



# APPENDIX N

## Social impact assessment



## New England Solar Farm

### Social impact assessment

Prepared for UPC Renewables Australia Pty Ltd | 16 November 2018





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## New England Solar Farm

Final

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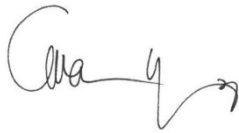
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Date 16 November 2018

Date 16 November 2018

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## Executive Summary

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UPC Renewables Australia Pty Ltd (UPC) proposes to develop the New England Solar Farm; a significant grid-connected solar farm and battery energy storage system (BESS) along with associated infrastructure, approximately 6 kilometres (km) east of the township of Uralla, which lies approximately 19 km south of Armidale in the Uralla Shire local government area (LGA) (the project).

A social impact assessment (SIA) was prepared for the project with reference to the methods outlined in the *Social impact assessment guideline for State Significant mining, petroleum production and extractive industry development* (DPE 2017). This meets the social requirement in the SEARs to include:

- an assessment of the likely social and economic impacts of the development (including the construction accommodation village), paying particular attention to the:
  - local community;
  - demand for the provision of local infrastructure and services; and
  - benefits of the development for the State and region.

The SIA was undertaken to fulfil the following objectives:

- identify the area of social influence for the project (ie where the social impacts may be felt);
- examine the profile of the community and social indicators;
- describe social trends and changes impacting the community;
- identify what matters to the community (attitudes, values, customs, concerns, way of life, aspirations);
- analyse the outlook for key economic fundamentals (eg housing, employment);
- describe local social governance, infrastructure and institutions;
- consider the likelihood, scale and distributive equity of potential social impacts of the project, both positive and negative, including the potential for cumulative impacts;
- consider the benefits of the project for the State and region; and
- provide management and monitoring recommendations, where required.

The project will have the potential to cause both positive and negative impacts to local and regional communities, with most impacts occurring during the construction phase.

The project has the capacity to provide significant benefits to the local and regional communities. The communities within the area of social influence for the project have articulated a desire to diversify the economic base of the region and to embrace renewable power generation. The local values, aspirations and way of life are broadly compatible with the nature of the project.

A temporary influx of a significant number of construction workers has the potential to impact social characteristics such as accommodation, local infrastructure, local businesses and cohesion. The project's construction workforce has potential to overwhelm the rental and temporary accommodation markets as well as community services such as GPs. However, this can be managed by the development of a construction accommodation village with associated ancillary services such as a medical post, management of which can be planned through implementation of a construction workforce management plan (CWMP) or similar prior to commencement of construction.

On balance, the project is likely to be welcomed by the community and the potential adverse social impacts associated with a large construction workforce are able to be managed or mitigated to an acceptable level through a range of actions. The project's CWMP will help to achieve the best mix of benefits for the local community without placing pressure on accommodation and other local services.



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# 1 Introduction

## 1.1 Overview

UPC Renewables Australia Pty Ltd (UPC) proposes to develop the New England Solar Farm; a significant grid-connected solar farm and battery energy storage system (BESS) along with associated infrastructure, approximately 6 kilometres (km) east of the township of Uralla, which lies approximately 19 km south of Armidale in the Uralla Shire local government area (LGA) (Figure 1.1) (the project).

The project is a State Significant Development (SSD) under the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). Therefore, a development application (DA) for the project is required to be submitted under Part 4, Division 4.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The NSW Minister for Planning (Minister), or the Minister's delegate, is the consent authority.

An environmental impact statement (EIS) is a requirement of the approval process. This social impact assessment (SIA) report forms part of the EIS. It documents the SIA methods and results, the initiatives built into the project design to avoid and minimise social impacts, and the additional mitigation and management measures proposed to address any residual impacts not able to be avoided.

## 1.2 Site description

The project will be developed within the Uralla Shire LGA. At its closest point, the project boundary is approximately 6 km east of the township of Uralla, and the northern array area starts approximately 8.6 km south of Armidale (refer to Figure 1.1).

The project boundary, which is defined as the entirety of all of the involved lots, encompasses a total area of 8,380 ha. The project boundary encompasses 61 lots, the majority of which have been modified by historical land use practices and past disturbances associated with land clearing, cropping and intensive livestock grazing.

The development footprint is the area within the project boundary on which infrastructure will be located. The development footprint encompasses a total area of 2,787 ha, which includes 1,418 ha within the northern array area, 625 ha within the central array area and 653 ha within the southern array area.

Within the development footprint, approximately 1,000 ha will be required for the rows of PV modules. The remaining area is associated with power conversion units (PCUs), space between the rows, internal access tracks and associated infrastructure (including substations and BESSs). The development footprint also includes land required for connection infrastructure between the three array areas as well as land required for new internal roads to enable access to the three array areas from the surrounding road network. Subject to detailed design and consultation with the project landholders, security fencing and creek crossings may be required on land outside of the development footprint, but within the project boundary.

The land within the project boundary is zoned RU1 Primary Production under the Uralla LEP. The properties within the project boundary are currently primarily used for sheep grazing for production of wool and lambs, with some cattle grazing for beef production.

The project is ideally located close to Transgrid's 330 kilovolt (kV) transmission line, which passes through the northern and central array areas (Figure 1.2). It also has access to the regional road network; including the New England Highway and Thunderbolts Way (Figure 1.2).

A number of local roads traverse the array areas and their surrounds, including Gostwyck Road, Salisbury Plains Road, The Gap Road, Carlon Menzies Road, Munsies Road, Saumarez War Service Road, Hillview Road, Elliots Road and Big Ridge Road, and will provide access to the three array areas from the regional road network throughout the construction and operation of the project (Figure 1.2).

The primary site access points will be from The Gap Road, Salisbury Plains Road, Hillview Road, Munsies Road and Big Ridge Road (Figure 1.2).

## 1.3 Project description

### 1.3.1 Overview

The project involves the development, construction and operation of a solar PV electricity generation facility and BESS, which consists of PV modules, batteries, inverters, transformers and associated infrastructure.

The development footprint provided on Figure 1.2 incorporates the land required for:

- the three solar array areas;
- up to three internal solar array substations and a single grid substation;
- associated BESS(s);
- operations and maintenance (O&M) infrastructure, including:
  - O&M buildings (namely meeting facilities, a temperature-controlled spare parts storage facility, supervisory control and data acquisition (SCADA) facilities, a workshop and associated infrastructure); and
  - car parking facilities;
- connection infrastructure between the three array areas (including electricity transmission lines (ETLs) and underground or overhead cabling); and
- a new internal road network to enable access from surrounding local roads to the three array areas during construction and operations.

In addition, security fencing and creek crossings (should they be required) will be placed within the project boundary.

The project will have a targeted 'sent out' electricity generating capacity of up to 800 MW (AC) and up to 200 MW (AC) two-hour energy storage. The final number of PV modules within the three array areas will be dependent on detailed design, availability and commercial considerations at the time of construction.

Electricity generated by the project will be injected into the grid via a new cut-in to TransGrid's 330 kV transmission line that traverses the northern and central array areas (refer Figure 1.2).

A construction accommodation village for non-local construction employees may be established to absorb the surge in accommodation demand that may arise as the influx of workers increases. The intent is to scale the accommodation – in terms of number of people accommodated – such that the correct balance is achieved between off-site and on-site accommodation.

The construction accommodation village will be on part of Lot 2 of DP 174053 in the northern array area (refer to Figure 1.2). The exact location of the construction accommodation village within Lot 2 of DP 174053 will be determined during the detailed design stage of the project.

Where available and suitable, local businesses will be engaged to supply goods and services to the construction accommodation village, typically consisting of provisioning, laundry, cleaning and catering.

### 1.3.2 Construction staging, duration and hours

Construction of the project will take approximately 36 months from the commencement of site establishment works to commissioning of the three array areas. It is anticipated that the project will be constructed in two stages.

Stage 1 will include complete construction of the northern array area including the grid substation and is anticipated to take approximately 25 months to complete.

Stage 2 will include complete construction of the central array area and southern array area and is anticipated to take approximately 20 months to complete. Stage 2 also assumes the construction of the BESS, which is also anticipated to take approximately 20 months to complete.

Stage 2 will commence approximately 12 months after the commencement of site establishment works planned as part of Stage 1.

It should be noted that the exact timing of each stage, including the commencement of Stage 1, the commencement of Stage 2 and the subsequent duration of the overlap between the two stages will be determined during the contracting, detailed design and financing stage of the project following project approval. Similarly, the overall duration of the project's construction will also be confirmed at this time once the preferred engineering, procurement and construction (EPC) contractor is selected and the detailed construction schedule is confirmed. The timeframes assumed as part of this assessment are indicative only and reflect a conservative upper limit of potential impacts from the project.

Construction activities will be undertaken from 6am–6pm Monday to Sunday. Exceptions to these hours may be required on limited occasions. Uralla Shire Council and surrounding landholders will be notified of any exceptions.

### 1.3.3 Construction workforce

The project will require a peak construction workforce of up to approximately 700 people.

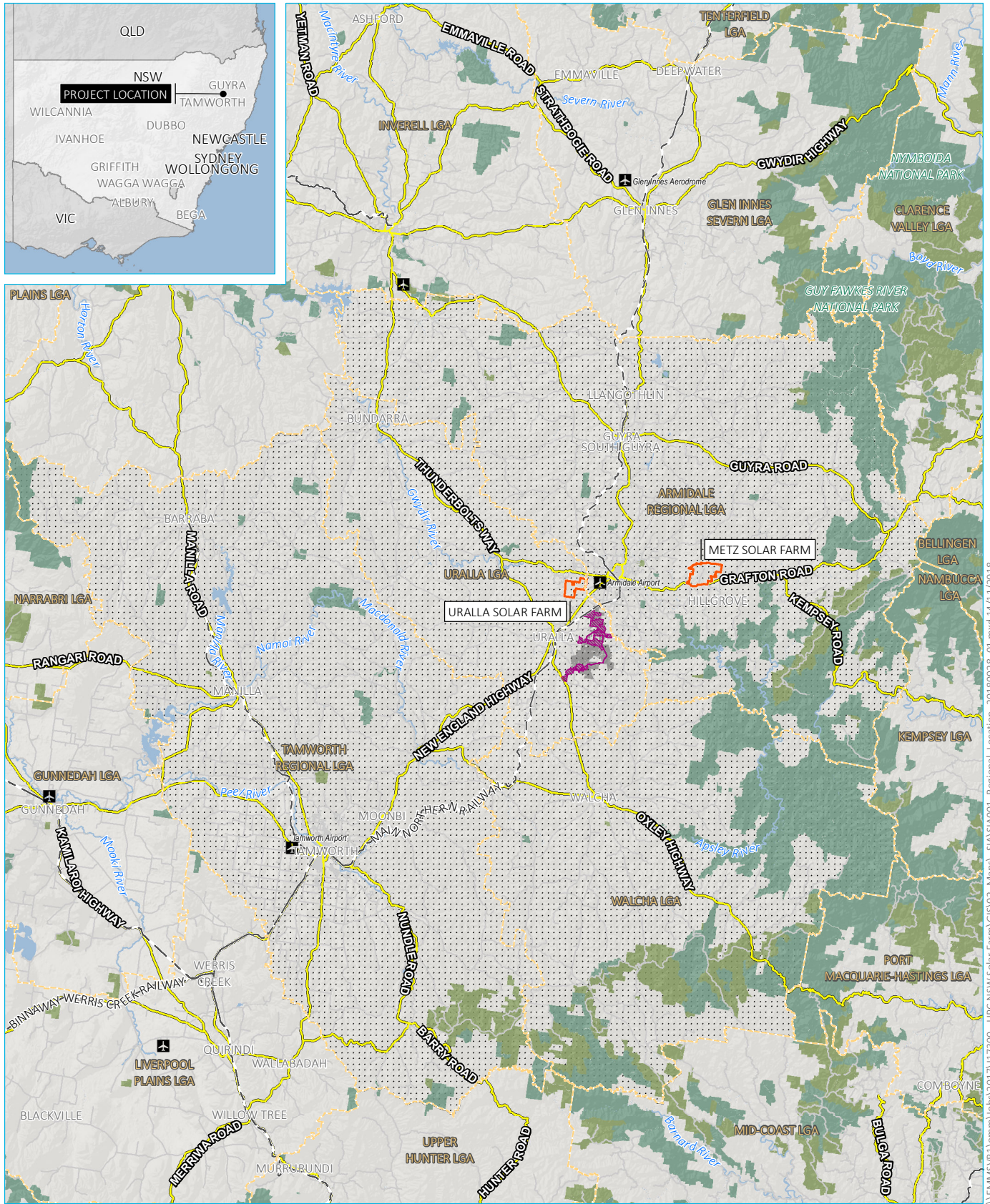
The construction of the project will generally require a workforce which begins at a modest level, the workforce then progressively builds over several months to a peak of up to 700 people, and then declines relatively quickly.

The first six months of the project will generally require less than 100 workers on-site at a given time. The growth in worker numbers is then anticipated to increase to a peak period around months 22 to 25 when over 600 workers are required. The workforce is then anticipated to reduce to less than 100 within a period of approximately five months, and is anticipated to remain under 100 for the remainder of the project's construction.

Based on this scenario, and considering external factors such as likely accommodation availability, the main period of potential impact is when worker numbers exceed 500. This is expected to be generally between month 18 and month 26. This risk is to be managed through the proposed staging of construction and the provision of on-site accommodation at the construction accommodation village.

The construction of the BESS as part of Stage 2 is anticipated to require a peak workforce of approximately 180 people and an average workforce of approximately 80 people. The workforce for the BESS has been included in the construction workforce and staging discussion provided above.





