EPURON

Submissions Report

NEVERTIRE SOLAR FARM

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1 INTRODUCTION

1.1 BACKGROUND

The Nevertire Solar Farm is proposed to be constructed approximately 1km west of the Nevertire township and 90km west of Dubbo, within the Warren Shire Council Local Government Area (LGA). The Nevertire Solar Farm proposal includes the construction, operation and decommissioning of a photovoltaic (PV) solar farm that would produce up to 105 Megawatts (MW AC) of electricity, and associated infrastructure.

The proposal requires development consent under Part 4 of the *Environmental Planning and Assessment Act 1979 (EP&A Act).* The proposal is considered State Significant Development (SSD) as it is development for the purpose of electricity generating works with a capital cost of greater than $30 million (clause 20, Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011).*

An Environmental Impact Statement (EIS) was prepared by NGH Environmental and was submitted to NSW Department of Planning and Environment (DPE). The structure and content of the EIS addressed the Secretary's Environmental Assessment Requirements (SEARs), provided by NSW DPE.

The EIS was placed on public exhibition from 23 February 2017 to 24 March 2017. During this period, submissions were sought from the local community, government agencies, interested parties and other stakeholders.

1.2 PURPOSE OF REPORT

This Submissions Report has been prepared by Nevertire Solar Pty Ltd and NGH Environmental to fulfill the requirements of Section 75H of the *Environmental Planning and Assessment Act 1979.* The purpose of the Submissions Report is to:

- Consider and respond to the issues raised in the public and agency submissions for the Nevertire Solar Farm.
- Describe any changes to the proposal, including a revised set of proposed mitigation measures.

2 THE PROPOSAL

2.1 PROPOSAL

The Nevertire Solar Farm proposal is for the construction, operation and decommissioning of a PV solar farm that would produce up to 105 Megawatts (MW AC) of electricity. The Nevertire Solar Farm proposal remains as per the detailed description provided in Section 3 of the EIS (NGH Environmental 2017), with the exception of minor changes noted in Section 2.2.

2.2 PROPOSAL CHANGES

The following minor changes have been made to the proposal. These changes constitute a reduction in the area of the proposed development, for the purpose of reducing impacts on native vegetation and areas that may contain threatened species habitat.

The Biodiversity Assessment Report (BAR) for the proposal and subsequent OEH correspondence identified that the small patch of woodland vegetation surrounding the dam and the inundation area adjacent to Boggy Cowal could potentially provide suitable habitat for threatened species including the Koala and Sloane's Froglet, respectively. Rather than undertake further targeted surveys, the proposal now avoids these areas.

The reduction in impact area results in:

- No requirement for further targeted threatened species surveys.
- No requirement for biodiversity offsets, under the Framework for Biodiversity Assessment for Major Projects.
- Increased constructability of the project, reducing the infrastructure footprint near Boggy Cowal where periods of inundation and wet soils are more likely.

No other changes to the project are proposed.

Table 2-1 Changes to the proposal

EIS description	New description
The one dam onsite would be decommissioned and may be filled in.	The dam onsite and vegetation surrounding the dam would not be impacted by the proposal. The solar array and associated infrastructure would avoid the dam and adjacent trees. Refer to updated infrastructure layout, Figure 2-1.
Solar array infrastructure would be developed to within 40m of the mapped Boggy Cowal centre line.	The solar array would now avoid the identified inundation area and potential Sloane's Froglet habitat located in the south western portion of the site, adjacent to Boggy Cowal. The reduced solar array area is now approximately 177 ha. Refer to updated infrastructure layout, Figure 2-1.

2.4 PROJECT BENEFITS

The benefits of the proposed Nevertire Solar Farm would remain unchanged. The project would still result in a number of benefits such as:

- Generation of approximately 263,000 MWh per annum of renewable electricity which is enough to supply electricity for 44,000 average NSW households (AER, 2014).
- Displacement of approximately 221,000 tonnes of CO_2 equivalent greenhouse gas emissions per year (Department of Environment and Energy, 2016).
- Diversification of fuel sources for electricity generation on the NEM, therefore increasing energy security.
- Creation of local job opportunities.
- Injection of expenditure in the local area.
- Development of a new land use thereby diversifying the regional economy.

