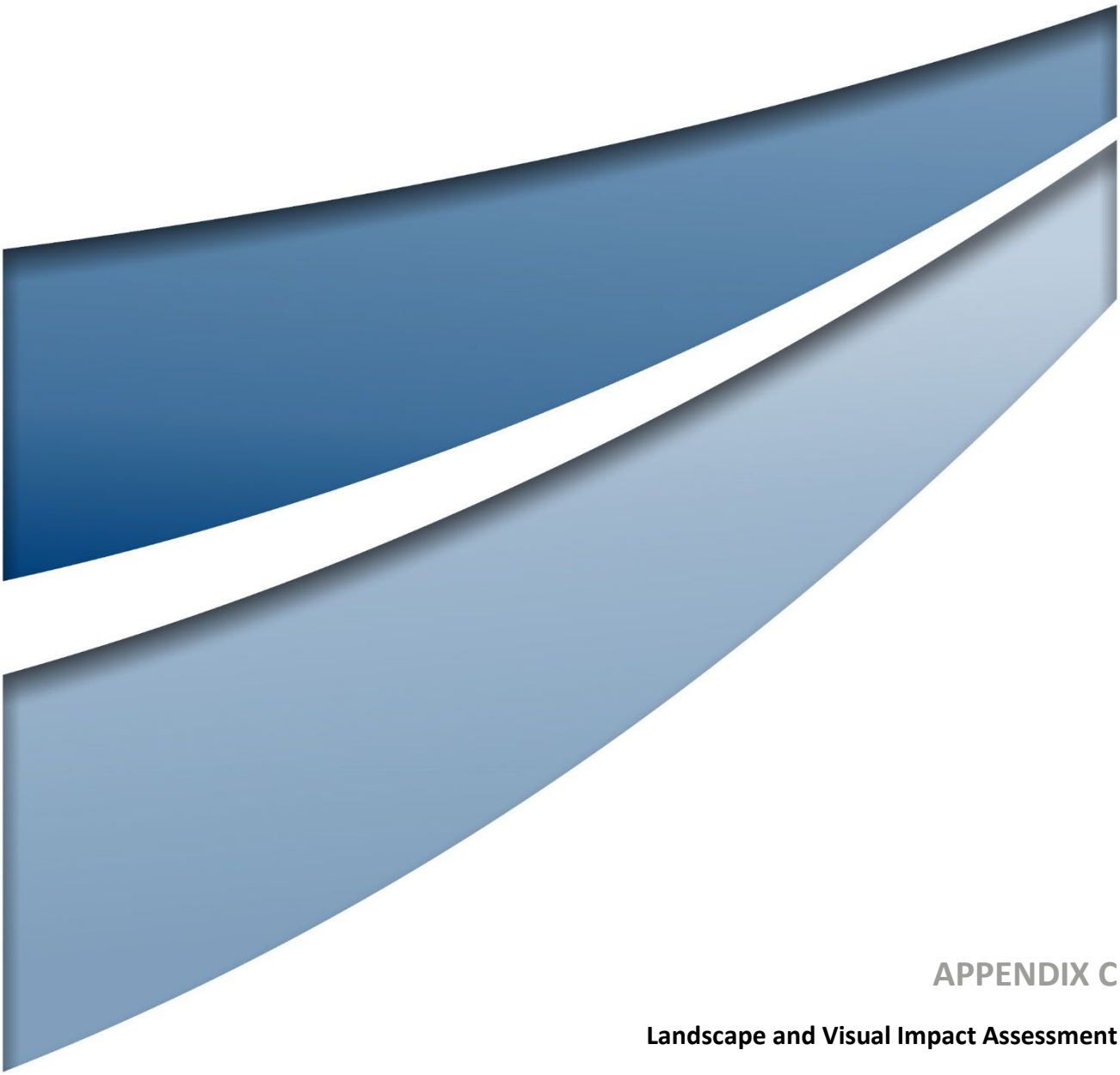
Aspect	Management/Mitigation Measure	Timing
	effectively • include agency specific Standard Operational Guidelines.	
	The FSS will consider fire propagation and a worst-case scenario will be considered within the FSS.	Pre-construction
	The Emergency Plan will be developed in accordance with the HIPAP No.1 and will be informed by the findings of the PHA.	Pre-construction
	An Emergency Services Information Package and an Emergency Responders Induction Package will be prepared for the site prior to construction. • The Emergency Services Information Package (ESIP) will be prepared in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans. • The Emergency Responders Induction Package is developed for the site in consultation with, and to the satisfaction of FRNSW, NSW RFS and NPWS. The package will inform first responders in accordance with agency specific Standard Operational Guidelines.	Pre-construction
	Implement and maintain APZ distances applicable to the TWA Facility, including: • *Upslope – Grassland 10 m, Woodland 12 m, Forest 24 m* • *Downslope (0-5 degrees) – Grassland 12 m, Forest 29 m*	*Pre-construction*
	Provide an adequate supply of water at the TWA Facility in accordance with PBP, 2019. This will include the following: • *Dedicated on site firefighting water supply (minimum of 100,000 Litres) – in addition to the firefighting supply required for the proposed solar farm (volume to be confirmed during the assessment process by the NSW RFS).* • *Provision of connection suitable for firefighting purposes located within the TWA Facility (65 mm Storz).* • *Fire hydrant/hose reel systems and all firefighting equipment installed and maintained in accordance with relevant Australian Standards.*	*Pre-construction*
	Include specific bushfire protection measures for the proposed TWA Facility within the Emergency Plan (and broader Risk and Emergency Plan), in accordance with PBP and in consultation with NSW RFS and NPWS. Detailed design of the TWA Facility and final siting will consider the requirements of PBP and provide for the implementation of appropriate bushfire protection measures. The Emergency Plan will include additional bushfire risks and mitigation measures associated with the TWA Facility, including: • *Detailed measures to prevent or mitigate fires igniting, outlining:* ○ *APZ locations and management requirements.*	*Pre-construction*