Source: EMM (2018); DFSI (2017); GA (2015)

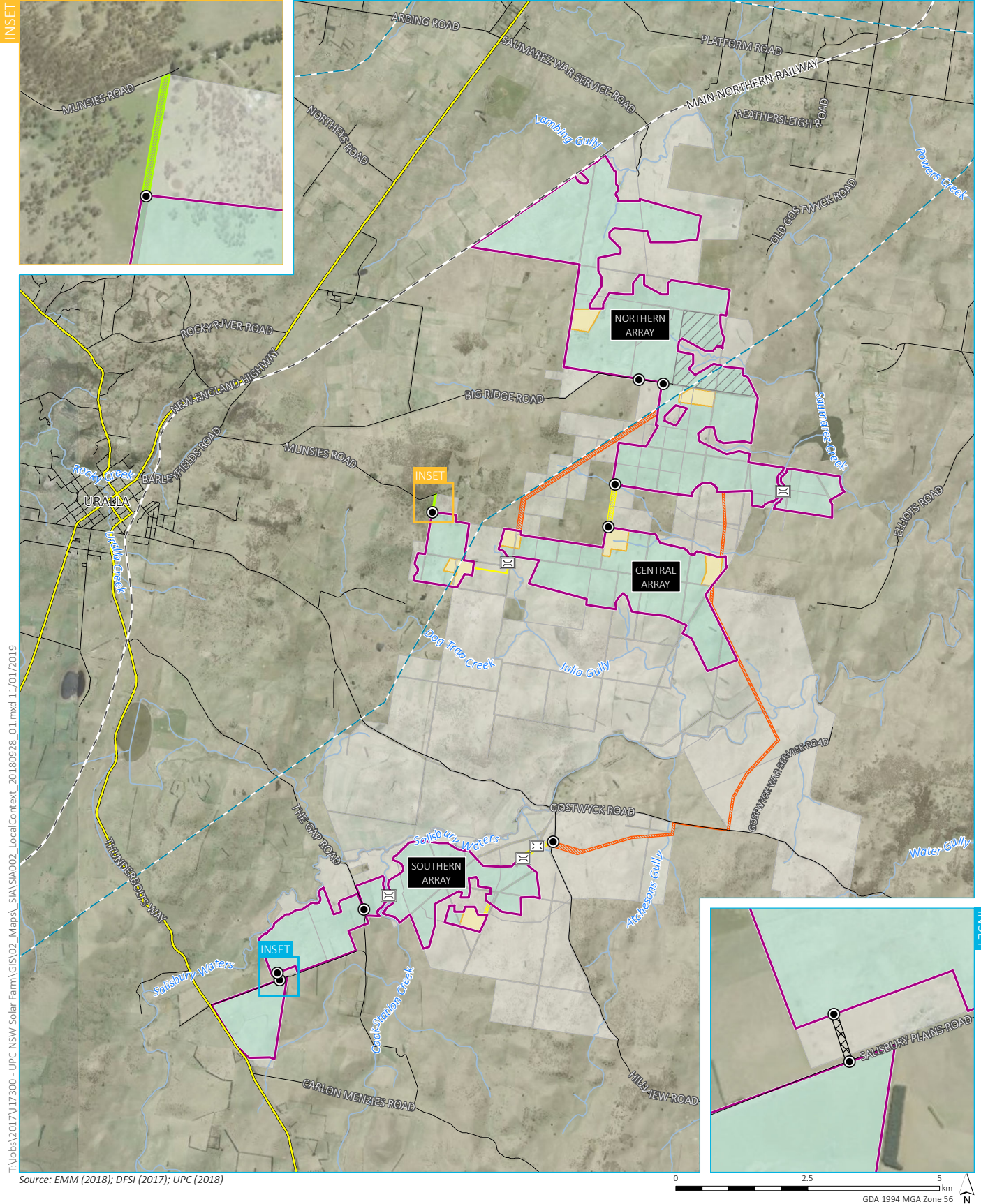


<b>KEY</b>		
Study area	Airport	Local government area
Development footprint	Rail line	Waterbody
Project boundary	Main road	NPWS reserve
Other SSD solar development	Local road	State forest
	Watercourse/drainage line	

Regional setting and the study area

New England Solar Farm  
 Social impact assessment  
 Figure 1.1

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Source: EMM (2018); DFSI (2017); UPC (2018)

**KEY**

- 330 kV transmission line
- - Rail line
- Main road
- Local road
- Watercourse/drainage line
- Project boundary
- Development footprint
- Solar array
- Potential ETL easement
- Potential site access corridor
- Potential site access/ETL easement
- Potential substation/BESS footprint
- Potential electrical cabling/site access corridor
- Potential creek crossing
- Potential site for construction accommodation village
- Proposed primary site access point

**Location of the New England Solar Farm**

New England Solar Farm  
Social impact assessment  
Figure 1.2



## 1.4 Assessment guidelines and requirements

This SIA has been prepared in accordance with the relevant government assessment requirements, guidelines and policies, and in consultation with the relevant government agencies.

The SIA was prepared with reference to the methods outlined in the *Social Impact assessment guideline for State Significant mining, petroleum production and extractive industry development* (DPE 2017).

The SIA was prepared in accordance with the requirements of the NSW Department of Planning and Environment (DPE), which are set out in the Secretary's Environmental Assessment Requirements (SEARs) for the project, issued on 8 May 2018. The SEARs identify matters which must be addressed in the EIS.

Revised SEARs were issued for the project on 11 October 2018 in response to UPC's request for a revision to the project description to include a temporary construction accommodation village (should it be required).

A copy of the revised SEARs is attached to the EIS as Appendix A, while Table 1.1 lists the individual requirements relevant to this SIA and where they are addressed in this report.

**Table 1.1** Relevant SEARs

Requirement	Section addressed
an assessment of the likely social and economic impacts of the development (including the workers accommodation facility), paying particular attention to the: <ul style="list-style-type: none"><li>- local community;</li><li>- demand for the provision of local infrastructure and services; and</li><li>- benefits of the development for the State and region.</li></ul>	Chapter 5

## 1.5 Structure of the report

This report is structured as follows:

- Chapter 2 describes the objectives of the SIA;
- Chapter 3 describes the assessment methodology adopted as part of the SIA;
- Chapter 4 describes the existing environment within which the project will be sited;
- Chapter 5 describes the impacts of the project on the local community;
- Chapter 6 describes the mitigation measures to address the identified impacts; and
- Chapter 7 provides conclusions.



## 2 Objectives

### 2.1 Objectives of this report

The SIA has sought to:

- identify the area of social influence for the project (ie where the social impacts may be felt);
- examine the profile of the community and social indicators;
- describe social trends and changes impacting the community;
- identify what matters to the community (attitudes, values, customs, concerns, way of life, aspirations);
- analyse the outlook for key economic fundamentals (eg housing, employment);
- describe local social governance, infrastructure and institutions;
- consider the likelihood, scale and distributive equity of potential social impacts of the project, both positive and negative, including the potential for cumulative impacts;
- consider the benefits of the project for the State and region; and
- provide management and monitoring recommendations, where required.

### 2.2 How will be people experience the project

The SIA examined a wide range of social factors and these, by necessity, require analysis of data such as demographics and economic indicators. The data alone, while essential to understand the characteristics of the community, does not reveal the community's voice about the project. The SIA therefore applies both quantitative and qualitative measures to achieve a realistic examination of how and why the project may bring positive, negative or neutral impacts to the communities in the area of social influence for the project (ie the study area).

Overall, the development of solar power generation within the Northern Tablelands, and in the vicinity of Uralla in particular, aligns closely with stated values of the community to the extent that they are stated in strategic policy and planning documents.

The region's strategic planning statements have embraced the idea of being a renewable energy hub and the role of the region as an exemplary community in terms of sustainability. These strategies and statements identify the alignment of renewable energy projects with the broader strategic objectives for the region and the State, such as a more diversified economic base and growth in employment. This is articulated through community plans, the voice of community leaders, and local programs.

The Hon Adam Marshall MP, Member for Northern Tablelands and Minister for Tourism and Major Events, authored an opinion piece for the *Northern Daily Leader* (13 July 2018) in which he reflects the pragmatic view that "renewable energy just makes sense – on any measure" (Marshall 2018a). The Minister also makes reference to the investment, jobs and diversification generated by renewable energy projects and that these are the positive outcomes "that our communities have been seeking for many years" (Marshall 2018a).

The Starfish Foundation, a registered charity for rural sustainability, has a number of community programs active in the New England region, including 'Farming the Sun'. The community is also engaged and supportive of Zero Net Energy Town (Z-Net) Uralla, which is assisting Uralla to transition to clean, energy self-sufficiency.

Notwithstanding those expressions of generic support for renewable energy in the region, it is noted that specific proposals to introduce renewable energy projects to farming localities in Australia have drawn some opposition, particularly from neighbours with property adjoining or nearby the proposed projects.

In considering recent community reactions to regional solar farm projects, care should also be taken to not generalise those specific issues as directly relevant to any other project. While solar farm projects share a common purpose in renewable energy generation, the local social and community context can have a significant influence on the issues that matter to the host community.

There are, nevertheless, a range of themes which are identifiable when renewable energy projects are proposed, and some consideration of these is warranted. Media coverage related to solar and renewable energy installations within other regional farming communities in NSW, Victoria and Queensland have given rise to related concerns by similar stakeholders. In addition to the issues of sterilisation of productive land and property values, adjoining landowners fear the projects will lead to traffic impacts, the spread of weeds and pest species, and visual intrusion. Along with expressing concern regarding these issues, the communities are also commonly seeking the opportunity to work through issues directly with the project proponent. In particular, communities are demanding accurate and timely information about the project, transparent engagement and 'fit-for-purpose' consultation methods.

The local community will experience the project in two, quite different, stages – the construction stage and the operational stage.

In terms of community experience of the project, the key difference between the construction and operational stages is the level of activity occurring within the surrounding community, and this is predominantly driven by the number of workers required and the volume of deliveries to the three array areas. The construction period has a markedly higher workforce demand compared to the operational stage.

It is also important to note that a significant proportion of the construction workforce is likely to be non-resident (ie originating from outside of the Uralla Shire LGA). The operational (post construction) period does not give rise to the same issue.

The economic and employment benefits for local communities (including the LGAs of Uralla, Armidale, Walcha and Tamworth) will be a positive social factor. Whilst the economic benefits of these employment opportunities have been estimated in the economic impact assessment (EIA) (refer to Appendix O of the EIS), the intangible positive social impacts of increasing employment and economic diversification in the region are more difficult to measure.

Academic research findings point to a potential for some adverse impacts for projects which require a large non-resident workforce. The caveat on this finding is that the research generally considers the mining sector, which differs from this project in two fundamental ways.

Firstly, the non-resident mining workforce involves a larger long-term operational component, whereas the proposed construction workforce for the project requires the participation of a non-resident workforce predominantly in the construction (not operational) stage. The impacts, therefore, have a shorter temporal dimension (estimated to be in the order of 36 months) for this project.

Secondly, the construction of a solar farm has a very significant proportion of construction jobs dedicated to the installation of PV modules (ie solar panels). This is a routine task which does not require specialist skills or experience, involves only basic on the job training and as such recruitment for that work can be sourced from local communities, with the attendant benefits for local employment and economic activity.

The social benefits such as employment, business activity and multiplier effects are likely to be distributed fairly broadly across the key centres of Armidale, Uralla, Walcha and Tamworth and their respective LGAs.

The social costs through adverse impacts, such as disruption to social cohesion, pressure on short-term accommodation, and additional demand on social services, will likely have a greater resonance in the town of Uralla due to its proximity to the development footprint. Noting that the need for a significant non-resident workforce is predominantly associated with the construction of the project, the impacts will be temporary. Nevertheless, attention to mitigating those potential impacts will be important for the Uralla community. As part of ongoing stakeholder engagement (refer Chapter 4 of the EIS), the local community has provided feedback that it would like to see a balance struck between utilising local businesses and supporting the regional economy while avoiding placing pressure on local accommodation, services and infrastructure. In order to achieve this, UPC will seek to utilise local workers, wherever practicable, while also having the flexibility to develop a construction accommodation village to accommodate a significant proportion of the project's non-resident construction workforce (should it be required).

As noted in Section 1.3.1, a construction accommodation village may be developed in the northern array area to provide accommodation for a component of the project's non-resident workforce. The construction of a non-resident worker accommodation facility on-site can have both a positive and negative effect. If self contained, it can act as a disincentive for those workers to contribute to the fabric of the local community and reduce the local business benefit. It generally depends on the types of services provided in the accommodation village and the extent to which the provisioning of the village favours local businesses. If not self-contained, the displaced demand for social services from smaller towns such as Uralla and Walcha can have a negative impact. UPC intends to source support services such as cleaning, laundry and catering from local providers wherever possible. This will stimulate opportunities for local businesses and generate economic multiplier effects.

Housing the project's non-resident construction workforce outside of a construction accommodation village has the potential to displace other short-term accommodation demand associated with cultural events, tourism and visitor stays. Rental squeeze, if it eventuates, could also adversely impact Aboriginal households to a greater extent than non-Aboriginal households as they represent a significant proportion of the households within the Uralla, Armidale and Tamworth LGAs who are living in rental accommodation.

Throughout community engagement as part of the preparation of the EIS, UPC has demonstrated their intention to establish a positive, long-term connection with the local community. As part of this, UPC has already committed to contribute \$250 per year for every MW (AC) of solar power installed over a period of 25 years. This contribution will start at a baseline of \$50,000 during construction and increase as the project is installed and becomes operational. This commitment has been communicated to the local community during ongoing engagement as the project's community benefit sharing initiative (CBSI) (refer Section 4.6 of the EIS).