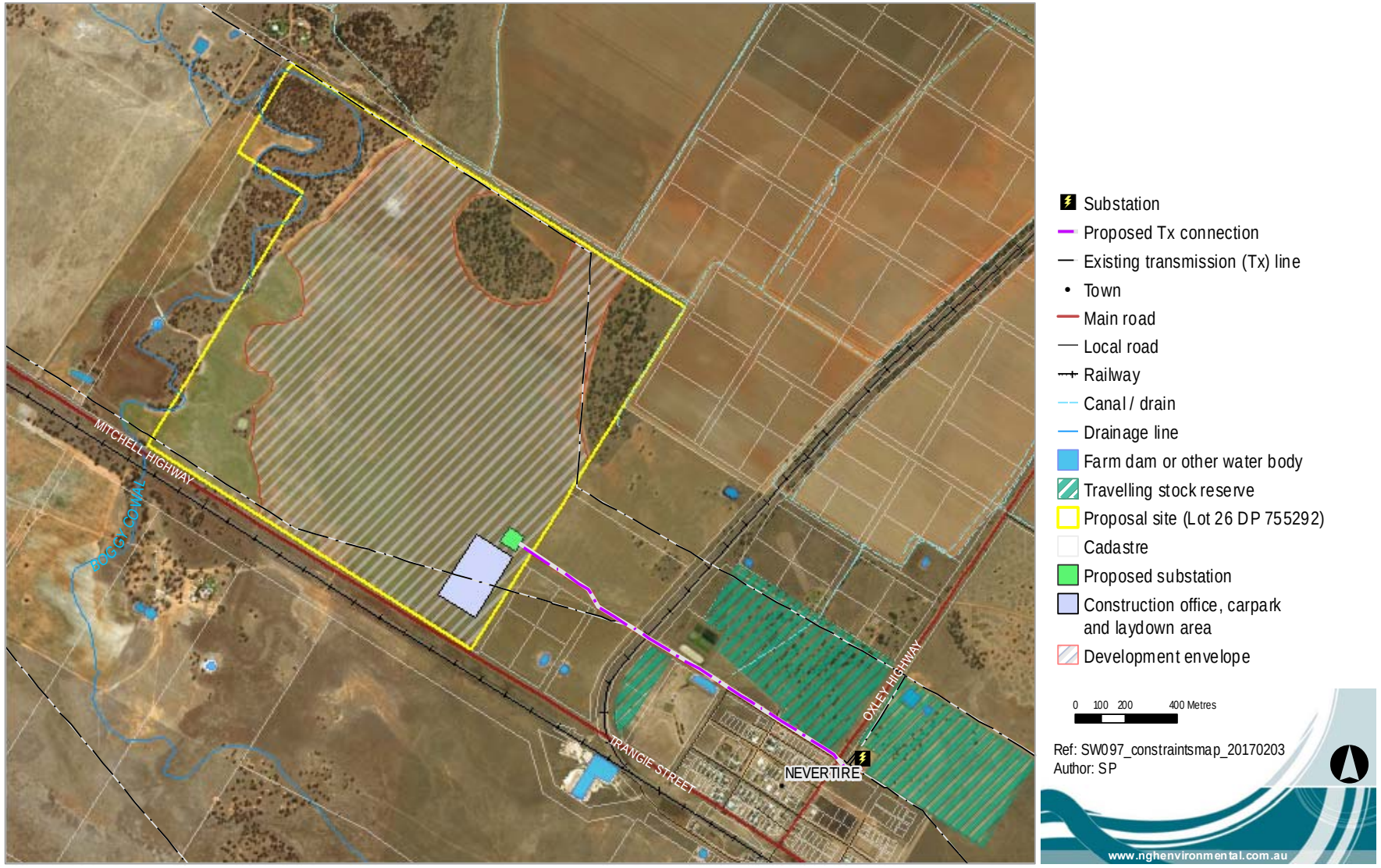


Figure 2-1 Updated proposed layout

3 CONSIDERATION OF SUBMISSIONS

3.1 EXHIBITION AND LOCATION

The Nevertire Solar Farm EIS was on public exhibition from Thursday 23 February to Friday 24 March 2017. Printed copies of the EIS were available at the following locations during the exhibition period:

- Warren Shire Council, 115 Dubbo Street, Warren
- Department of Planning and Environment, 320 Pitt Street, Sydney
- Nature Conservation Council, 14/338 Pitt Street, Sydney

Electronic copies of the EIS were also available online at the Major Projects section of the DPE website.

Local residents were notified of the exhibition period via a newsletter mail out between 13 and 17 March 2017. DPE also placed advertisements in the local and regional papers announcing the exhibition period.

3.2 SUBMISSIONS RECEIVED

DPE received a total of eight submissions during the exhibition period. Two submissions were received from individual members of the public and six submissions were received from government agencies. No submissions were received from special interest groups.

The key issues raised in each submission received are summarised in this document (Sections 4 and 5). The full submissions can be found on the Major Projects website:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8072

Table 3-1 Responses received

Category	Number of responses received
Individual members of the public	2
Government agency submissions 1. NSW Environment Protection Authority 2. NSW Transport, Roads and Maritime Services 3. NSW Department of Industry, Resources and Energy 4. NSW Department of Primary Industries 5. Warren Shire Council 6. NSW Office of Environment and Heritage	6
Total	**8**

4 PROPONENTS RESPONSE TO COMMUNITY SUBMISSIONS

Two community submissions were received; one was anonymous. Both submissions questioned the appropriateness of the location of the proposed solar farm, considering the proximity to the village of Nevertire, residences and major roads. With respect to the location, several additional issues were raised which are addressed specifically below. These include:

- Impacts on rural lifestyle
- The visual change from grazing and cropping (rural setting) to solar panels
- The effectiveness of tree plantings/screening to address visual impacts
- Reduced property/home values
- Visual impact of traffic in Nevertire

Table 4-1 Community submission issues raised and proponent's response

Issue	Proponent's response
Impacts on rural lifestyle	Community consultation undertaken for the proposal identified that primary production was the most valued characteristic of the Nevertire local area to the local community. Respondents stated they valued the rural lifestyle. Specifically, they identified views, community/family ties and the small town of Nevertire as contributing to their rural lifestyle. The EIS acknowledged that the solar array would be visible to the public and have potential for noise and traffic impacts. Visual impacts are addressed specifically below. Most noise and traffic impacts would be associated with construction, and would therefore be temporary (12 months). During operation, maintenance staffing and activities would be at low levels. Therefore, minimal adverse noise and traffic impacts are anticipated during operation and decommissioning. The proposal is considered unlikely to have any direct impact on community/family ties or the size of Nevertire. While construction staffing may swell the township temporarily (12 months), the operational plant will require low staffing levels and be unlikely to affect the community in this regard. Mitigation strategies are provided within the EIS to address impacts to the community. These centre on consultation with the community, so that benefits can be maximised and conflicts resolved where possible. No changes to the EIS mitigation measures are proposed. The EIS also identified positive outcomes of the solar farm on the rural lifestyle. There are clear economic benefits or an alternative income stream for the host property. The construction phase will provide economic stimulus to local service providers, such as the Nevertire pub, café, mechanic etc.
Visual change and effectiveness of tree plantings/screening	The EIS acknowledges that the solar array would be a new type of infrastructure in the area and would change the character of the site from extensive agriculture to electricity generation. The proposal would also result in a loss of expansive pastoral views from a limited number of locations. The open landscape was identified through community consultation as the most important view or landscape characteristic for the region and local area. However, photomontages used in the Visual Impact Assessment identified that the visual impacts of the low-lying infrastructure attenuate rapidly with distance