Aspect	Management/Mitigation Measure	Timing
	○ *Access locations, passing bays and any alternate emergency access.* ○ *Water supply and any other bush fire suppression systems.* ○ *Code of Conduct (or similar) applicable to all staff and occupants outlining requirements to reduce potential ignition sources (i.e. no smoking or contained smoking areas, restricted access to fuel and electrical sources, no uncontained flammable liquids on site etc.).* • *Work that should not be carried out during total fire bans during construction/operation.* • *Availability of fire-suppression equipment.* • *Storage and maintenance of fuels and other flammable materials.* • *Notification of the local NSW RFS Fire Control Centre for any works that have high potential to ignite surrounding vegetation during construction/operation/maintenance, proposed to be carried out during a bushfire fire danger period to ensure weather conditions are appropriate.* • *Development of any proposed land management practices either within the Feasibility Area and more broadly within the Project Area with consideration of existing land management practices undertaken within the National Park.* • *Appropriate bush fire emergency management and relevant evacuation plan.* • *An appropriate evacuation response in the event that an evacuation is required, including* ○ *Assigning responsibility for management actions.* ○ *Identifying the relevant contact details (RFS, FRNSW etc) who should be contacted and when.* ○ *Development of appropriate triggers for evacuation based on the applicable fire danger rating.* ○ *Identification of emergency assembly points on site and appropriate safety procedures* ○ *Identification of safe assembly points offsite and relevant routes* ○ *Instructions relating to sheltering on site (if required)*	
	The Bushfire Attack Level (BAL) construction standard will not exceed BAL-29, and a a minimum a BAL 12.5 construction standard will be applied.	*Pre-construction*

Aspect	Management/Mitigation Measure	Timing
Social Amenity	A Community Engagement Strategy will be prepared for the Project to include consistent, transparent and proactive information provision and consultation with stakeholders throughout Project development.	Pre-construction
	A Community Benefit Sharing Strategy will be developed in consultation with local stakeholders to target investment to local needs and priorities and cognisant of activities/efforts of adjacent projects.	Pre-construction
	Design and construct the TWA Facility to reduce impacts on local businesses and services including: ○ encouraging workforce to remain on site and get daily needs met on site ○ limiting use of personal vehicles ○ providing an appropriately stocked and staffed first aid station ○ providing access to telehealth services ○ consultation with the local hospital.	Construction
	Prepare and implement an Emergency Plan with due consideration to additional bushfire risks associated with the inclusion of the on-site TWA Facility.	*Construction*
	Prepare and implement a Traffic Management Plan.	*Construction*
	Implement the Amended Accommodation and Employment Strategy	*Pre-construction* *Construction*
	Prepare and implement a Code of Conduct for the resident Project workforce at the on-site TWA Facility, to ensure that all social, ecological, environmental and safety requirements are understood and adhered to by all workers.	*Construction*
	Prepare and implement Water Sourcing Strategy and Waste Management Plan	*Construction*
	Develop and operate an on-site Sewage Treatment Plant (STP) for the on-site TWA Facility	*Construction*
Economic	A Community Benefits Sharing Strategy will be developed and implemented for the Project including a VPA with UHSC.	Pre-construction
Waste Management	Lightsource bp will prepare a Waste Management Plan, which will include a detailed breakdown of the waste types and quantities in accordance with relevant legislation and guidelines. Waste will be reused and recycled in accordance with a waste management hierarchy. The waste management plan will include the following:	Construction