While the construction stage and the influx of a large workforce will be a noticeable change locally, the community is, on balance, likely to find the experience to be acceptable and also likely to recognise the community and employment benefits of a diversifying regional economy. The community see themselves as resilient, sustainable and innovative. In addition, The Minister has expressed his aspirations for the broader region to become a renewable energy hub for NSW. The way the community will experience the project, seen in this broader context, is therefore as a pathway to a desired future state.



## 3 Methodology

### 3.1 Method

The *International Principles of Social Impact Assessment* defines a SIA as being:

The processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processed invoked by those interventions.

(Vanclay 2012)

SIA is an approach of assessing and predicting the likely consequences of a proposed action, or project, in social terms. This involves understanding impacts from the perspectives of those involved in a personal, community, social or cultural sense. Social assessment processes work together to provide a complete picture of potential impacts and their context and meaning.

SIA is used to predict the effects of a particular proposal on people, their way of life (how they live, work and interact with each other) their culture (norms and traditions) and their community (institutions and structures) (Armour 1990). Some individuals or groups within the community may benefit, while others may experience negative impacts. If negative impacts are predicted, it is the role of the SIA to determine how such impacts may be managed effectively to reduce the degree of social disruption to those affected.

### 3.2 Study area

The selection of the study area reflects the spatial extent of where the social impacts of the project are likely to register with the community. It is essentially the extent of material influence arising from the project.

The study area for this SIA includes the Uralla, Tamworth and Armidale LGAs. The study area was chosen to provide a representation of the individuals, groups and businesses that are likely to be most affected by the project. The Armidale and Tamworth LGAs have been included in this study area as some individuals from these areas are likely to make up part of the project's construction workforce. The regional centres of Armidale, and to a lesser degree Tamworth, are also likely to experience some impacts arising from the project, such as short-term accommodation demand. This might also extend to mid-sized towns such as Walcha, which are within a modest (<50 km) distance of the project's development footprint.

### 3.3 Assessment methodology

This SIA was undertaken using the following methodology:

- a review of social issues for the project;
- a description of the existing social environment, which involved:
  - identifying the study area for the SIA;
  - reviewing relevant government and policy relating to the study area;

- analysing primary and secondary data sources including, Australian Bureau of Statistics (ABS) data, existing social policies, plans and strategies, and media;
  - reviewing existing land uses in the described areas;
  - reviewing prevailing economic, social and demographic trends impacting local communities and businesses;
  - reviewing social infrastructure, including open space and community services; and
  - identifying existing community values, attitudes, customs and aspirations;
- a review of stakeholder engagement and community consultation undertaken as part of the project (refer Chapter 4 of the EIS) to establish the values of the communities within the study area;
  - identifying and assessing the significance of the social impacts of the project on individuals and the community in accordance with a moderate level of assessment of described in EIA-N05 - impacts have been assessed for both the construction and operation stage of the project, which involved consideration of the following issues:
    - impacts on social infrastructure;
    - impacts on community values including local amenity, access and connectivity; and
    - impacts to business, property and accommodation;
  - assessing the impact of the project in the context of other concurrent and foreseeable projects (refer Section 5.1 of this report); and
  - identifying management and mitigation measures and their feasibility for managing the impacts of the project.

### 3.4 Data sources

The following data sources were used in the preparation of this SIA:

- ABS data;
- relevant State and local government strategies, plans and policies;
- community consultation with surrounding landholders and other interested parties;
- site visits and community engagement activities;
- traffic impact assessment (TIA) (refer to Section 5.8 and Appendix K of the EIS);
- visual impact assessment (VIA) (refer to Section 5.6 and Appendix I of the EIS);
- Aboriginal cultural heritage assessment report (ACHAR) (refer to Section 5.3 and Appendix D of the EIS);
- historic heritage assessment (HHA) and statement of heritage impact (SoHI) (refer to Section 5.4 and Appendix E of the EIS);

- Hansard, NSW Parliament;
- academic research papers;
- news media;
- accommodation service provider websites (eg Bookit and Trivago); and
- rental housing provider websites (eg RealEstate, Domain and Rental).



## 4 Existing environment

### 4.1 Social and cultural setting

Uralla is a medium sized rural town on the New England Highway approximately 2.5 hours drive from Coffs Harbour and approximately 22 km from the nearest major regional centre, Armidale, to the north.

The Uralla Shire LGA is situated in the northern tablelands of NSW, approximately halfway between Sydney and Brisbane. With an elevation of 1,012 metres (m) above sea level (ASL), the area has a cool, dry climate. Geographically, the Uralla Shire LGA is on a landform which transitions between the New England Tablelands to the east and the Western Slopes and Plains to the west. This has influenced the evolution of the town and region in terms of its predominant industries and lifestyle.

The site is within Anaiwan country. The Anaiwan people have a long affiliation with the Uralla Shire LGA and there are sites known to have been used for gatherings and social organisation.

Non-indigenous settlement of the area occurred generally after the area was surveyed by Surveyor-General John Oxley in 1818. Pastoralists and squatters began to occupy the area from the mid 1800s.

A gold rush in 1855, concentrated on the Rocky Creek area, saw the local population rise significantly.

The Uralla Municipality was incorporated in 1882.

Uralla portrays itself as a thriving community with a notable reputation for decorative arts such as pottery, set amongst an historic and pastoral landscape.

There are a number of cultural events held regularly in or near Uralla. The premier event is Thunderbolts Festival (October) which includes a street parade and other festivities. Another notable event is the Lantern Parade (March) to coincide with Earth Hour.

The Member for Northern Tablelands, Adam Marshall MP, has described the local farming constituents as "resilient and innovative" and described the Northern Tablelands more generally as "the mixed agricultural heartland of this State" (Marshall 2018b). The same speech expresses concern for the social and economic resilience of towns within the electorate as a consequence of the prolonged drought.

In a separate Private Members Statement, the Member for Northern Tablelands also spoke of the entrepreneurship of the communities in his electorate. He notes the spirit of entrepreneurship being expressed in "countless tales of adaptation, ingenuity, and dedication to the local community; of local people just looking to have a go" (Marshall 2017).

Relevant to this project, The Minister also made a statement regarding an earlier renewables project, namely Sapphire Wind Farm near Glen Innes (Marshall 2016). In that statement, The Minister describes the Northern Tablelands as "the renewable energy hub of this State" (Marshall 2016).

The Minister prepared an opinion piece for the *Northern Daily Leader* in July 2018 in which he also notes the important role of renewable energy as a source of investment in regional NSW, a robust source of revenue for local economies, and the strategic advantage enjoyed by the Northern Tablelands and New England region in delivering renewable energy (Marshall 2018a).

Notwithstanding some local concerns about large-scale renewable projects, The Minister also confirmed that most renewable energy companies “...have been warmly welcomed into our region and successfully designed and completed renewable projects” (Green 2018).

Uralla has been active in promoting innovation and sustainability, particularly in terms of energy needs, through grass-roots programs such as Z-Net Uralla. Uralla has expressed a desire to also be the first zero net energy town in Australia. Uralla Shire Mayor, Michael Pearce, has described the local community as “passionate about renewable energy” (Parkinson 2014) and acknowledged the benefits of renewable energy to both the environment and the community.

## 4.2 Population and demographics

The workforce associated with a new project has the potential to cause population change in nearby communities, depending on the proportion of the workforce which is housed locally. Changes in population may result in a range of social impacts that affect individuals, families, and communities. For example, increases in population may affect (enhance or limit) existing residents’ access to local housing, services and facilities.

### 4.2.1 Community profile – Uralla Shire LGA

The population of the Uralla Shire LGA in 2011 was 6,034 compared to 6,048 in 2016, reflecting an increase of just 14 people (0.2%) residing within the area (ABS 2016a; ABS 2011). This represents an average annual population change 0.05% per year over this period which, from a practical perspective, indicates that the population is experiencing negligible change.

The median age of people in the Uralla Shire LGA, according to ABS Census 2016, was 46 years. Children aged 0-14 years made up 19.3% of the population and people aged 65 years and over made up 20.5% of the population. Due to the LGA having a higher proportion of older inhabitants it may be more difficult to find suitable employees locally. It is likely that suitably qualified individuals will be sourced from the younger populations in surrounding towns/LGAs such as Tamworth and Armidale. The non-resident workforce will result in direct and indirect benefits to local businesses in Uralla.

Aboriginal and/or Torres Strait Islander people make up approximately 11% of the Uralla Shire LGA’s population.

The township of Uralla has experienced growth over this period with an increase of 322 people residing in the township between 2011 (2,421) and 2016 (2,743) (ABS 2016a; ABS 2011). In 2016, there were 1,640 families recorded. Regional Development Australia Northern Inland’s *Regional Plan 2016-2019* (RDANI 2016a) projects that the population within the Uralla Shire LGA will increase by 19% by 2031. However, it should be noted that population growth rate projections published by DPE predict significantly less growth over the same period (ie approximately 3% growth from 2016 to 2031) (DPE 2016).

In 2016, within Uralla Shire LGA, 30.6% of the population were attending an educational institution. Of these, 29.7% were in primary school, 21.5% in secondary school and 14.3% in a tertiary or technical institution.

The majority of businesses within the Uralla Shire LGA are associated with agriculture, forestry and fishing, which contribute to more than \$100 million or 25% of the Uralla Shire LGA’s gross regional product (RDANI 2016a).

The importance of agriculture to the Uralla Shire LGA's economy is further reflected by the area's employment statistics, which indicate that approximately 400 employees or 30% of employment within the Uralla Shire LGA is supported by agriculture, forestry and fishing (RDANI 2016a).

It is likely that due to the relatively stable population of the township of Uralla and the Uralla Shire LGA changes to local population, through the influx of a construction workforce, will be noticeable and therefore it will be important to undertake respectful, inclusive and meaningful engagement with the community. As described in Chapter 4 of the EIS, UPC has been undertaking an extensive community consultation and engagement strategy with members of the local community within the Uralla Shire LGA since March 2018, including providing regular community information and feedback sessions, one-on-one meetings, maintaining a project website and informing locals via letters and advertisements in the Armidale Express, and will continue to consult the community and provide regular updates as part of their stakeholder engagement strategy (refer Chapter 4 of the EIS).

#### 4.2.2 Community profile – Tamworth LGA

The median age of people in the Tamworth LGA is approximately 40 years. Children aged 0-14 years make up 20.2% of the population and people aged 65 years and over make up 19.2% of the population. Aboriginal and/or Torres Strait Islander people make up approximately 10% of the Tamworth LGA population.

In 2016, within the Tamworth LGA, 30.2% of people were attending an educational institution. Of these, 28.9% were in primary school, 21.1% in secondary school and 11.9% in a tertiary or technical institution. In 2016, there were 35,530 people who reported being in the labour force in the Tamworth LGA. More than half were employed full-time, and 5.7% were unemployed.

#### 4.2.3 Community profile - Armidale LGA

The median age of people in the Armidale LGA is approximately 36 years old. Children aged 0-14 years make up 18.1% of the population and people aged 65 years and over make up 16.9% of the population.

In 2016, within the Armidale LGA, 38.3% of people were attending an educational institution. Of these, 20.9% were in primary school, 19.3% in secondary school and 32.8% in a tertiary or technical institution. There were 13,353 people who reported being in the labour force. More than half were employed full time.

Aboriginal and/or Torres Strait Islander people make up approximately 7% of the Armidale LGA population.

Key demographic and characteristics of the study area are shown in Table 4.1 for the Uralla, Armidale and Tamworth LGAs.

**Table 4.1 Key demographics and travel characteristics of the study area in Uralla, Tamworth and Armidale LGAs**

Characteristic	Uralla LGA	Tamworth LGA	Armidale LGA
<b>Population and demographics</b>			
<i>Populations</i>	6,048	77,029	29,449
<i>Average household size</i>	2.4	2.4	2.4
<i>Age breakdown</i>			
0-4 years	5.1%	6.6%	5.7%
5-9 years	6.7%	6.9%	5.9%
10-14 years	7.4%	6.6%	6.5%
15-19 years	6.1%	6.1%	8.7%
25-29 years	3.9%	6.0%	9.5%
30-34 years	3.5%	5.9%	6.2%
35-39 years	4.4%	5.5%	5.6%
40-44 years	5.1%	6.0%	5.0%
45-49 years	6.2%	6.3%	5.6%
50-54 years	7.0%	6.5%	5.8%
55-59 years	7.7%	6.7%	6.6%
60-64 years	8.2%	6.3%	6.5%
65-69 years	8.1%	5.8%	5.5%
70-74 years	7.4%	4.7%	5.2%
75-79 years	3.4%	3.7%	4.1%
80-84 years	2.1%	2.5%	3.2%
85 years and older	1.9%	2.5%	2.2%
<i>Qualification level</i>			
Bachelor or higher degree	16.4%	11.8%	23.2%
Advanced diploma or diploma	8.8%	7.6%	7.2%
Year 12	10.6%	11.0%	16.6%
No qualification	0.2%	0.3%	0.3%
Not stated	12.5%	13.6%	11.7%
<i>Household structure</i>			
Couples with children	38.5%	39.0%	38.8%
Couples without children	45.9%	41.2%	41.5%
One parent families	14.3%	18.3%	17.9%
Other families	1.3%	1.5%	1.8%
Lone person	Male= 22.1% Female= 77.9%	=16.7% =83.3%	=19.1% =80.9%
Other not classifiable household	1.3%	1.7%	0.5%
Group households	2.4%	3.0%	4.7%