Issue	Proponent's response
	in this low relief terrain. Three receivers were assessed as having potential for a medium level of impact – the potential visual impacts of the proposal were found to be low for most receivers. Photomontages were also used to understand the effectiveness of screening. A draft planting layout was provided in the Visual Impact Assessment. To address the highest impact locations, it outlined screening vegetation would be planted within the south-west and south-eastern site boundaries and supplement existing onsite vegetation to the north-east. It also outlined screening requirements including the consideration of denser plantings for the residence to the immediate south of the site and selection of appropriate species for the site. Post construction audits are a commitment of the project, to assess the effectiveness of screening layout and augment it if required. Further consultation with the closest receivers to assist with proposed mitigation measures and screening is a commitment of the project. No changes to the EIS mitigation measures are proposed. While screening will effectively break up views of the proposed infrastructure, softening the impact for motorists, one residence and from a recreational area, it is acknowledged that this will not mitigate the loss of the 'expansive pastoral views'. It is noted that in the surrounding area, expansive pastoral views are common and that the proposal will have a low level of impact on this feature in the locality.
Reduced property/home values	The existing value of the solar farm site and adjacent large landholdings is assumed to be based on agricultural productivity and proximity to Nevertire as service centre. The proposal would not affect these drivers directly. The EIS notes that the proposed solar farm is a highly reversible development, involving relatively small areas of excavation for driven pile mounts (for the solar panels) permitter access track and footings for inverters. After the operational life of the project (expected to be around 30 years), the site can be returned to its existing agricultural capacity or alternative land use. Project commitments include a Rehabilitation Plan, based on onsite soil testing. As above, the proposal also has a potential to create an economic stimulus for local economy. Economic benefits include income for the area, job creation and alternative income stream for the host property.
Visual impact of traffic in Nevertire	The EIS identifies that the visual impact of traffic on the local community would be the greatest during the peak construction period, which is approximately 6-9 months. During peak construction, there would be approximately 300 employees onsite and an increase of truck deliveries to site. Visual impacts of traffic are considered low for the remaining construction period and for the operation and decommissioning of the proposal. There would be a negligible long term impact. The construction traffic for the proposal would mostly use the Mitchell Highway and Oxley Highway. These highways have been identified in the EIS as currently being used by existing large heavy vehicles. Buses may also be used to transport workers to help reduce the number of cars to site. A Traffic Management Plan would be developed to reduce potential visual impacts of traffic within Nevertire. The plan is to include community consultation regarding traffic impacts for nearby residences. No changes to the EIS mitigation measures are proposed.

5 PROPONENTS RESPONSE TO GOVERNMENT AGENCY SUBMISSIONS

Government agency submissions are addressed in the order received. For each submission, the key issues are summarised in the left hand column and the Proponents response is provided in the right hand column.

Table 5-1 Agency submissions and proponent's response

Issue	Proponent's response
NSW Environmental Protection Authority	
No comment	The NSW Environment Protection Authority (EPA) had previously determined that the proposed development is not a Scheduled Activity under the *Protection of the Environment Operations Act 1997* and consequently will not require an Environment Protection Licence. Therefore, they will not be reviewing or providing comment on the DA and EIS. No changes to the EIS mitigation measures are considered to be required.
NSW Transport, Roads and Maritime Services	
Access from Mitchell Highway and Traffic Management Plan	Roads and Maritime Services considers the Mitchell Highway access upgrade is likely to be more significant than the minor widening works detailed in the EIS. Roads and Maritime Services supports the applicant's approach that a Traffic Management Plan (TMP) is developed in consultation with Warren Shire Council and Roads and Maritime. The EIS commits the proponent to consult with Roads and Maritime Services regarding the proposed upgrading of the site access. It is outlines the upgrade will be designed and constructed to the standards specified by Roads and Maritime Services. No changes to the EIS mitigation measures are considered to be required.
NSW Department of Industry, Resources and Energy	
No concerns	The Resources and Energy division of the NSW Department of Industry had no specific concerns regarding resource sterilisation resulting from the proposal. They believe that that the solar farm aligns with Government Policy to increase renewable energy generation, jobs and investment in NSW. No changes to the EIS mitigation measures are considered to be required.
NSW Department of Primary Industries	
Soils, stability and land condition	NSW Department of Primary Industries comments and recommendations included: • A detailed soil survey is recommended to be undertaken to inform land capability and the management related to construction and final land management for the site. • It is recommended that the final decommissioning concept plan should establish baseline data to identify further parameters to use in determining final land condition outcomes. These may include both physical (soil texture, and structure) and chemical characteristics (such as acidity and nutrients). Other objectives should include the restoration of soil profile functionality, consideration of soil ameliorants, and final groundcover details in consultation with the landholder.