Aspect	Management/Mitigation Measure	Timing
	• a summary of the waste types, classification and estimated annual quantities of wastes produced during the construction of the Project • measures to manage waste disposal in accordance with the principles of the waste hierarchy, with emphasis on reducing, reusing and recycling wastes prior to disposal • the procedure for assessing, classifying and storing waste in accordance with EPA guidelines • procedures for storage, transport and disposal of waste • monitoring, record keeping and reporting, including the use of waste tracking data to demonstrate the lawful disposal of contaminated products, waste or residues generated by the Project (if any).	
	Management of wastes generated during the operational phase of the Project will occur through a Waste Management Plan as part of the OEMP.	Operation
	A Decommissioning and Rehabilitation Management Framework has been prepared for the Project to demonstrate a commitment to ensuring appropriate environmental management is undertaken during decommissioning and rehabilitation phase in accordance with legislative requirements, conditions of consent, stakeholder interest and industry best practice. The Framework will be updated throughout the life of the Project as appropriate.	Decommissioning
	The Waste Management Plan will be developed in consultation with the Upper Hunter Shire Council and surrounding LGAs including Mid-Western Regional Council.	Pre-construction
	A 94% recycling rate by weight will be achieved for the panels during each stage of the Project.	Life of Project (Construction, Operation and Decommissioning)
Air Quality	As part of the CEMP, protocols to minimise air emissions during construction will include: • water suppression on all exposed areas, unsealed roads and stockpile area when required (i.e. if visible dust emissions are observed) • the location and scale of activities which generate dust emissions would be modified and limited during periods of dry and windy weather • engines to switch off when not in use for prolonged periods • development of a complaints procedure to identify and respond to complaints.	Construction
	Areas within the Project Area which have been temporarily disturbed by construction and operational activities will be	Life of Project

Aspect	Management/Mitigation Measure	Timing
	rehabilitated.	(Construction, Operation and Decommissioning)
	Once construction has been completed, ground cover will be established and maintained in accordance with the OEMP.	Operations



APPENDIX C

Landscape and Visual Impact Assessment

Goulburn River Solar Farm

Addendum 2 - Temporary Workers Accommodation Facility

LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

Prepared for Umwelt Pty Limited
2024

enVisage

Goulburn River Solar Farm

Addendum 2 – Temporary Workers Accommodation Facility

LANDSCAPE CHARACTER and VISUAL IMPACT ASSESSMENT

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Addendum 2 revision	Date of Issue	Author	Reviewed/ Approved for issue
Rev 1	6 May 2024	Alison Dodds	Stacey Brodbeck
Rev 2	23 May 2024	Alison Dodds	Stacey Brodbeck

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Tables

1 Introduction

1.1 Purpose of this report

This report is an Addendum (Addendum 2) to the landscape character and visual impact assessment (LCVIA [1]) which assessed the proposed Goulburn River Solar Farm and Battery Energy Storage System (BESS), at Goulburn River near Merriwa (the EIS Project). The LCVIA informed the development application for the EIS Project, submitted to the Department of Planning and Environment (DPE) (now the Department of Planning, Housing and Infrastructure (DPHI)) for determination in 2023.

Following exhibition of the Project, an Addendum to the LCVIA (LCVIA Addendum 1 [2]) was prepared to assess amendments proposed by the proponent, Lightsource Development Services Australia Pty Ltd (Lightsource bp) ('Amendment Project 1'), which included road upgrades and modifications to the solar array and BESS. Assessment results presented in LCVIA Addendum 1 (assessment of Amendment Project 1), supersede those presented in the LCVIA (assessment of the EIS Project).

LCVIA Addendum 2 has been prepared to describe and assess a further proposed amendment for an on-site temporary workers accommodation (TWA) Facility ('Amendment Project 2'). The need for an on-site TWA Facility was determined through consultation with government agencies and in response to agency submissions during DPHI's assessment of Amendment Project 1. The TWA Facility would be developed within the western portion of the existing 'Development Footprint' (defined and assessed within the EIS Project, subsequent Amendment Project 1 and Amendment Project 2), and would span an area of approximately 3 hectares (ha). The area is described in Amendment Project 2 as the 'TWA Facility Feasibility Area'. A representative worst-case location for the TWA Facility has been identified within the TWA Facility Feasibility Area for the purposes of this assessment to comprehensively assess the maximum possible impacts, particularly to road users travelling along Wollara Road.

LCVIA Addendum 2 is set out in the following sections:

- Section 2 Describes the proposed TWA Facility (Amendment Project 2).
- Section 3 Addresses potential change to landscape character impacts (compared to Amendment Project 1).
- Section 4 Addresses potential change to visual impact (compared to Amendment Project 1).
- Section 5 Addresses potential change to lighting impact (compared to Amendment Project 1).
- Section 6 Reviews and updates Project mitigation measures.