**Table 4.1 Key demographics and travel characteristics of the study area in Uralla, Tamworth and Armidale LGAs**

Characteristic	Uralla LGA	Tamworth LGA	Armidale LGA
<b>Population and demographics</b>			
<b>Employment &amp; economic</b>			
<i>Employment status</i>			
Worked full-time	55.9%	59.9%	53.4%
Worked part-time	33.7%	29.0%	33.4%
Away from work	5.3%	5.4%	5.5%
Unemployed	5.2%	5.8%	7.7%
Youth unemployment	14.3%	12.2%	17.9%
<i>Occupation</i>			
Managers	19.0%	14.6%	14.7%
Professionals	16.1%	16.4%	23.3%
Technicians and trades workers	14.2%	14.0%	11.1%
Community & Personal Service Workers	10.2%	10.2%	11.6%
Sales workers	7.8%	9.4%	9.7%
Machinery operations and drivers	4.8%	8.2%	4.0%
Labourers	14.0%	14.0%	11.9%
Clerical & Administrative workers	12.5%	11.5%	12.4%
<i>Industry of employment (top responses)</i>			
Beef Cattle Farming (Specialised)	5.4%	3.4%	3.6%
Higher Education	5.0%	-	10.2%
Sheep-Beef Cattle Farming	4.5%	-	-
Local Government Administration	3.9%	-	-
Sheep Farming (Specialised)	2.9%	-	-
Hospitals (except Psychiatric)	-	4.6%	3.2%
Secondary Education	-	2.8%	2.9%
Coal Mining	-	2.6%	-
Supermarket and Grocery Stores	-	2.6%	-
Other Social Assistance Services	-	-	2.8%
<i>Method of travel to work</i>			
Car, as driver	65.7%	68.8%	64.2%
Worked at home	11.1%	6.6%	7.2%
Car, as passenger	4.5%	5.7%	6.5%
Walked only	4.2%	3.7%	5.4%
Truck	1.6%	1.8%	1.2%

**Table 4.1 Key demographics and travel characteristics of the study area in Uralla, Tamworth and Armidale LGAs**

Characteristic	Uralla LGA	Tamworth LGA	Armidale LGA
<b>Population and demographics</b>			
<i>Cultural diversity</i>			
Both parents born overseas	8.0%	7.6%	14.3%
Both parents born in Australia	76.4%	77.6%	69.2%
<i>Religious affiliation</i>			
Anglican	29.2%	30.2%	22.8%
No religion	23.9%	19.4%	27.4%
Catholic	20.5%	24.5%	20.2%
Not stated	9.7%	9.7%	10.3%
Presbyterian and Reformed	4.8%	4.5%	4.5%

Source ABS 2016a; ABS 2016b; ABS 2016c.

### 4.3 Existing land uses

The Uralla Shire LGA is dominated by resource-based agricultural activity. Agriculture accounts for approximately 40-50% of economic activity in some localities.

In larger regional centres such as Tamworth and Armidale, the economies are more diverse, with services predominately focused on household consumption.

The New England North West region encompasses a total of 12 LGAs in regional NSW including the Uralla Shire, Tamworth and Armidale LGAs. The gross value of agricultural production in the New England North West region, in 2016-2017, was \$3 billion, which was 21% of the total gross value of agricultural production in NSW. The New England North West region has a diverse agricultural sector. The major commodities in the region based on gross value of production are cattle and calves (\$687 million) and wheat (\$482 million) (ABARES 2018).

The development footprint for the project intersects a mix of large-scale and small-scale farms from within the Uralla Shire LGA. The agricultural properties that make up the development footprint are currently primarily used for sheep grazing for production of wool and lambs, with some cattle grazing for beef production.

The project will marginally reduce the total area of land under agricultural production in the Uralla Shire LGA and more generally within the New England North West region through the establishment of the solar arrays and associated infrastructure for the solar farm's operational life of at least 25 years. The land area taken out of production for the operational life will be partially offset by the grazing of sheep between the rows of PV modules, as discussed below.

Given that the development footprint represents approximately 0.87% of the total land area within the Uralla Shire LGA, the utilisation of agricultural land by the project will only result in a temporary negligible reduction in the overall agricultural productivity of the Uralla Shire LGA and the New England North West region. Further discussion of the project's potential impacts on land use and agriculture is provided in Section 5.5 of the EIS. Overall, it is considered that the project will result in a negligible and insignificant reduction in the overall agricultural productivity of the Uralla Shire LGA and New England North West region.

Further, as noted in the EIS, UPC is currently in discussions with a number of the project landholders to enable sheep grazing to resume on portions of the three array areas following the completion of the construction of the project. At least two of the landholders in each of the northern, central and southern arrays have expressed an interest in this. Since the 'ground coverage ratio', which is an indicator of the percentage of land area that is covered with project infrastructure, for single axis tracking solar PV module technology is typically only 30-40%, this leaves a considerable amount of grazing land that can be utilised in between the rows of PV modules. In addition, at the end of the project's operational life, project infrastructure will be decommissioned and the development footprint can be returned to its pre-existing condition suitable for agricultural land use. This will involve removing all of the above-ground infrastructure and rehabilitating the pasture (should it be required). The majority of project infrastructure will not generate toxic effluent, wastewater, emissions or other contaminants that would be expected to have a lasting negative effect on the land.

#### 4.4 Businesses

Major industries of employment across the Uralla, Tamworth and Armidale LGAs include beef- cattle farming (specialised), sheep farming (specialised), sheep-beef-cattle farming, hospitals, teaching, administration and mining.

ABS statistics for the Uralla Shire LGA indicate that the number of businesses within the Uralla Shire LGA have been generally stable, or marginally declining (from 630 to 613), over the period 2012-2015. The decline was attributable to a reduction in the number of mid-sized businesses employing 5-19 people.

Non-employing businesses represent a little over half of the number of registered businesses in the Uralla Shire LGA.

## 4.5 Housing and rental

Table 4.2 provides key statistics regarding housing type, structure and tenure within the Uralla Shire, Tamworth and Armidale LGAs.

**Table 4.2 Housing and rental data for the Uralla Shire, Tamworth and Armidale LGAs (2016)**

Classification	Uralla (LGA)	Tamworth (LGA)	Armidale (LGA)
<b>Dwelling type (% of all dwelling)</b>			
Occupied private dwellings	88.5%	88.8%	86.6%
Unoccupied dwelling	11.5%	11.2%	13.4%
<b>Dwelling structure (% of occupied private dwelling)</b>			
Separate house	96.3%	88.0%	84.6%
Semi-detached, row or terrace house, townhouse	0.4%	7.0%	8.9%
Flat or apartment	1.5%	2.6%	5.2%
Other dwelling	1.3%	1.7%	0.5%
<b>Dwelling tenure (% of occupied private dwelling)</b>			
Owned outright	41.7%	34.9%	34.4%
Owned with mortgage	33.3%	30.3%	26.0%
Rented	20.9%	30.7%	36.1%
Other tenure	1.1%	0.9%	0.8%
<b>Mortgage repayment and rent (median mortgage repayments \$ monthly/median rent \$ weekly)</b>			
Mortgage repayments	\$1,404	\$1,450	\$1,300
Rent	\$200	\$250	\$230

Source ABS 2016a; ABS 2016b; ABS 2016c.

The proportion of occupied private dwellings generally reflects the non-metropolitan state average in most of the local areas, but mostly below the NSW overall percentage.

There is a general dominance of separate houses, as opposed to semi-detached or apartment dwellings. Uralla Shire LGA has a slightly higher rate of separate house dwellings in comparison to Tamworth and Armidale LGAs, mostly due to these areas being established as regional city areas, with greater populations and more diverse dwelling types.

There was a higher proportion of dwellings being purchased and a lower proportion being rented in the Uralla Shire LGA in comparison to Tamworth and Armidale LGAs. Mortgage repayments were generally similar across the LGAs.

A desktop review of long-term rental housing available in the main towns and communities within the study area was undertaken using various websites. Table 4.3 reviews the long-term housing availability.

**Table 4.3 Long-term rental housing availability**

Town	House size			Total number of properties available
	Two bedrooms	Three bedrooms	Four +bedrooms	
Uralla	4	4	2	10
Tamworth	41	82	29	152
Armidale	23	44	19	86
Walcha	0	1	1	2
<b>Total</b>	<b>68</b>	<b>131</b>	<b>51</b>	<b>250</b>

Source: *real.estate.com.au, domain.com.au and rent.com.au.*

At the time of the investigations, there were 68 properties available across the study area with two bedroom rentals and 182 properties available with three and four plus bedrooms for rent. There were a total of 250 rental available properties across the study area.

A review of local property and real estate websites identified publically advertised rental properties. Most of the properties on the rental market are for family use as they offer more than one bedroom. The majority of the rental properties identified as part of this exercise are three to four bedroom houses within the Armidale LGA.

There are minimal one bedroom units available for rent in the townships of Uralla and Armidale. One bedroom rental properties are also not publically available in a number of surrounding townships and rural localities, including Arding, Walcha and Invergowrie.

Based on this review, it appears that there may be potential rental properties available for rent during construction. However, these options are mainly for family-based, larger household configurations. There are limited opportunities for one bedroom units in close proximity of the project.

Given that the construction period is estimated to take approximately 36 months, it has been assumed that some of the workers are likely to relocate their families to the local area. It has also been assumed that those relocating with their families would demonstrate similar household characteristics (eg household size) to those of NSW (averaged).

## 4.6 Social infrastructure

Increased activity and population growth will generally impact on infrastructure provision in the local community. Demand will increase for social infrastructure such as health, education, emergency services and community and recreation facilities. Existing social infrastructure within the Uralla Shire LGA includes:

- community facilities (eg Uralla Community Centre; Aboriginal Elders Social Group and Aboriginal Home Care Packages; Uralla Shire Library; McMaugh Gardens (Aged Care Centre); and Disability Support Groups (under the National Disability Insurance Scheme));
- open spaces (eg Hampden Park; Wooldridge Recreation and Fossicking Area; Uralla Caravan Park; Country Road Caravan Park; Uralla Swimming Pool; and MacDonald Park);
- a variety of shops and services (eg bank branches and employment services); and
- sports facilities and social infrastructure (eg a range of different sporting organisations, local clubs, and cafes and hotels).

## 4.7 Accommodation

### 4.7.1 Overview

Accommodation for construction workers will be sourced through a combination of the following approaches:

- local workers who reside in nearby centres, such as, Armidale, Uralla, Walcha and Tamworth in their own homes and will travel to and from the three array areas every day;
- workers who move into the area for the construction stage of the project, who find accommodation in the surrounding centres listed above; or
- workers who move into the area for the construction stage of the project and live in the construction accommodation village (should it be required).

Depending on the number of workers requiring accommodation in surrounding towns and regional centres, this could place pressure on local short-term accommodation and other services, which may have adverse flow-on effects. For example, construction workers may restrict the availability of supply of short-term accommodation to other users during peak tourist periods such as school holidays and the region's major festivals and annual events.

It is noted, however, that from the point of view of minimising construction stage costs and the potential for negative impacts associated with incoming workers, the 'least cost' approach is to maximise the employment of local workers who already reside in the area. Therefore, in this respect the interests of the developer and the construction contractor are therefore arguably aligned with the interests of the local community. However, the availability, capability and motivation of locals to take up available job opportunities cannot be assumed, which is why UPC is adopting a conservative strategy and applying for flexibility to establish a temporary construction accommodation village (should it be required).

As described in Section 1.3.1, a construction accommodation village for non-local construction employees may be established for the project's construction stage. If constructed, the construction accommodation village will accommodate approximately 250-500 workers (subject to demand). A significant proportion of the project's non-resident workers may be required to reside at the construction accommodation village while they are rostered on. As noted in Section 1.3.1, the exact location of the construction accommodation village within Lot 2 of DP 174053 will be determined during the detailed design stage of the project.

## 4.7.2 Accommodation providers

Table 4.4 reviews the available resources within the Uralla, Armidale, Tamworth and Walcha LGAs and their capacity to facilitate construction workers and individuals during the construction and operational stages of the project.