Issue	Proponent's response
	The EIS recognised that salinity and sodic soils as a potential issue at the site due to the evidence of salt scalding and water inundation. Construction impacts are identified as potentially the disturbance of sodic soils which may cause slumping, increased channel erosion and reduced vegetation growth. The EIS commits to a soil and water management plan, and erosion and sediment control plan, that would be prepared, implemented and monitored during the proposal. As part of these plans a commitment to soil testing is included. It would be carried out prior to any impacts, to inform any soil treatments (such as application of gypsum in compacted areas and top soil management) and provide baseline information for the decommissioning rehabilitation. Additionally, the EIS commits to a Rehabilitation Plan to be prepared to ensure the site is returned to it pre solar farm land capability. The plan would be developed with reference to the base line soil testing and with input from an Agronomist to ensure the site is left stabilised, under a cover crop or other suitable ground cover. The plan would also reference: • Australian Soil and Land Survey Handbook (CSIRO 2009) • Guidelines for Surveying Soil and Land Resources (CSIRO 2008) • The land and soil capability assessment scheme: second approximation (OEH 2012) No changes to the EIS mitigation measures are considered to be required.
Crown Land	NSW Department of Primary Industries commented that a Roads Act License would be required to be obtained prior to commencement of works for the transmission line along the Crown Road between the solar farm and substation site. As noted in Section 5, Planning Context of the EIS, permits under the *Crown Lands Act 1989* are required. Consultation undertaken with DPI (Lands) has confirmed that Belerenga Street, Clyde Street and Gobabla Street are Crown road reserves. Landowner consent has already been granted by DPI, conditional upon agreement on land tenure (such as establishment of a specific easement). No changes to the EIS mitigation measures are considered to be required.
Source of water resources	NSW Department of Primary Industries commented that the proponent should confirm the source of water resources during and post construction prior to project approval. This should be undertaken to understand the water supply risks and to ensure any requirement for additional licensing is identified early and WMA approvals can be excluded where appropriate under Section 89J of the EP&A Act. The Proponent, is currently progressing investigations with specialist service advisors in the water trading industry. The Proponent could unnecessarily restrict better future supply options if it was required to nominate a specific source and supply arrangement at this time. The proponent acknowledges that the supply source will need to be specified and approved before construction works can commence and that any supply must be a legal source. The sources would be finalised and presented in the Construction Environmental Management Plan to DPE, prior to any construction impacts. Further information on the availability of potential water sources is below, demonstrating that water supply is not a risk to the project Warren Shire Council have stated they will be able to meet the needs of the Nevertire Solar Farm during construction and operation. The majority of the water required during construction will be able to be accessed at Nevertire with Council advising access, availability etc as water is required (pers. comm. T. Wark, Water and Sewer Manager, Warren Shire Council 21/4/2017). <u>Water use - construction</u> The project during construction would require 21.6ML over a 12 month period. This equates to approximately 1.8ML per Month, 0.06 ML per day or 3 semi loads per day.

Issue	Proponent's response
	Water trading starts in July of each financial year. Trading in temporary water supply for the financial year allows a water user to transfer Water Access License(s). The number of High Security Water Access Licenses (WAL's) available for the NSW Macquarie/ Cudgegong Rivers Water Source adjacent the site as of 20 April 2017 was 79 (http://www.water.nsw.gov.au/water-licensing/registers). Some of the High Security WAL's are traded each year. High security water made available for the 2016/2017 year was 13,828 ML. The water required for the project (21.6ML) is 0.16% of the high security water available this past year. The High Security allocation hovers around the 13,000ML mark each year. Over the last three years about half of the High Security allocation water available was used. The water required for the project would be about 0.27% of the water used (7923 ML) in the current financial year. The water required for the project would be about 0.36% of the unused water made available in the last financial year. The impact of drawing the 21.6ML from the Macquarie/Cudgegong Rivers Water Source would be negligible because ample remaining unused water is available in the system based on the previous water use figures. The number of Aquifer Water Access Licenses (WAL's) available for the NSW Lower Macquarie Zone 3 Ground Water Source adjacent the site as of 20 April 2017 was 28 (http://www.water.nsw.gov.au/water-licensing/registers). The water available under these Aquifer WAL's was 8264 ML for the 2016/17 financial year. Of this volume 478 ML was used as of 20th April 2017 or about 6% of the water available. The water required for construction represents 0.26% of the volume available, 4.5% of the water used and 0.28% of the water not used but available (94%) this financial year. Town water is supplied to Warren, Nevertire and Collie. Warren has a dual supply system. Nevertire has an independent bore water supply. The Nevertire Bore that supplies the town has a 40ML LOCAL WATER UTILITY WAL. The Nevertire water users currently draw 30ML from the bore (pers. comm. T. Warke, Warren Shire Council 19/04/2017). However, the bore has a larger supply capacity than the licensed 40ML and could be increased with approval from DPI. The increase would utilise some of the unused 94% capacity indicated above. Warren Shire Council draws 1.7ML/day from the Macquarie River and reticulates this untreated water through the non-potable system. The non-potable water represents 48% of the town supply volume. Three bores supply Warren's potable system with about 1.9ML/day. The project construction requirement of 21.6ML represents 3.5% of the used component of the local non potable water supply. Taking the construction water from the local water utility supply for construction in a similar year would have a negligible impact on the available town supply. It could also be met from the bore water source but potable water is a negligible component of the construction water demand at 0.2-0.3 ML/Year. Potable water required during construction would be met by the Nevertire bore water supply and represents a maximum 1% increase in demand for one year. The Council raw water supply is available to road builders and others in the LGA for commercial purposes. <u>Water use – operation</u> Water required during operation are in the order of 0.20 to 0.24ML/year of potable water. The maximum daily water requirement would be approximately 900L. This water would principally be for cleaning. Based on the information above, impacts on water supply during operation would be negligible. This would represent about 0.67-0.80% of the current Nevertire bore water consumption. As such it is reasonable to assume the operational needs of the project can be easily met from the Warren Shire Council Nevertire Bore supply via local water utility allocation. No changes to the EIS mitigation measures are considered to be required.