1.2 Methodology

The methodology applied in LCVIA Addendum 2 is consistent with that applied in the original LCVIA and LCVIA Addendum 1, and follows the methodology prescribed in *Technical Supplement – Landscape and Visual Impact Assessment* which accompanies the NSW Government's *Large-Scale Solar Guideline* (August 2022). In summary, impact is determined by combining *sensitivity* to change, with the *magnitude of change* that would result from the Project. The possible level of impact ranges from 'high' to 'very low' as shown in Table 1-1 .

Table 1-1: Matrix of impact [3]

	High visual sensitivity	Moderate visual sensitivity	Low visual sensitivity	Very low visual sensitivity
Very high magnitude	High	High	Moderate	Moderate
High magnitude	High	Moderate	Moderate	Low
Moderate magnitude	Moderate	Moderate	Low	Low
Low magnitude	Moderate	Low	Low	Very low
Very low magnitude	Low	Low	Very low	Very low

[1] Envisage Consulting, April 2023, *Goulburn River Solar Farm, Landscape Character and Visual Impact Assessment.*
[2] Envisage Consulting, December 2023, *Goulburn River Solar Farm, Landscape Character and Visual Impact Assessment, Addendum.*
[3] Table 9 from the *Technical Supplement.* Colour added by Envisage

2 Proposed amendments

2.1 Scope of Amendment Project 2

Amendment Project 2 encompasses the following change:

- Inclusion of a Temporary Workers Accommodation (TWA) Facility within the development footprint.

2.2 Description of proposed TWA Facility

The proposed solar farm workforce would be accommodated on-site, within a TWA Facility constructed within the western portion of the development footprint (refer to Section 2.3 for location). The TWA Facility would occupy around 3.1 ha, be designed to accommodate up to 400 workers, and be temporary, for use during the solar farm construction period.

Demountable units

The TWA would comprise multiple single storey prefabricated demountable modules (about 14 metres (m) long, 3.2 m wide and 3.2 m high), including a dining area, gym, and administration offices, as well as covered walkways and security. The modules are likely to be light in colour. Typical TWA Facility demountable buildings and a typical layout are shown in Figure 2-1.

Access and parking

Access to the TWA Facility would be via the Project entrance on Wollara Road, and internal access roads constructed for the Solar Farm (already assessed in the EIS Project and Amendment Project 1) . The main Project car parking area would be used (already assessed in the EIS Project and Amendment Project 1). There is no additional car park associated with the TWA Facility.

The TWA facility would be fully serviced to reduce the need for workers to travel to/from the Facility, providing meals for breakfast, lunch and dinner, and alcohol in a dedicated and licensed recreation area. Regardless, there would be intermittent vehicle movements as workers travel to and from the Facility at night (and therefore, use of headlights at night). Shuttle buses would be provided for this purpose. Vehicles would travel from the north via Wollara Road, to and from the TWA Facility.

Lighting

The TWA Facility would include lighting of pathways (a mixture of overhead lights and low-level bollards), external mounted lights attached to the buildings, and internal lights within the buildings. There is no change to operational lighting associated with the solar farm.

The selection of light type would be designed to avoid excessive light spillage onto surrounding areas. All lighting would comply with requirements of the *Dark Sky Planning Guideline* (DPE, 2023) and be consistent with lighting mitigation measures (included in the LCVIA) to reduce the impact of light, including principles for good lighting design, use of shielded, downward facing lights and site appropriate lighting.

Construction

The TWA Facility would likely be constructed progressively to align with the anticipated increase of construction workforce associated with the Project (construction of the proposed solar farm would take around 27 months).

There are no plans for tree removal (in addition to that already assessed in the EIS Project and Amendment Project 1) to construct the TWA Facility. Trees and vegetation identified to be retained would be protected.

There would be minor additional earthworks within the Development Footprint (to that already assessed in the EIS Project and Amendment Project 1) to prepare the TWA site.

Prefabricated TWA Facility components would be delivered via 19 m semi-trailers and assembled on-site using forklifts, using internal access roads (already assessed in the EIS Project and Amendment Project 1).

Decommissioning

Once the TWA Facility is no longer required, it would be decommissioned, and the TWA site would be cleared of any temporary infrastructure and equipment. There would be no buried services, concrete pathways, footings, awnings or other elements left behind. Once the TWA Facility is dismantled the resulting area would then be installed with solar farm infrastructure, as previously intended in the EIS Project. The entire area would be rehabilitated once the solar farm is decommissioned.