**Table 4.4 Accommodation in Uralla, Tamworth and Armidale LGAs**

Local government area	Accommodation provider	Capacity
Uralla	Altona Motel	16 rooms
	Aurelia's Farm	The Cottage (6 people) The Gostwyck Room (2 people)
	Bushranger Motor Inn	17 rooms
	Country Road Caravan Park	8 rooms (+ powered & unp. sites)
	Dingle B&B	2 rooms
	Elmswood B&B	1 room
	Grace Cottages	2 cottages (2 people)
	Harlow Park Horseriding	3 rooms
	Ticino B&B	2 rooms
	Thunderbolt Inn	7 rooms
	Top Pub	14 rooms
	Queen Street Uralla Caravan Park	Powered & unpowered sites
	Wayward Jerseys Farmstay	3 rooms
	Sentry Box Boer Goat Stud & Farm stay	1 cottage
	Lakeside Lodge B&B	4 rooms
	Woodhaven Cottage B&B	1 cottage
	Kentucky B and B	1 cottage
	Lochiel Cottage	3 rooms
	Retreat Shearers Quarters	3 rooms
	Myanbah Cottages	5 rooms
Yarralong B&B and Farmstay	Temporary closure due to drought	
	<b>Total</b>	<b>93 rooms</b>

**Table 4.4 Accommodation in Uralla, Tamworth and Armidale LGAs**

<b>Local government area</b>	<b>Accommodation provider</b>	<b>Capacity</b>
Tamworth	Best Western Sanctuary Inn	60 rooms
	Quest Tamworth	40 rooms
	Quality Hotel Powerhouse	81 rooms
	City Sider Motor Inn	38 rooms
	CH Boutique Hotel	62 rooms
	The Tamworth Hotel	14 rooms
	Aaron Cottage	3 rooms
	Almond Inn Motel	27 rooms
	The Duck Inn Apartments	6 rooms
	Kootingal Land view Motel	12 rooms
	Tamworth City Motel	31 rooms
	Motel Grande Tamworth	11 rooms
	Motel 359	55 rooms
	Golden Grain Motor Inn	13 rooms
	Country Capital Motel	31 rooms
	The Roseville Apartments	3 rooms
	Abraham Lincoln Motel	15 rooms
	Ibis Styles Tamworth	108 rooms
	Best Western Motor Inn	29 rooms
	Tamworth Lodge Motel	17 rooms
	Sundance Park Motel	25 rooms
	Amberoo Apartments	14 rooms
	Econo Lodge	60 rooms
	Tamworth Central Motel	5 rooms
	Mercure	52 rooms
	Town & Country Motor Inn	18 rooms
	Best Western Plus All Settlers Motor Inn	20 rooms
	The Stagecoach Motor Inn	24 rooms
	Roydons Motor Inn	12 rooms
	Colonial Inn	33 rooms
	Edward Parry Motel & Apartments	15 rooms
	McNevin's Tamworth Motel	24 rooms
	City Gate Motel	11 rooms
	Tamwell Motel & Coffee Lounges	16 rooms
Golden Guitar Motor Inn	30 rooms	
Cadman Motor Inn & Apartments	14 motel rooms (+ 6 1 bedroom & 2 bedroom apartments)	
Golf Links Motel	21 rooms	
Motabelle Holiday Units	9 rooms	
Ashby House Motor Inn	21 rooms	
Studio 637	2 rooms	
The Retreat at Frog Moore Park	5 rooms	
	<b>Total</b>	<b>876 rooms</b>



**Table 4.4 Accommodation in Uralla, Tamworth and Armidale LGAs**

<b>Local government area</b>	<b>Accommodation provider</b>	<b>Capacity</b>
Armidale	Country Comfort Armidale	42 rooms
	Lindsay House Country Hotel	5 rooms
	City Centre Motor Inn Armidale	40 rooms
	Petersons Armidale Winery & Guesthouse	7 rooms
	Moore Park Apartments	3 bedrooms
	Hideaway Motor Inn Armidale	22 rooms
	Alluna Motel	20 rooms
	Abbotsleigh Motor Inn	32 rooms
	Quality Hotel Powerhouse Armidale	57 rooms
	Moore Park Inn	20 rooms
	Armidale Pines Motel	19 rooms
	Deer Park Motor Inn	24 rooms
	Armidale Motel	21 rooms
	Elite Motor Inn	14 rooms
	Estelle Kramer Motor Inn	7 rooms
	Sandstock Motor Inn Armidale	12 rooms
	Club Motel	18 rooms
	Cedar Lodge Motel	2 suites
	New England Motor Inn	10 rooms
	Acacia Motor Inn Armidale	15 rooms
	Cotswold Gardens	24 rooms
	Armidale Tourist Park	9 rooms
	Townsmart	1 apartment
	Armidale Cottage	1 room
	White Lanterns Motel	13 rooms
	Westwood Motor Inn	252 rooms
	Westside Studio Apartments	9 rooms
	Belmont New England	4 rooms
	Loloma Bed and Breakfast	2 rooms
	Armidale Rose Villa Motel	10 rooms
	Guyra Summit Caravan Park	50 rooms
	Top of the Range Retreat	3 rooms
		<b>Total</b>
Walcha	Walcha Caravan Park	11 cabins
	Apsley Arms Hotel	Unknown
	Commercial Hotel	Unknown
	Walcha Road Hotel	3 cabins
	Walcha Royal Cafe & Accommodation	Unknown
	New England Hotel Motel	10 rooms
	Walcha Motel	19 rooms
	<b>Total</b>	<b>&gt; 43 rooms</b>

These tables provide data on existing accommodation. It should be noted that additional accommodation may be established as local entrepreneurs seek to satisfy demand through development or provision of latent accommodation options such as the use of shearers quarters or the adaptation of other structures. This capacity is acknowledged but is difficult to quantify.

### 4.7.3 Occupancy rates

Average occupancy rates across the surveyed establishments were reported as approximately 65% and up to 90-100% during peak periods.

Occupancy rates were reported as generally being above this average in establishments within Armidale (approximately 70%) and generally lower in Uralla (approximately 55%); however, consultation with establishments in Uralla and the Uralla Visitor Information Centre identified that this increases during peak periods, consistent with the trend across the broader surveyed region.

In Tamworth, the annualised occupancy rate for all establishments (hotels, motels, serviced apartments) is 49% (ABS 2016c). The rate is generally steady throughout the year but tends to lift slightly in the June quarter.

Data for Walcha occupancy rates was not available at the time of writing but might be expected to be comparable to the occupancy rates for Uralla.

### 4.7.4 Peak demand periods

The representatives surveyed identified a number of peak periods during which the townships of Armidale and Uralla supported larger numbers of tourists and visitors. The University of New England (UNE) hosts three rounds of graduations annually, which results in a large number of students and families visiting and staying locally, primarily in the township of Armidale. The township of Armidale also hosts a number of the region's major festivals and annual events, as well as sporting carnivals. These events attract local and international visitors. Peak demand periods identified by representatives from establishments in Armidale included but were not limited to the following:

- school holidays (especially when NSW and QLD holiday periods overlap);
- UNE graduations (April, October and December);
- UNE intensive study periods (normally every 2 months); and
- Armidale School Rugby Carnival (April).

Discussions with representatives from establishments in the township of Uralla indicated that major events within the town are limited to Thunderbolts Festival (October) and Seasons of New England (March).

In addition, a number of representatives from establishments within the townships of Uralla and Armidale also noted that major events in the surrounding region often result in a flow-on effect, resulting in increased occupancy of short-term accommodation options (eg Tamworth's Country Music Festival in January and Gunnedah's AgQuip exhibition in August).

A summary of the study area's major festivals and annual events, with a focus on Uralla, Armidale and surrounds is provided in Table 4.5.

**Table 4.5 Major festivals and annual events within Uralla, Armidale and surrounds**

Month	Event	Indicative timing
January	Tamworth Country Music Festival	18-27 January 2019
	NSW school holidays	Continue through to last week of January
March	Uralla Lantern Parade	24 March 2018
	Seasons of New England (Uralla)	30 March 2018
April	Armidale School Rugby Carnival	14-15 April 2018
	UNE Graduation	6-7 & 13-14 April 2018
	NSW school holidays	19-28 April 2019
July	NSW school holidays	6-21 July 2019
August	AgQuip Exhibition (Gunnedah)	21-23 August 2018
September	NSW school holidays	28 September to 13 October 2019
October	UNE Graduation	26-27 October 2018
	Thunderbolts Festival (Uralla)	27 October 2018
December	UNE Graduation	13-15 December 2018
	NSW school holidays	Commence the week before Christmas

During these periods, the region's supply of temporary short-term accommodation is almost completely utilised. As such, consideration of possible mitigative measures to reduce the project's impacts/utilisation of local accommodation during these periods may be required in order to reduce impacts to the local community.

## 4.8 Health

### a. Available services

Table 4.6 reviews the current available health services in the Uralla Shire, Tamworth and Armidale LGAs.

**Table 4.6 Health Services in Uralla, Tamworth and Armidale**

Location	Health Service	Type of Service
Uralla	McMaugh Gardens Aged Care Centre	Assisted Living Facility
	Uralla Medical Centre	Medical Clinic
	Uralla Clinic- Dr Syed Ahsan; Dr Salma Husain	General Practitioner
	TG's Child Care Uralla	Child Care Centre
	Tablelands Community Support Options	Disability services & support organisation
	Uralla Chiropractic	Chiropractor
	Australian Christian Meditation Community	Meditation Instructor
	Home and Community Care Program	Community centre

**Table 4.6 Health Services in Uralla, Tamworth and Armidale**

<b>Location</b>	<b>Health Service</b>	<b>Type of Service</b>
Tamworth	Community Health Services	Community Health Service
	Peel Health Care	Medical Clinic
	Headspace	Mental Health Services
	Oxley Health Care	Medical Clinic
	Challenge Therapeutic Services	Mental Health Services
	Billabong Clubhouse	Mental Health Services
	Carer Assist	Mental Health Services
	Centacare New England North West	Counsellor
	Hunter England Local Health Network	Medical Centre
	Tamworth Aboriginal Medical Service	Community Health Centre
	i.care Kelly Hanrahan	Psychologist
	Challenge Community Services	Disability Services and support organisation
	Family Psychology Services	Psychologist
	National Hearing Care	Audiologist
	McKellar Psychology	Psychologist
	Insight Services Group	Occupational Rehabilitation Centre
	Tamworth General Practice	General Practitioner
	Lifestyle Home Services	Home Health Care Services
	Soulful Beauty & Skincare	Skincare Clinic
Anglicare Northern Inland	Counsellor	
Armidale	Australian Unity-Home & Disability Services Hub	Home health care service
	Armidale Aboriginal Medical Service	Doctor
	Armajun Aboriginal Health Service	Aboriginal & Torres Strait Islander Organisation
	Home Nursing Group	Aged Care Service
	Bupa Aged Care Armidale	Aged care
	HealthWISE New England North West	Mental health service
	Armidale Private Hospital	Hospital
	Integral Health Armidale	Family Medical Practice
	Faulkner St Medical Practice	Medical Clinic
	Armidale Rural Referral Hospital	Hospital
	Armidale Community Health	Child, Youth and Family Health Services
	Eyra Medical and Skin Clinic	Medical Centre/ Skin Cancer Clinic
Walcha	Walcha District Hospital	Hospital
	Riverview Aged Persons Hostel	Respite care
	Walcha Multipurpose Service	Health service centre
	Walcha General Practice Clinic	General Practitioner
	Freer G R Dr	General Practitioner
	General Mental Health Services	Mental Health Care
Dental Practitioner Services	Dental Care	

#### b. Hospitalisation (Uralla Shire LGA)

Within the Uralla Shire LGA, between 2014 and 2016 there were 153.9 potentially preventable hospitalisations each year at the rate of 2,414 per 100,000, which was similar to the NSW rate (2,104.2). In 2014, 77 people experienced a barrier to health care access, with cost being the main reason at a rate of 1.7 per 100 people.

There are two General Practices in the local area and for every full-time GP there are 2,668 people.

There were 11 hospitalisations for intentional self-harm in 2014-16 at a rate of 173.7 per 100,000 people which was similar to the NSW rate.

#### c. Deaths and births (Uralla Shire LGA)

In 2016, the total number of deaths of residents was 52; with the median age of death 79 years of age in 2016. The main cause of death in 2016 in the Uralla Shire LGA was coronary heart disease (9.3%), which was consistent with Australia's leading cause of death. In 2016, there were approximately 49 births in the Uralla Shire LGA.

### 4.9 Crime (Uralla Shire LGA)

Table 4.7 presents data from the NSW Bureau of Crime Statistics and Research including the major offences within the Uralla Shire LGA and their ranking in 2016 and 2017 in comparison to other LGAs in NSW.

**Table 4.7 Uralla Shire LGA crime offences and ranking**

Offence Type	2016 LGA Rank	2017 LGA Rank
Domestic violence related assault	64	71
Non-domestic violence related assault	96	112
Sexual assault	1	75
Break and enter dwelling	119	106
Break and enter non-dwelling	110	107
Motor vehicle theft	106	85
Steal from motor vehicle	118	110
Steal from dwelling	83	90
Fraud	101	101
Malicious damage to property	112	107
Harassment	91	103
Arson	66	108
Prohibited weapons offences	52	59
Trespassing	62	95
Liquor offences	86	56
Breach bail conditions	112	105
Breach AVO	103	102

Source: NSW Recorded Crime Statistics 2013 to 2017

*\*The rates are calculated per 100,000 population for each LGA where the LGA population is greater than 3,000. Caution should be used when comparing rates when incident numbers are small, since large percentage change in rates between periods will result from small changes in incident counts.*

Table 4.7 suggests that the crime rate in the Uralla Shire LGA is quite low; however, the Uralla Shire LGA was ranked number 1 in 2016 for sexual assault. The 2017 ranking shows substantial decrease in this offence.

Crime, security and safety should be monitored during construction and operation due to increase in individuals. Vandalism and theft could present a risk during the project's construction period. UPC should consider safety and workforce procedures on-site to mitigate this risk.

## 4.10 Transport infrastructure

### a. Airport

The closest airport to Uralla is Armidale Regional Airport, which is operated by Armidale Regional Council. It is approximately 20 minutes drive from Uralla. The airport is serviced by three airlines. Qantaslink and Regional Airlines (REX) both offer daily return flights from Armidale to Sydney. Fly Corporate provide daily, return weekday flights to Brisbane.

A variety of options are available to passengers arriving at or departing from Armidale Airport such as airport shuttle, private transfers, rental cars and taxi services. Hire car providers include AVIS, Hertz, Thrifty, Realistic and Budget.

A \$10 million upgrade of Armidale Regional Airport was completed in December 2017, creating a new terminal building with improved check-in, baggage, handling, food, beverage and retail facilities, as well as enhanced parking. Continued upgrades to the airport are planned for the coming years.

### b. Road network

The New England Highway extends north/south through the Uralla Shire LGA. The road is fully sealed and maintained by NSW Roads and Maritime Services (RMS). Other regional roads within the Uralla Shire LGA include Thunderbolts Way, Bundarra Road and Barraba Road, which are maintained by Uralla Shire Council on behalf of RMS.

A number of local roads traverse the array areas and their surrounds, including Gostwyck Road; Salisbury Plains Road; The Gap Road; Carlon Menzies Road; Munsies Road; Saumarez War Service Road; Hillview Road; Elliots Road and Big Ridge Road, and will provide access to the three array areas from the regional road network throughout the construction and operation of the project (Figure 1.2).