Issue	Proponent's response
Flooding	NSW Department of Primary Industries commented the proponent should undertake an assessment of the potential impacts on flooding on neighboring properties due to the buildings and the solar array infrastructure. The EIS indicated that no Flood Prone Land mapping for the site had been identified. Since that time a flood study and flood mapping has been identified (Macquarie River Narromine to Oxley Station, Floodplain Management Plan, Department of Environment and Climate Change, 2008). The study assigned the 1955 and 1990 floods average recurrence interval of 200 and 65 years respectively. The resultant flood maps indicate that the site is above a 1 in 200 year flood level (see Appendix B) and would also not have been inundated according to the 1990 and 2000 flood flow distribution. Therefore, the site is confirmed to be not subject to river flooding. The EIS indicates the site is expected to be slow draining due to heavy soils. However, the proposal does not involve any extensive earthworks or landform reshaping and therefore the onsite hydrology would not be altered during construction or decommissioning. The project will not change the onsite hydrology and the site is confirmed to not be flood effected, therefore there will be no flood impact on neighbouring properties. As flooding is no longer considered a substantive issue, one mitigation measure listed within the EIS has been deleted: • *A flood risk contingency plan would be prepared prior to construction and is to be implemented during construction, operation and decommission. The plan would:* o *Detail who would be responsible for monitoring the flood threat and how this is to be done.* o *A process for removing any necessary equipment and materials offsite and out of flood risk areas.* o *Consideration of site access in the event that some tracks become flooded.* o *Establishment of an evacuation point.*
Boggy Cowal and onsite dam	NSW Department of Primary Industries requested clarification on where the buffer for Boggy Cowal had been measured from to ensure consistency with DPI Water's *Guidelines for Controlled Activities on Waterfront Land (2012)*. Further more, they requested clarification on whether the dam onsite would be removed. The 40m buffer applied to Boggy Cowal was established from the identified waterway centre line on SixMaps. Subsequent to the EIS exhibition, a revised layout of the solar farm (refer to Section 2.2) has been developed. This supersedes the EIS layout and provides an additional buffer to Boggy Cowal. The solar array now avoids the identified inundation area within the south western portion of the site. This layout change also results in the onsite dam no longer being impacted. One mitigation measure listed within the EIS has been modified: *A 40m buffer would be maintained around Boggy Cowal in accordance with DPI Water's Guidelines for Controlled Activities on Waterfront Land (2012) to reduce potential impacts to the waterway and GDEs*
Warren Shire Council	
No concerns	Warren Shire Council outlines they are aware of the proposal and had no concerns in relation to the development. No changes to the EIS mitigation measures are considered to be required.

Issue	Proponent's response
NSW Office of Environment and Heritage	
Offsetting, impacts on Koala habitat and native vegetation	The NSW Office of Environment and Heritage response included: • A detailed offset strategy should be provided prior to the approval of the impact so the benefits to biodiversity to compensate for the adverse impacts of the project can be assessed. The offset strategy should propose an offset that is consistent with the *NSW Biodiversity Offsets Policy for Major Projects.* • Species credits should be calculated for the koala so that the loss of the 0.84 hectare woodland area of koala habitat is offset appropriately. • The proponent to clarify the proposed total impact to native vegetation and the amount requiring offsetting. The EIS calculated that 14 credits would require offsetting to account for the loss of 0.84ha of Poplar Box - Belah Woodland. Furthermore, targeted surveys were committed for the Sloane's Froglet. As above, subsequent to the EIS exhibition, a revised layout of the solar farm (refer to Section 2.2) has been developed. This supersedes the EIS layout and now avoids the identified inundation area within the south western portion of the site (potential habitat for Sloane's Froglet). This layout change also results in the onsite dam no longer being impacted. The trees surrounding this dam accounted for the 0.84ha of Poplar Box - Belah Woodland (noted as Koala habitat by OEH). The reduction in impact area results in: • No requirement for further targeted threatened species surveys. • No requirement for biodiversity offsets, under the Framework for Biodiversity Assessment for Major Projects. • No requirement for a biodiversity offset strategy. Three mitigation measures listed within the EIS would be removed: • If the loss of 0.84 ha of Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW cannot be avoided, the ecosystem credit requirements (calculated to generate 14 credits) would be offset according to the FBA. • Appropriately timed surveys (June – August) would be implemented to determine if Sloane's Froglet occurs within the development site. If identified within the development site either: o The proposal would be modified to avoid habitat for this species, or o The species credit requirements (calculated using the constructed impact area on mapped habitat) would be offset for the species according to the FBA • Implement offset management plan which ensures that fauna movement still possible around perimeter of development site.

6 ENVIRONMENTAL MANAGEMENT CHANGES

The table in Appendix A documents the revised environmental management commitments of the proposal. Where measures are relevant to more than one environmental aspect, they are cited only once under the most relevant aspect, to avoid duplication. The applicable project phase (construction, operation or decommissioning) is also noted.

No new mitigation measures are required. One mitigation measure presented in the EIS has been modified, the original and modified mitigation measure is present below.

Original mitigation measure	Modified mitigation measure
A 40 m buffer would be established around Boggy Cowal Creek to reduce potential impacts to the waterway and GDEs.	A 40m buffer would be maintained around Boggy Cowal in accordance with DPI Water's Guidelines for Controlled Activities on Waterfront Land (2012) to reduce potential impacts to the waterway and GDEs

Three mitigations measures have been deleted, these include:

- If the loss of 0.84 ha of Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW cannot be avoided, the ecosystem credit requirements (calculated to generate 14 credits) would be offset according to the FBA.
- Appropriately timed surveys (June – August) would be implemented to determine if Sloane's Froglet occurs within the development site. If identified within the development site either:
  - The proposal would be modified to avoid habitat for this species, or
  - The species credit requirements (calculated using the constructed impact area on mapped habitat) would be offset for the species according to the FBA.
- Implement offset management plan which ensures that fauna movement still possible around perimeter of development site.

These mitigation measures have been modified or removed due to the change in solar array extent now avoiding the inundation area, native vegetation, potential threatened species habitat and the onsite dam located within the south western portion of the proposal site.

7 CONCLUSION

This Submissions Report responds to the issues raised in submissions from the community and government agencies, following the public exhibition of the Nevertire Solar Farm EIS. The Submissions Report fulfils the requirements of Section 75H of the *Environmental Planning and Assessment Act 1979*.

In response to the submissions:

- 4 mitigation measures have been deleted.
- 1 mitigation measure has been modified.
- no new mitigation measures have been created.

In consideration of the assessment of the impacts from the project contained in the EIS, and the proposed mitigation measures committed to in the revised mitigation measures (included in Appendix A of this report), it is believed that all relevant issues and concerns have been addressed and that the project should now proceed for approval by the Minister.