Many local roads, including town streets are sealed, however lower trafficked roads (including a number of the roads within the vicinity of the three array areas) are unsealed. Generally, the local road network is all weather, however, during periods of greater rainfall, some roads will be inundated and the majority of road inundation sites will be at causeways which are posted with depth markers to advise motorists of water depths.

The project's potential impacts on the local and regional road network have been considered as part of the TIA (refer Section 5.8 and Appendix K of the EIS).

### c. Train and coach network

The local area is serviced by a train station (Uralla Station) which generally connects the regional network. Train services between Sydney and Armidale stop at Uralla.

Edwards Coaches provides several routes, one in particular connecting Armidale and Uralla. Route 480 is the Uralla/Armidale Loop which operates via the New England Highway to Uralla Tourism Centre, Bridge Street, which runs Monday to Friday.

## 4.11 Tourism

Table 4.8, Table 4.9 and Table 4.10 provide a summary of the tourism markets and key attractions in the Uralla Shire, Tamworth and Armidale LGAs, respectively.

**Table 4.8 Tourism in Uralla Shire LGA**

Key Measures	Key Attractions
Visitors (000's) = 17	Galleries and antique shops
Nights (000's) = 49	Fine food & wine
Average length of stay (nights) = 2.9	Fossicking
Expenditure (\$ million)= 6	Cultural heritage tours
Average spend per visitor (\$) = 373	Thunderbolt's Festival
Average spend per night (\$) = 129	Agricultural ventures

Source: RDANI 2016a

**Table 4.9 Tourism in Tamworth LGA**

Key Measures	Key Attractions
Visitors (000's) = 1,050	Agricultural ventures
Nights (000's) = 1,514	Fine food & wine
Average length of stay (nights) = 3	Outdoor & adventuring
Expenditure (\$ Million) = 280	Arts and heritage
Average spend per visitor (\$) = 267	Country Music Culture
Average spend per night (\$) = 128	Galleries and antique shops

Source: Australian Government Austrade 2017

**Table 4.10 Tourism in Armidale LGA**

Key Measures	Key Attractions
Visitors (000's) = 609	Fine food & wine
Nights (000's) = 941	Natural wonders
Average Length of Stay (nights) = 3	Art and culture
Expenditure (\$ Million) = 170	History & heritage
Average spend per visitor (\$) = 279	Galleries and antique shops
Average spend per night (\$) = 121	

Source: Australian Government Austrade 2017

In the Armidale and Tamworth LGAs for 2016, expenditure was higher in comparison to the Uralla Shire LGA, mainly due to the scale of these regions, therefore involving more visitors per year. Average length of stay across the LGAs was generally consistent.

Key attractions across the LGAs are generally similar, with fine food and wine, art and culture and music attractions being consistent across the three LGAs.

#### 4.12 Community goals and aspirations

The Uralla Shire LGA is committed to creating a unique environment which offers an excellent quality of life and economic opportunities for individuals, businesses and families in the community. As listed within the *Master Community Strategic Plan 2017-2027*, the community within the Uralla Shire LGA strives to:

- enjoy a high quality of life;
- have thriving business centres;
- have educational and job opportunities available for people with a wide range of skills and attributes;
- have an innovative, adaptive and diverse economy;
- have access to good public services and relevant infrastructure;
- have continuing improvement in its socio-economic status;
- treasure its natural and built heritage and continue to be progressive;
- ensure sustainability;
- provide security and safety for its residents;
- have a growing population and a sound demographic structure; and
- retain its own independent community based local government authority.

One of the strategies articulated by Uralla Shire Council is to promote the Uralla Shire LGA and the region as a wonderful place to live, work, visit and invest. Uralla Shire Council has completed a case study to explore the feasibility of Uralla becoming Australia's first zero net energy town, which puts the community at the forefront in the pursuit of more sustainable living.

The community has embedded a role for renewable energy production in its vision for the future both as a more diversified economy and as an attribute of an innovative and sustainable community.



#### 4.12.1 Regional

The key vision for the New England North West Region is articulated in the New England North West Regional Plan 2036 (NSW Government 2017). One of the directions provided within the plan specifically relates to the goal to the growth of the region as the renewable energy hub of NSW. The plan identifies emerging industries, such as renewable energy and green technology, as a welcome addition to the traditional economic base of the region. The strategic location of the region between Sydney and south-east Queensland is noted as an underpinning factor that can support local employment growth in renewable energy projects. As noted within the plan:

The focus of the future is to leverage the distinctive regional identity to promote intensive agriculture, horticulture, green industries, renewable energy generation and tourism.

(NSW Government 2017)

The plan also makes specific reference to Uralla Shire LGA and defines the area's key priorities as providing support for new housing, attracting younger workers by raising the area's profile and increasing awareness of job opportunities and encouraging renewable energy opportunities.

#### 4.12.2 State

The NSW Renewable Energy Action Plan (REAP), prepared by the NSW Government in 2013, continues to play an important role in the State's energy future, seeking to increase the diversity of the State's energy mix by encouraging investment in renewable energy sources, including large-scale grid-connected solar farms. The REAP notes that existing proposals for large-scale wind and solar farms will generate employment and investment from construction, operations and connection to the State's electricity grid (NSW Government 2013).

Once operational, the project will generate up to 2,000 GWh of electricity annually, depending on its final capacity, thus helping the State to meet its policy objectives. This is the equivalent of the electricity required to power up to 250,000 NSW households.

### 4.13 Local area values

The *Master Community Strategic Plan 2017 - 2027* articulates, on behalf of the community, the things that are important for the Uralla Shire LGA. Some of the key themes are:

- the quality of local community life;
- a strong and diversified economy, local services and employment opportunities; and
- the natural setting and environment.

The people of the Uralla Shire LGA have a strong connection to the area's cultural heritage. The community is renowned for its arts and crafts, particularly pottery, wool crafts, theatre and fine arts. The local community has a high volume of volunteers that create ongoing events, community groups, attractions and other services which are strongly supported.

The community is proud of the area's rich history. Uralla has more than 50 buildings and sites of heritage significance. The community collectively bought and restored McCrossins Mill in the 1980s and 1990s, and this is now a multi award-winning museum, gallery and function centre still run by volunteers. Volunteering is seen as a significant contributor to social cohesion and sense of place for the local community within the Uralla Shire LGA.

The area is at the forefront of the wool fibre industry. The area has state-funded scientific research, progressive breeding programs and high yielding production levels. The beef and lamb industry is prominent.

As noted in Section 2.2, throughout community engagement as part of the preparation of the EIS, UPC has demonstrated their intention to establish a positive, long-term connection with the local community. As part of this, UPC has already committed to contribute \$250 per year for every MW (AC) of solar power installed over a period of 25 years. This commitment has been communicated to the local community during ongoing engagement as the project's CBSI (refer Section 4.6 of the EIS).

As part of this process and broader community engagement activities, the key local area values highlighted by individuals include: views; community and ancestry; historic and cultural values; work opportunities; recreation opportunities; and the natural environment.

It is understood that Uralla Shire Council is partnering with Z-Net Uralla and local businesses, schools and landholders to transition to greater energy efficiency and sustainability within the Uralla Shire LGA. This partnership has implemented a range of initiatives from sustainable firewood production to energy audits and small-scale solar installations for homes and businesses. The community embraces these sorts of initiatives and Uralla Shire Council and Z-Net Uralla hopes to demonstrate the benefits of alternative technologies and raise awareness of sustainable practices. Statistics on small-scale solar installations, compiled by Z-Net Uralla in 2017, reveal that the Uralla community has embraced renewables (primarily through installation of roof top solar).

#### 4.14 Local area concerns and issues

A scan of political debate and news coverage for the Uralla Shire LGA and surrounds identified that existing local concerns and issues of broad community interest include:

- road upgrades and maintenance, particularly the New England Highway;
- flood risk;
- water quality;
- water sharing plans;
- drought;
- pest species (eg foxes);
- regional tourism and visitor economy; and
- the discontinuation of the Uralla Show (insufficient volunteers).

There has been some reporting of community opposition to a renewable energy development including a meeting in Invergowrie, attended by the Mayors of Uralla and Armidale. As noted elsewhere, the reported concerns include the sterilisation of productive land and the impacts of the development on adjoining land values.

It is worth noting that when the environmental assessment was exhibited for the Metz solar farm near Armidale (proposed by Infinergy Pacific Pty Ltd), there was only one submission received from a neighbour and two from the community more generally. The community submissions related to 'in principle' objection to renewable energy generally and did not make specific reference to the proposed project. The neighbour objection focussed on inadequate consultation, the loss of local arable land, hydrology, glare/glint, noise, dust, aviation impacts (reflectivity), traffic and visual impacts.

UPC has coordinated a number of different stakeholder engagement activities to discuss the project with neighbouring landholders and the local community. As part of these engagement activities, the concerns expressed by the local community with specific reference to the project have included:

- potential visual amenity impacts;
- potential for noise during construction and operation;
- potential for traffic during construction and operation;
- effects on land use and property values; and
- effects on the natural environment.



## 5 Assessment of impacts

### 5.1 Workforce impacts

Construction is anticipated to commence in mid 2019 and, depending on staging, could extend to up to 36 months. A description of the proposed staging approach is provided in Section 1.3.2.

As noted in Section 1.3.2, the exact timing of each stage, including the commencement of Stage 1, the commencement of Stage 2 and the subsequent duration of the overlap between the two stages will be determined during the contracting, detailed design and financing stage of the project following project approval. Similarly, the overall duration of the project's construction will also be confirmed at this time once the preferred EPC contractor is selected and the detailed construction schedule is confirmed.

During construction, a workforce of up to approximately 700 workers may be required at the peak period (estimated to be around month 23), which includes a peak workforce of approximately 180 for the BESS.

Based on the staging approach presented in Section 1.3.2, the anticipated workforce remains below 100 for the first six months of the project's construction and progressively builds until a peak period of four months where greater than 600 workers will be needed (anticipated to be from month 22 to month 25). The anticipated construction workforce then declines relatively rapidly over the next three months and is below 100 by month 30.

In terms of assessment, consideration of the average workforce across the 36 month construction period is not helpful because the impacts will not be experienced by the community as an average.

When the project is operational, a workforce of up to 15 FTEs will be required.

A proportion of the project's construction workforce will be supplied locally from the Uralla Shire LGA and surrounding areas.

#### i Impacts on accommodation

Impacts of accommodation will be both positive and negative, and the tipping point depends on the extent to which accommodation demand exceeds the optimum level of occupancy for existing rental and short term accommodation in the study area.

The accommodation pressure is likely to be felt predominantly in Uralla and Armidale. This is due to the likely accommodation demand arising during the peak period of workforce need associated with the UPC project and also the cumulative effect of other major projects, particularly the Uralla Solar Farm (if that were to proceed) and the larger projects known to be planned for the Armidale Regional LGA, such as the redevelopment of Armidale High School and expansion of the University of New England (UNE), should they proceed.

There is likely to be displaced demand (from Armidale) to the other main centres such as Tamworth and Walcha. There is a high degree of capacity in the Tamworth region to absorb additional accommodation demand, and to a lesser degree in Walcha.

The project includes provision for a construction accommodation village on the site of the project and this will be an important pressure valve to address surplus demand for accommodation once local accommodation options are satisfied. The scalability of the construction accommodation village will allow for occupancy rates at local accommodation to reach an optimal level and to begin absorbing additional demand to avoid market distortion and to mitigate the risk of aggressive inflation (and perhaps equally aggressive decreases) in the rental values for existing tenants in the local communities, particularly Uralla.

## ii Impacts on business and industry

The project's potential impacts on the agricultural industry arise from the occupation of agricultural land by a non-agricultural facility.

The impact of the project on the subject land will be minimised in two main ways, namely:

- the use of single-axis tracking solar PV module technology will mean there will be approximately 5-8 m in between the rows of modules, which means that up to 60% of the land within the development footprint can still be used for grazing sheep during operations; and
- the project layout (ie splitting the project infrastructure across three distinct array areas) means that there is still considerable land around the development footprint that will continue to be used for agriculture by project landholders and neighbouring agricultural operations.

There is not expected to be any significant constraint on the current or potential agricultural uses of adjoining or nearby land.

At the end of the project's operational life, project infrastructure will be decommissioned and the development footprint can be returned to its pre-existing condition suitable for agricultural land use. Specific requirements on individual land parcels will be subject to consultation with the individual landholders.

Local businesses will benefit from sub-contracting opportunities during construction and operations (eg fencing and road maintenance, vegetation management, pest control and periodic washing of the PV modules), as well as indirect economic benefits for food outlets, accommodation providers, service stations and local tradespeople (eg electricians and plumbers). This will also have multiplier effects for economic activity as local businesses contracting or servicing the demand generated by the project will themselves require secondary and support services as outlined in detail in the EIA (refer Appendix O of the EIS).

The Uralla Shire LGA snapshot for the *Northern Inland Development Plan* (RDANI 2016b) identifies the benefits of investment in local renewable energy technologies. This includes the opportunity of 'renewable energy tourism' as a driver for the local visitor economy and educational tours servicing schools from across the region. The Uralla Shire Council notes the opportunity presented by renewable energy facilities to open up ancillary services in the renewable energy value chain and to create a more stable and resilient economic base for the regional economy.

Employment in the Uralla Shire LGA is dominated by the agriculture, forestry and fishing sector. The input of the project to other sectors, particularly construction and subsequently technical services, will assist in the diversification of the local economic base. A number of the project landholders may use the income stream generated by the project to either drought-proof their current agricultural operations or diversify their economic activities by using the income to fund other ventures.