APPENDIX A REVISED MITIGATION MEASURES

The following table constitutes the revised mitigation measures to which the proponent commits, pending project approval, to manage the environmental impacts of the project. The modified mitigation measure is shown in **bold**.

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

Table A-1 Revised mitigation measures.

Safeguards and Mitigation Measures	C	O	D
• All hollow bearing trees identified would be avoided by the works.	C		
• Preparation of a Flora and Fauna Management Plan (FFMP) that would incorporate protocols for: o Protection of native vegetation to be retained o Best practice removal and disposal of vegetation o Weed management o Unexpected threatened species finds o Rehabilitation of disturbed areas The FFMP would form part of the Nevertire Solar Farm Construction Environmental Management Plan (CEMP).	C		
• Stockpiling materials and equipment and parking vehicles will be avoided within the dripline (extent of foliage cover) of any native tree. • Prior to the commencement of work, a physical vegetation clearing boundary at the approved clearing limit is to be clearly demarcated and implemented. The delineation of such a boundary may include the use of temporary fencing, flagging tape, parawebbing or similar.	C		D
• Where possible, use non barbed-wire on exterior fencing to minimise bird collision risks.		O	
• Where possible, landscape plantings will be comprised of local indigenous species with the objective of increasing the diversity of the existing vegetation. Planting locations would be designed to improve the connectivity between patches in the landscape where consistent with landscaping outcomes.		O	
• If night work is unavoidable, ensure any floodlights are directed away from vegetation.	C		D
• Weed and hygiene protocols will be prepared and implemented.	C		D
• During operation direct lights away from vegetation.		O	
• Weed and planting protocols will be prepared and implemented		O	
• Feral species to be monitored and a management plan to be prepared and implemented to reduce feral species abundance		O	
• The sites Nevertire Isolated Find 1, Nevertire Isolated Find 2 and Nevertire Isolated Find 3 are salvaged by an archaeologist and/or the Warren LALC prior to the proposed work commencing. The final storage place for the artefacts should be negotiated with the registered Aboriginal party.	C		

Safeguards and Mitigation Measures	C	O	D
• The development must avoid the site Nevertire Scarred Tree 1, as per the current design plans detailed in this report. A minimum 10m buffer around the tree should be in place to protect the root zone.	C		
• Epuron prepares a Cultural Heritage Management Plan (CHMP) to address the potential for finding additional Aboriginal artefacts during the construction of the Solar Farm. The CHMP will outline an unexpected finds protocol to deal with construction activity. Preparation of the CHMP should be undertaken in consultation with the registered Aboriginal party.	C		
• In the unlikely event that human remains are discovered during the construction, all work must cease in the immediate vicinity. OEH, the local police and the registered Aboriginal parties should be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal.	C		
• Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation. This would include consultation with the registered Aboriginal party and may include further field survey.	C	O	D
• Implement noise control measures such as those suggested in Australian Standard 2436-2010 "Guide to Noise Control on Construction, Demolition and Maintenance Sites", to reduce predicted construction noise levels.	C		
• Additionally, during construction: o Use less noisy plant and equipment where feasible and reasonable o Plant and equipment to be properly maintained. o Provide special attention to the use and maintenance of 'noise control' or 'silencing' kits fitted to machines to ensure they perform as intended. o Strategically position plant on site to reduce the emission of noise to the surrounding neighbourhood and to site personnel. o Avoid any unnecessary noise when carrying out manual operations and when operating plant. o Any equipment not in use for extended periods during construction work should be switched off. o Establish good relations with people living in the vicinity of the site at the beginning of proposal and maintain. Keep people informed, take complaints seriously, deal with complaints expeditiously. The community liaison member of staff should be adequately experienced.	C		
• The materials and colour of onsite infrastructure will, where practical, be non-reflective and in keeping with the materials and colouring of existing infrastructure or of a colour that will blend with the landscape. Where practical: o Buildings will non-reflective and in eucalypt green, beige or muted brown. o Pole mounts will be non-reflective.	Design stage		

Safeguards and Mitigation Measures	C	O	D
• Security fencing posts and wire would be non-reflective; green or black rather than grey would reduce the industrial character of the fence.			
• A Visual Impact Management Plan would be prepared to address the 'as built' visual impacts of the proposed solar farm. The plan would include: o Onsite vegetation screening for viewpoints 13, 30 and 39. This would be aimed at 'breaking up' not blocking views of onsite infrastructure, although sections of denser plantings may be considered for the residence to the immediate south of the site (Receiver 42), in consultation with this landowner (draft plan provided as Figure 6-13 of the EIS to show location of screening. Additional guidance on screening is provided in the VIA, Appendix G). o Verification of predicted and actual impacts. A post construction audit would be undertaken to assess the effectiveness of the screening layout with reference to the final constructed infrastructure and augment the former if required. • The final screening plan would be developed in consultation with the affected landowners (the residence 340m south-west of the site and managers of the Noel Waters Oval (where they wish to be consulted).	C	O	
• Parking areas, material stock piles and other construction activities would be located as far as practical from nearby residences or screened (by existing vegetation or constructed screens) for the period of construction.	C		
• Night lighting would be minimised to the maximum extent possible (i.e. manually operated safety lighting at main component locations). It would be directed away from the Mitchell Highway, so as not to cause light spill that may be hazardous to drivers.	C	O	D
• The array would be designed to allow sufficient space between panels to establish and maintain ground cover.	Design measure		
• A soil and water management plan, and erosion and sediment control plans, would be prepared, implemented and monitored during the proposal, in accordance with Landcom (2004), to minimise soil (and water) impacts. These plans would include provisions to: o Carry out soil testing prior to any impacts, to inform any soil treatments (such as application of gypsum in compacted areas and top soil management) and provide baseline information for the decommissioning rehabilitation. o Install, monitor and maintain erosion controls. o Ensure that machinery leaves the site in a clean condition to avoid tracking of sediment onto public roads which may cause risks to other road users through reduced road stability. o Manage topsoil: In all excavation activities, separate subsoils and topsoils and ensure that they are replaced in their	C		D