Some business owners in the region may raise concerns that the project could potentially attract their workers and that as a result they would lose staff.

### iii Impacts on travel and access

The project will require the use of local and regional roads for the transport of people, plant, materials and consumables to and from the development footprint. There is potential for the transport activity associated with the construction period to impact the normal availability of transport modes (eg flights) or to contribute to congestion on roads.

Reliable highway transport corridors traverse the region linking Sydney, Brisbane, Melbourne, the mid and far north coasts of NSW and the port city of Newcastle. A regional road network connects major centres and reasonable local road networks provide for services in each LGA. However, it is estimated that \$266 million is needed to bring roads in the Northern Inland up to a satisfactory standard.

Daily passenger rail services run from most Northern Inland centres to Sydney. Freight rail links Moree and Tamworth to Sydney and Newcastle ports and is utilised for the growing export trade. QANTAS link operate daily services to Sydney from Armidale, Moree, and Tamworth. Brindabella flies from Tamworth to Brisbane and Aero Pelican flies from Narrabri to Sydney and Newcastle. Charter air services also operate from the major airports.

Construction materials and infrastructure will be transported to the three array areas via road. Heavy vehicles up to 25 m in length will require access to the three array areas. Construction materials, infrastructure, plant and equipment required within and delivered to the three array areas will include:

- PV modules;
- piles;
- tracking tubes and associated tracker equipment (eg motors, bearings, drivetrains, etc);
- electrical infrastructure including cabling and PCUs;
- substation and BESS infrastructure;
- construction and permanent O&M buildings and associated infrastructure;
- earthmoving machinery and equipment for site preparation;
- pile-driving equipment;
- assisted material handling equipment (forklifts and cranes); and
- machinery and equipment for connection infrastructure establishment.

Oversized vehicle movements may be required for the delivery of the 33 kV/ 132 kV transformers that will be located at the solar array substations and the 33 kV/132 kV/330 kV transformer that will be located at the grid substation.

It is assumed that a large proportion of the project's construction workforce that originate in the Tamworth and Armidale LGAs will be using shuttle buses from the regional centres of Armidale and Tamworth to commute to Uralla. In addition, a shuttle bus service will operate from the township of Uralla to the relevant array area. The shuttle buses will be operated by or on behalf of UPC. The availability of shuttle buses as a main source of transport for the majority of the project's construction workforce will minimise impacts on transport and access.

There are local scheduled bus services (eg Edwards Coaches) between Armidale and Uralla but these are limited to one or two services each morning and afternoon. It is unlikely that scheduled services will align with shift phases. The scheduled services may however provide suitable services for project employees seeking transport between towns and centres at other times.

#### iv Origin of workers

The origins of the project's construction workforce may include:

- Uralla Shire LGA – approximately 10% of the project's construction workforce;
- Tamworth LGA – approximately 20% of the project's construction workforce; and
- Armidale LGA - approximately 20% of the project's construction workforce.

The remaining 50% of the project's construction workforce are anticipated to originate from outside of these LGAs. A significant proportion of the project's non-local construction workforce may be required to reside at the construction accommodation village during the peak period of construction.

The LGAs of Uralla, Armidale and Tamworth have a population which typically experiences a rate of approximately 10-13% of their communities, which are away from work or unemployed. The availability of employment opportunities which are locally based will likely be taken up by those members of the community. There are also a significant proportion of these communities who currently work part-time and may also take up opportunities to increase their participation.

Further, it should be noted that the employment opportunities generated by the project could also be taken up by younger generations. As noted in Table 4.1, youth unemployment in the Uralla Shire, Tamworth and Armidale LGAs is 14.3%, 12.2% and 17.9%, respectively, which is greater than the NSW state average (10.2%).

#### v Cumulative impacts

The energy market is evolving and there is a marked growth in large-scale renewables, both wind and solar (AEMO 2017). The Australian Government's Large Scale Renewable Energy Target proposes 33,000 gigawatt hours (GWh) to be derived from renewable sources by 2020.

This has stimulated investment in several large-scale renewable energy facilities in NSW and a number of projects are proposed in the New England region.

Clenergy proposes to develop a 100 MW PV solar farm at Metz, approximately 18 km east of Armidale (refer to Figure 1.1). The Metz Solar Farm (SSD 16\_7931) was approved by the Minister for Planning on 18 July 2017. It is expected to go into construction once financing has been secured.



Neoen is in the early stages of a proposal to develop the Uralla Solar Farm (SSD 18\_9534) within the Uralla Shire LGA, approximately 4.9 km north-west of the project that is the subject of this assessment (refer Figure 1.1). Based on the information provided within the PEA, it is understood that if constructed, the proposed Uralla Solar Farm would cover an area of up to 1,800 ha and have a targeted capacity of around 400 MWac (GHD 2018). The proposed site for the Uralla Solar Farm is identified on Figure 1.1.

In addition, Enerparc is seeking to develop the Tilbuster Solar Farm (SSD 18\_9619) within the Armidale Regional LGA, approximately 22 km north of the project. SEARs for the Tilbuster Solar Farm were released on 12 October 2018. Based on the information provided within the PEA, it is understood that if constructed, the proposed Tilbuster Solar Farm would cover an area of up to 150 ha and have a targeted capacity of around 300 MW (NGH 2018).

Based on a review of DPE's Major Projects register and consultation with both Armidale Regional Council and Uralla Shire Council, it is understood that there are a number of other projects likely to be constructed within the region. These projects are concentrated in the Armidale LGA and include:

- Armidale High School's redevelopment – a proposed redevelopment of the existing high school to establish a new, purpose-built high school with a capacity of approximately 1,580 students;
- expansion of UNE's Armidale campus to accommodate additional colleges and a small-scale solar farm (including construction of the Wright Block – three new residential blocks and associated infrastructure); and
- Armidale Regional Airport industrial park development, which will include a multi-purpose commercial land development, a business park, highway service centre and fully-serviced aviation related lots.

Good practice requires that proponents consider how their proposed development will contribute to the cumulative impact of other projects within the area of influence and evaluate the significance of that cumulative impact.

The key projects will be the other solar energy projects proposed by Clenergy, Enerparc and Neoen.

These projects will likely represent a similar scenario to the project proposed by UPC, specifically being that the impacts of the projects are greatest when the facilities are being constructed. Staging of construction is therefore important. Operational stages for the projects are not likely to represent a substantive impact, whether considered individually or as a cumulative impact. The Infinergy project at Metz, for example, proposes a staff requirement of approximately 8-10 full time equivalent staff when operational.

The challenge is in the size of the workforce during the construction period and particularly the cumulative impact given the similarity in the construction requirements, the workforce skills requirements and the material and services required for the construction.

Construction of the Metz Solar Farm is anticipated to commence in early 2019 and will require a construction workforce of up to 100 staff over approximately 12 months.

The PEA for the Neoen project at Uralla has indicated a construction period of 12-16 months and an anticipated peak workforce of approximately 500-600 staff. The PEA for the Enerparc project at Tilbuster does not provide anticipated construction timing or workforce requirements.

Cumulative impacts will need to be most closely considered regarding the construction of the Neoen project, given the project timing (ie awaiting release of SEARs), proximity to the township of Uralla and the project's northern array area, the period of construction and the anticipated size of the construction workforce. Community concerns relating to the Neoen project may require revisions to its project design or additional assessment requirements, and these factors may delay determination of the proposal by DPE.

Some flexibility will be needed in developing management solutions for cumulative impacts, particularly worker accommodation, as there is a high degree of uncertainty regarding the relative timing of construction for the local renewable energy projects. It would seem reasonable to expect some overlap of construction periods (should both the project and the Uralla Solar Farm be constructed), noting the 1-2 year construction period for the Uralla Solar Farm, but the key consideration will be the extent to which the peaks in workforce numbers coincide for these two projects. There may be some benefit to employment continuity if the projects are able to maintain a relatively steady level of demand by 'bookending' the peak periods of worker demand (ie ensuring the conclusion of the peak construction period of one project leads in to the commencement of the peak construction period for the other).

The other major projects (not related to renewable energy production) are located in or close to Armidale. This suggests that a cumulative impact is potentially one of accommodation for the aggregate workforces associated with these projects. It is unlikely that the Armidale projects will spill demand to towns such as Uralla given the availability of existing accommodation options in and near Armidale. Those projects may, however, displace accommodation demand associated with the New England Solar Farm to areas other than Armidale if the availability of accommodation in Armidale is constrained.

The most likely means of absorbing that displaced demand will be through accommodation in Tamworth, where significant capacity is available, or through the proposed construction accommodation village within the northern array area. As noted elsewhere, the capacity for accommodation at the construction accommodation village will be scalable to enable some responsiveness to accommodation issues. This is important given the number of variables which may influence the availability of accommodation at any given stage of construction for the New England Solar Farm and other local projects.

## vi [Distributive equity](#)

The social impacts, positive and negative, of any development are unlikely to be allocated in a uniform way across communities.

For this project, it is one of the key considerations regarding the effect of the non-resident workforce. The non-residential component of the workforce is expected to be housed locally and/or in the construction accommodation village.

Temporary accommodation camps typically provide sleeping quarters, food, laundry and some recreational facilities.

There is potential for a non-resident workforce to create inequities in local communities through a gender imbalance, income difference, 'fly over' effects, demand on limited social services, and disruption of social cohesion. This is typically an issue for mining and extractive industries which have a higher male representation in the workforce and are generally more reliant of fly-in/fly-out, or FIFO, workers. The project will seek to maximise local employment and arrangements are in place for sharing the benefits of the project locally, such as the establishment of the CBSI, which will enable the local community to allocate funds to deserving local community projects.

A paper prepared by Kerry Carrington and Margaret Pereira (2011) titled, *Social Impact of Mining Survey: Aggregate Results Queensland Communities*, identified a number of potential issues with non-resident workforces. Although the survey conducted by Carrington and Pereira (2011) focussed on the mining sector and the Bowen Basin in Queensland, the key findings point to issues generally with non-resident workforces.

The survey suggested that local communities have a negative view of non-resident workers (greater than 60% of respondents) because of the impact on (amongst other things):

- housing availability and affordability;
- local services and infrastructure; and
- local recreation and amenity.

A relatively modest proportion of respondents (26%) thought that the impacts would be positive on the local economy. Only 11% of respondents thought the impacts of a non-resident workforce would have a positive impact on their lifestyle and community wellbeing.

Interestingly, the survey also found that the majority of respondents supported projects where the non-resident component of the workforce was 25% or less.

Assuming that communities identify themselves at the town or regional centre scale (and not as, say, the Northern Tablelands regional community) then in terms of distributive equity the potential impact of a non-resident workforce will be most acutely felt in Uralla.

The impact of a significant non-resident workforce is, importantly, only associated with the construction period (up to 36 months). The estimated construction workforce will be up to approximately 700 (anticipated at the peak period around month 23) whereas the operation stage will require approximately 15 staff.

The research findings from Carrington and Pereira (2011) were based on a long-term operation workforce, such as is required for mining operations, whereas the non-resident workforce for the project is associated with the construction period only.

It is noted that in Tamworth LGA, approximately 57% of Aboriginal households lived in rented accommodation, which is 29% higher than other households. The rate is higher in Armidale LGA where 69% of Aboriginal households rent their accommodation. For Uralla Shire LGA, 46% of Aboriginal households rented their accommodation. Overall, the proportion of Aboriginal households renting in the study area was approximately 30% higher than non-Aboriginal households. The implication is therefore that in the event of rental squeeze due to an incoming workforce, Aboriginal households may be proportionally more exposed.

## vii Impacts on public health services

There are two general practices in Uralla and for every full-time GP there are 2,668 people. The scale of the influx of workers, particularly those residing in Uralla or at the construction accommodation village, is likely to create a burden on local medical practitioners. The effect is less likely to be felt in regional centres such as Tamworth and Armidale.

The proximity of Uralla to the three array areas would suggest that GPs in the Uralla Shire LGA would be the first point of contact for workers seeking medical support or advice.

## viii Summary of impacts

The project is expected to have several positive impacts and limited negative impacts.

The strategic vision for the region, and Uralla in particular, has a key focus on the continuing development of the renewable energy sector for reasons of both economic and environmental benefit. Delivering that vision, which is expressed at a State, regional and local level, relies on the success of projects such as the New England Solar Farm.

The project will provide significant employment opportunities during the construction stage. During operation, there will be up to 15 ongoing employment opportunities and flow-on benefits to the community as a result of the CBSI (refer Section 4.6 of the EIS).

Based on the stakeholder engagement, there is a positive attitude and general community support for the project. Through the provision of additional economic stimulus, employment opportunities and benefits and investment in infrastructure and services, the net community benefit of the project is considered to be positive.

In summary, the project will provide a number of benefits and opportunities including:

- direct and indirect business opportunities for the local and regional economy, potentially including equipment suppliers, contractors, labour hire companies, accommodation providers, eateries and fuel suppliers, etc; and
- employment opportunities, with up to approximately 700 employees needed during the 36 month construction period.

As part of ongoing engagement with Uralla Shire Council and DPE, UPC will seek regular updates on major projects and developments within the Uralla Shire LGA and, more generally, within the New England region.

## 5.2 Other potential impacts

The EIS addresses the SEARs and matters raised during engagement with stakeholders. It includes consideration of the potential biophysical, social and economic impacts of the project.

Section 4.4.2 of the EIS outlines the feedback and matters raised by the local community during the community information and feedback sessions and, more generally, as part of ongoing community engagement, and where these matters have been addressed in the EIS.

A set of mitigation and management measures will be put in place that have been designed to address specific impacts associated with the project. Periodic monitoring of the effectiveness of the proposed measures will occur and these measures will be revised as necessary throughout construction and operations.