Safeguards and Mitigation Measures	C	O	D
natural configuration to assist revegetation. Stockpile topsoil appropriately so as to minimise weed infestation, maintain soil organic matter, maintain soil structure and microbial activity. o Minimise the area of disturbance from excavation and compaction; rationalise vehicle movements and restrict the location of activities that compact and erode the soils as much as practical. Any compaction caused during construction would be treated such that revegetation would not be impaired. o Ensure any discharge of water from the site is managed to ensure ANZECC (2000) water quality criteria are met. o Manage works in consideration of heavy rainfall events; if a heavy rainfall event is predicted, the site should be stabilised and work ceased until the wet period had passed.			
• A ground cover management plan would be developed to ensure a stable ground cover during operation of the solar farm, minimising erosion and adverse water quality impacts. The plan would be developed with reference to soil testing and with input from an Agronomist to ensure species selection and sodicity impacts are addressed. Highly managed grazing may be used to maintain the height of ground cover.	C		
• A spill response plan would be developed as part of the overall risk management plan to prevent contaminants affecting adjacent surrounding environments. The plan would: o Manage the storage of any potential contaminants onsite. o Mitigate the effects of soil contamination by fuels or other chemicals (including emergency response and EPA notification procedures and remediation. o Ensure that machinery arrives on site in a clean, washed condition, free of fluid leaks.	C	O	D
• A protocol would be developed in relation to discovering buried contaminants within the proposal site (e.g. pesticide containers). It would include stop work, remediation and disposal requirements.	C		D
• **A 40m buffer would be maintained around Boggy Cowal in accordance with DPI Water's Guidelines for Controlled Activities on Waterfront Land (2012) to reduce potential impacts to the waterway and GDEs**	**Design**		
• The final design would take into account the best available flood information and may include foundations up to 500mm above ground level. Electrical components would be designed to withstand inundation. The substation and office building would be located on the higher north-east portion of the site.	Design		
• Design would take into account: o Anchoring to resist short term flooding o Mounts used for infrastructure to resist short term flooding Stage construction where necessary to avoid working in areas that are inundated with water.	Design		

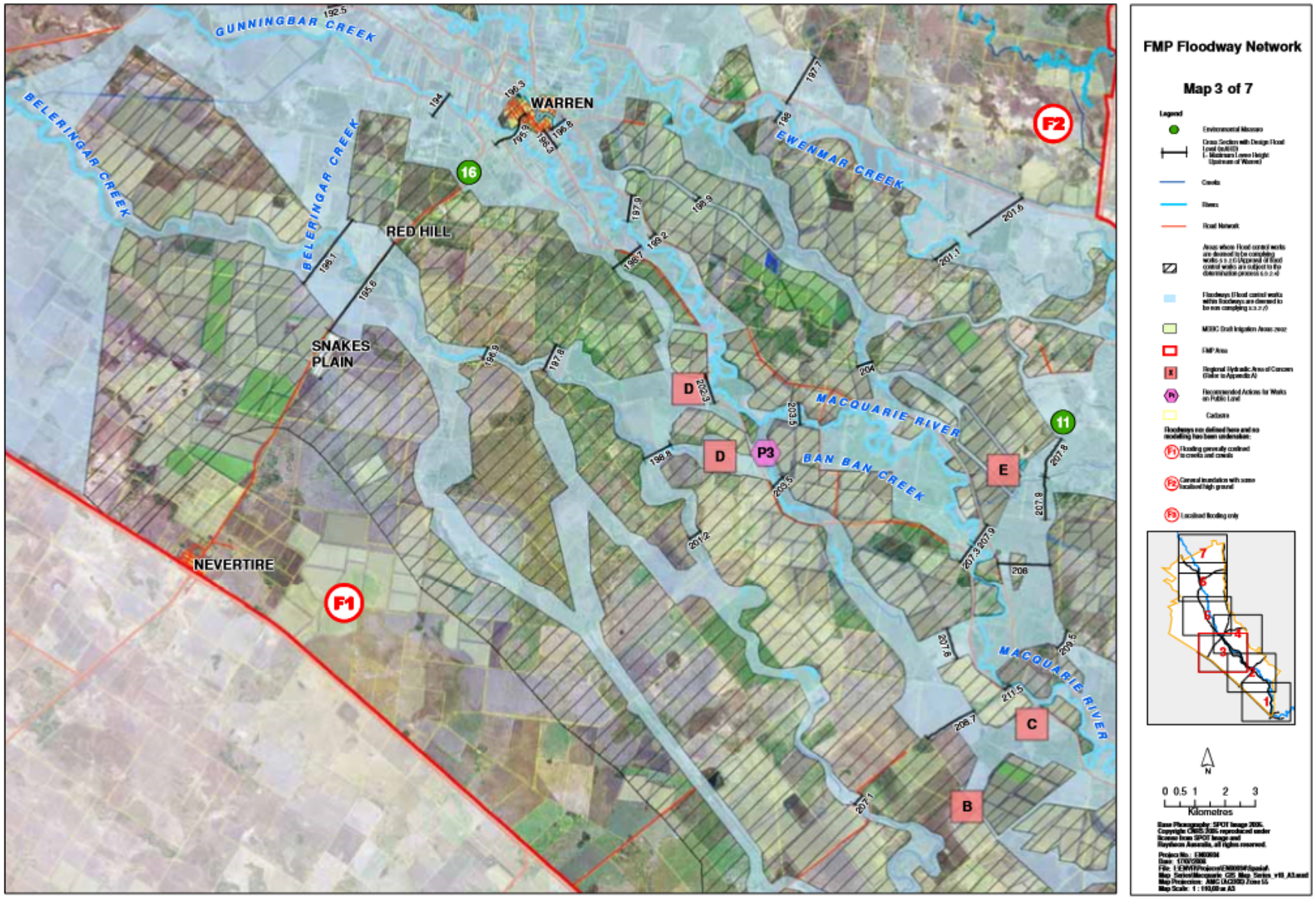
Safeguards and Mitigation Measures	C	O	D
• All staff would be appropriately trained through toolbox talks for the minimisation and management of accidental spills.	C	O	D
• All fuels, chemicals, and liquids would be stored at least 50 m away from any waterways or drainage lines and would be stored in an impervious bunded area.	C	O	D
• Adequate incident management procedures will be incorporated into the Construction Environmental Management Plan, including requirement to notify EPA for incidents that cause material harm to the environment (refer s147-153 *Protection of the Environment Operations Act*).	C	O	D
• The refuelling of plant and maintenance would be undertaken in impervious bunded areas on hardstand areas only.	C	O	D
• Machinery would be checked regularly to ensure there is no oil, fuel or other liquids leaking from the machinery.	C		D
• To mitigate temporary flooding impacts on infrastructure: o Design would take into account: ▪ Anchoring to resist short term flooding ▪ Mounts used for infrastructure to resist to short term flooding o Stage construction to avoid the short term periods where parts of the site are inundated with water.	C		
• The proponent would consult with the Roads and Maritime Services regarding the proposed upgrading of the site access. The upgrade would be subject to detailed design, and must be designed and constructed to the standards specified by Roads and Maritime Services.	Design		
• A Haulage Plan would be developed with input from the roads authority, including but not limited to: o Assessment of road routes to minimise impacts on transport infrastructure. o Scheduling of deliveries of major components to minimise safety risks (on other local traffic). o Traffic controls (signage and speed restrictions etc.).	C		D
• A Traffic Management Plan would be developed as part of the CEMP, in consultation with Warren Council and Roads and Maritime. The plan would include, but not be limited to: o Assessment of road condition prior to construction on all local roads that would be utilised. o A program for monitoring road condition, to repair damage exacerbated by the construction and decommissioning traffic. o The designated routes of construction traffic to the site. o Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction. o Scheduling of deliveries. o Community consultation regarding traffic impacts for nearby residents.	C		D