Questions in regard to the project's impact on the value of surrounding properties have been raised by the local community. There is currently no empirical evidence or detailed academic studies in an Australian setting (eg quantitative research or economic assessments) that considers whether an increase in large-scale solar PV developments in an area is associated with a decline or increase in surrounding property values. However, it is appreciated that this is an issue of concern to the local community. While economic analyses for the industry in relation to valuation and pricing of land does not yet exist, and there are many factors that influence land values, inference can be drawn from one key factor, which is amenity, and specifically, the impacts to the amenity of neighbouring properties and the locality.

Generally, it is considered that impacts related to visual amenity seem to be the more prevalent concern driving fears of loss of property value for neighbouring residential properties. Adjoining landholders whose properties are primarily used for agricultural production are logically more likely to be concerned with potential impacts to surface water flow paths, soil erosion and weed and pest management. Concerns have also been raised by a small number of adjoining and neighbouring landholders regarding the theoretical impact of the project on the future value of their properties for residential use and/or subdivision, should this be permissible under the Uralla LEP.

The EIS and supporting technical assessments have considered potential amenity impacts from the project's construction and operations. Construction impacts will be temporary in nature and are therefore considered unlikely to have a lasting impact on the amenity of the locality. The residual impacts associated with the ongoing operation of the project (ie after the implementation of proposed management and mitigation measures) are predicted to be minimal.

Further detail on potential impacts to the local community and amenity are provided in Chapter 5 of the EIS, primarily Section 5.6 (visual), Section 5.7 (noise), Section 5.8 (traffic) and Section 5.12 (local infrastructure and services).



## 6 Management and mitigation measures

The project needs to be considered in two separate modes - construction and operation.

The impacts associated with the project predominantly arise during the construction period (estimated to be up to 36 months). Furthermore, the key impacts during the construction period derive from the significant workforce required for the construction of the project.

There are various factors related to the influx of a large workforce which can be managed and mitigated. The factors include the size of the overall workforce and the spread of demand; the movement of that workforce; the accommodation of the workforce; and the interaction of the workforce with the local community and businesses.

### 6.1 Workforce impact mitigation

#### 6.1.1 Size of the workforce

The development of the project will occur in two key stages. Stage 1 will take approximately 25 months and Stage 2 will take approximately 20 months. The stages are sequential but there is a period of overlap as Stage 2 works are proposed to commence 12 months after the commencement of Stage 1. This means there is an overlap period of approximately 13 months.

For both stages there is likely to be a pattern of growth and decline in the number of workers required and each stage has a peak level of employment demand. For Stage 1, the peak occurs in the range of Month 11 to Month 16 (approximately 325-350 people employed). For Stage 2, the peak occurs in the range of Month 22 to Month 27 (approximately 395-470 people employed). This means that the peak employment period for Stage 1 is separated from the peak employment period for Stage 2 by approximately five months.

Perhaps equally importantly, the number of employees required by Stage 2 during the Stage 1 peak is markedly lower than at other times, and when Stage 2 is at its peak, Stage 1 diminishes significantly.

This is the most effective way to mitigate the overall impact of the project's construction workforce. The deliberate separation of peaks in demand for the two stages has been proposed to mitigate the impact on local communities and also as an effective way for UPC to maintain a level of work availability for the workforce across the two stages. The latter also benefits those people in the local community who are employed at by the project by enabling greater continuity in employment.

The staging means that the greatest aggregate demand (considering the concurrent workforces for Stage 1 and Stage 2) will be in the vicinity of 700 workers, and this will occur approximately 2 years into the project (around month 23).

If the project was (conversely) to not separate Stage 1 and Stage 2 peaks, the overall workforce during a joint peak period could be in excess of 1,000 people. In addition, without staging, the development of the project would likely occur over a shorter timeframe.

A more even spread of employment demand through project staging avoids the 'boom and bust' consequences of sharp adjustments in major project employment.

## 6.1.2 Accommodation of the workforce

The SIA has identified that, notwithstanding the proposed spread of worker demand, there will be a greater demand for accommodation that may not be reasonably met by local towns and regional centres.

The method by which that issue can be managed may be the construction of an accommodation village within the northern array area during the construction period. There may be a need to house approximately 250-500 workers on-site at the busiest periods. If constructed, it is anticipated that the construction accommodation village could be scaled up or down, depending on the need to absorb or shed surplus demand. This would mean that, during peak periods of construction, it is likely that a proportion of the project's non-local construction workforce will reside at the construction accommodation village while they are rostered on.

Accommodation on-site should be scaled to allow benefit to flow to local individuals and businesses that have accommodation available to rent, but to absorb accommodation demand once local vacancy rates reach the 2-3% range. This is generally considered a healthy range for rental property. The on-site accommodation might therefore conceivably only commence once local accommodation reaches a comfortable level, and then be expanded or reduced in scale as the size of the workforce builds and declines.

It is also anticipated that the construction accommodation village can also assist the project to respond to potential impacts on the tourist and rental accommodation in the surrounding area. While there is ample short term 'tourist' accommodation in centres such as Armidale and Tamworth (several hundred rooms in each centre), the towns of Uralla and Walcha have only approximately 93 and 43 rooms respectively. Longer-term accommodation (typically houses) currently available in the area is around 250 properties. It might therefore be expected that the existing rental market across the study area can accommodate the majority of the workforce associated with the project. It is the residual workforce, assumed to be up to 500 people for the purposes of this assessment, that will be accommodated at the construction accommodation village (should it be required).

The provision of on-site accommodation can also reduce potential impacts on the local road network by reducing the number of commuter trips associated with worker movements to and from the project's array areas.

It is noted therefore that the provision of accommodation for a large project workforce is not without benefit to local towns and centres. Social and economic benefits will arise where available rental stock is taken up, but dis-benefits arise where the demand is markedly greater than the supply of rental accommodation.

Should it be required, the solution is therefore to ensure that the on-site worker accommodation within the construction accommodation village is scalable and flexible enough to absorb excess demand but also able to restrict on-site accommodation and thereby displace demand back to communities in the event that existing rental housing stock in nearby towns and centres is not taken up.

It will be difficult to predict precisely where that balance should be. Other projects within the region (such as the Uralla Solar Farm) may have a compounding effect or may not.

Regular engagement by UPC with the CRG or similar will enable local communities to advise UPC of adjustments which may need to be made, for example, to accommodate more or less workers within the construction accommodation village (should it be required).



During discussions, a number of representatives indicated that a combination of advanced planning, staged construction and/or shared accommodation arrangements could allow the existing rental market within the townships of Uralla and Armidale to accommodate a proportion of the project's construction workforce.

It is also recommended that UPC not provide rental subsidies for project workers. This practice benefits project workers but inflates the rental market prices in local communities and can displace existing locally based residents.

### 6.1.3 Movement of the workforce

The movement of workers to and from the three array areas will be most pronounced when shifts commence or finish, although there may be demand at other times as well. The traffic implications of this impact on local roads will be mitigated by providing shuttle bus services, operated by or on behalf of UPC, between the three array areas and Uralla, and between Uralla and other centres for worker accommodation such as Armidale and Tamworth.

### 6.1.4 Local businesses

The impact of the project on local businesses is related to the extent to which the construction material needs and the construction accommodation village provide preferential consideration to locally-based business for the provision of goods and services.

UPC proposes to procure goods and services, as far as possible, from local businesses. This will favour local businesses in any services or goods where reduced transport costs offer a competitive advantage or where costs are comparable with non-locally sourced goods and services.

### 6.1.5 Labour force followers

The potential influx of additional population ('followers') is not expected to be significant for this project. The advent of labour force followers, such as non-local or transient traders, suppliers and other service providers, is more prevalent in longer term projects. The main factor which can be introduced to mitigate that risk is early contractual engagement with local suppliers of goods and services to close out the prospect of business opportunities for other parties. Raising awareness of the policy to favour established local suppliers is also helpful and can be signalled via the UPC project website.

### 6.1.6 Medical services

The potential demand on medical and well-being services in Uralla, which has only two GPs, can be alleviated by the provision of medical support within the construction accommodation village (should it be required) or on-site. This might comprise qualified nursing or related support services. This would enable less serious medical issues, such as minor injuries, to be attended without reference to local Uralla GPs.

### 6.1.7 Indigenous support and development

Local indigenous communities have a specific exposure to any distortions in the current rental accommodation market, and also have a generally lower employment status in terms of both security of tenure, pay and skills base.

There is an opportunity to include an indigenous development plan as part of the overall construction and operation of the project. The construction period, being approximately 36 months, provides sufficient time for the project to include a program aimed at increasing indigenous training and employment.

The CBSI is also an opportunity for funds to be allocated to indigenous support programs, as appropriate.

### 6.1.8 Grievance redress mechanism

There is, notwithstanding the mitigation measures proposed for the project, a residual risk of occasional incidents or trends which may cause concern to individuals or groups in the host communities, namely the Uralla Shire LGA. It is recommended that a publicly accessible system be created, utilising a website facility and telephone hotline, for any grievance to be registered. This should be supported by a policy and mechanism by which any legitimate grievance can be investigated and resolved.

### 6.1.9 Construction workforce management plan

A primary means of planning and managing the potential impacts will be through implementation of a construction workforce management plan (CWMP) or similar, which will likely include (but not be limited to):

- local workforce numbers and locations;
- transient workforce accommodation locations;
- consultation mechanisms with Uralla Shire Council, Armidale Regional Council and Tamworth Regional Council to avert pressure on local resources and ensure a reasonable approach to planning transient worker housing;
- consultation frameworks with local providers to ensure fairness, open communication and forward planning, and grievance mechanisms;
- plans for medical and other needs to ensure appropriate spread of workforce needs across all local resources and to avoid heavy pressure on a small number of local GPs;
- a Code of Conduct for the project's workers (particularly to avoid anti-social behaviour at peak construction times); and
- how the CWMP will be managed and audited.

A key aim of the CWMP will be to achieve the best mix of benefits for the local community without placing pressure on accommodation and other local services.

## 7 Conclusion

The project has the capacity to provide significant benefits to the local and regional communities. The communities within the area of social influence for the project have articulated a desire to diversify the economic base of the region and to embrace renewable power generation. The local values, aspirations and way of life are broadly compatible with the nature of the project.

The project also delivers on the strategic aspirations of the New England North West region and the State in terms of increased opportunities for renewable energy generation, diversification of regional economies and environmental benefits through clean energy. As defined within the *New England North West Regional Plan* (NSW Government 2017), the vision for the region focuses on supporting cities, important farmland, renewable energy projects and tourism opportunities and the region's local communities are, consequently, experiencing a period of growth and change associated with that evolution.

The two stages of the project – construction and then operation – have vastly different impacts.

The operational stage creates very little adverse impact socially. The employment level during operation is quite modest, at approximately 15 employees. At this scale, there are negligible impacts of social factors such as local services, business opportunities, transport, social services, community cohesion or local infrastructure.

On the other hand, the construction period represents a marked change for the social setting of the study area, and for the immediate township of Uralla and its localities. This is fundamentally due to the scale of the workforce which is needed during construction, relative to the host community.

An influx of a significant number of workers has the potential to impact social characteristics such as accommodation, local infrastructure, local businesses and cohesion.

The most obvious measure to mitigate that potential impact is to reduce, as far as is feasible within available project planning scope, the overall quantum of workers required on-site at the same time. The staging of construction into two physical project components and over two distinct periods, spreads the workforce demand and therefore reduces the otherwise potential aggregate workforce by approximately 35% (ie approximately 700 rather than 1,000).

Beyond that overall impact mitigation measure, there will still be impacts from a workforce which is significant relative to the size of the receiving community.

Local employment will clearly be a direct benefit but the local labour market statistics suggest that there will still need to be non-local workers recruited. Non-resident workers will generally require local accommodation and there are a number of considerations regarding the impact on accommodation. This is because the region has periods of high demand for temporary (visitor and tourism) accommodation associated with annual community events, seasonal variability and institutional calendars such as university graduations and class terms.

Accommodation is therefore key amongst these potential issues. The project will therefore seek approval to establish a construction accommodation village within the northern array area (should it be required).

There is accommodation available within the study area but care needs to be taken to optimise economic benefit through an appropriate level of worker take-up of local rental options. Too little demand can leave local property owners without possible income; too much demand can force rents to rise to the detriment of local occupants. It is therefore important to avoid market distortion, and this can be achieved by ensuring 'scalable' capacity in the construction accommodation village if local demand at the time of construction indicates it is required.

An analysis of distributive equity identified that the Uralla Shire LGA and surrounds would, while experiencing some benefits, also carry the greatest potential burden in terms of social impacts. One of the more vulnerable sectors within the Uralla Shire LGA community is the Aboriginal population (approximately 10% of the total population in Uralla). The local Aboriginal community has a higher sensitivity to changes in rent, cost of living and employment. It is recommended that there is further consideration by UPC and the construction contractor towards increasing opportunities for training and employment for local indigenous people.

The presence of a significant workforce also infers that workers will need to move between the workplace and accommodation and local centres. There will be shuttle bus services provided by or on behalf of UPC to minimise impacts such as traffic and congestion.

Local businesses will be preferred by UPC for the provision of goods and services, where such goods and services are available from local businesses and price competitive.

The potential for the large worker population to overwhelm social services, particularly local medical practices, can be mitigated by the provision of basic medical services either on-site or within the construction accommodation village (should it be required during the construction stage). This will attend to all minor matters which might otherwise require referral to local GPs.

On balance, the project is likely to be welcomed by the community and the potential adverse social impacts associated with a large construction workforce are able to be managed or mitigated to an acceptable level through a range of actions. The project's CWMP will help to achieve the best mix of benefits for the local community without placing pressure on accommodation and other local services.

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