Safeguards and Mitigation Measures	C	O	D
o Consideration of cumulative impacts. o Consideration of impacts to the railway. o Traffic controls (speed limits, signage, etc.). o Procedure to monitor traffic impacts and adapt controls (where required) to reduce the impacts. o Providing a contact phone number to enable any issues or concerns to be rapidly identified and addressed through appropriate procedures.			
• The proponent would repair any damage resulting from proposal traffic (except that resulting from normal wear and tear) as required at the proponent's cost.	C	O	D
• Consultation with local community, to minimise impact of construction of adjacent agricultural activities and access.	C		
• Consultation would be undertaken with Essential Energy regarding connection to the substation and design of electricity transmission infrastructure.	C		
• Consultation would be undertaken with John Holland Rail regarding design of transmission line over the Nevertire Warren Railway line.	C		
• A Rehabilitation Plan would be prepared to ensure the array site is returned to it pre solar farm land capability. The plan would be developed with reference to base line soil testing and with input from an Agronomist to ensure the site is left stabilised, under a cover crop or other suitable ground cover. The plan would reference: o Australian Soil and Land Survey Handbook (CSIRO, 2009) o Guidelines for Surveying Soil and Land Resources (CSIRO, 2008) o The land and soil capability assessment scheme: second approximation (OEH, 2012) o Below ground infrastructure that impedes cropping (less than 500mm depth) may be removed, subject to consultation with the land owner.			D
• The materials and colour of onsite infrastructure will, where practical, be non-reflective and in keeping with the materials and colouring of the landscape.	C		
• A Waste Management Plan (WMP) would be developed in consultation with Warren Shire Council (with regard to disposal options). It would include but not be limited to: o Identification of opportunities to avoid, reuse and recycle, in accordance with the waste hierarchy. o Quantification and classification of all waste streams. o Provision for recycling management onsite. o Provision of toilet facilities for onsite workers and how sullage would be disposed of (i.e., pump out to local sewage treatment plant). o Tracking of all waste leaving the site.	C	O	D

Safeguards and Mitigation Measures	C	O	D
o Disposal of waste at facilities permitted to accept the waste. Consultation would be undertaken with local waste facility operators to ensure that loads do not exceed capacity. o Requirements for hauling waste (such as covered loads). o Disposal options for excess waste (Warren Shire has limited options available for the disposal of waste and other viable options will need to be implemented). o Wooden crates used on site will need to be thoughtfully disposed of offsite. The crates often cannot be chipped to be used as mulch due to chemical sprays used. o Septic system is installed and operated according to the local Warren Shire Regional Council regulations.			
• All design and engineering would be undertaken by qualified and competent person/s with the support of specialists as required.	C		
• Transmission lines would be located as far as practical from residences, farm sheds, and yards to reduce the potential exposure to EMFs.	C		
• Design of electrical infrastructure would minimise EMFs.	C		
• Development of a complaints procedure to promptly identify and respond to issues generating complaints.	C	O	D
• Protocols to guide vehicle and construction equipment use, to minimise emissions would be included in construction and operational environmental management plans. This would include but not limited to Australian standards and the POEO Act.	C	O	D
• Protocols would be included in construction and decommissioning to minimise and treat dust (water carts or similar in response to visual cues). This may involve installation of barriers such as shade cloth, to protect receivers.	C		D
• Should an item of historic heritage be identified, the Heritage Division (OEH) would be contacted prior to further work being carried out in the vicinity.	C	O	D
• A minimum 10m setback from native vegetation remnants would be incorporated into the final design.	Design		
• Develop a Bush Fire Management Plan to include but not be limited to: o Management of activities with a risk of fire ignition. o Management of fuel loads onsite. o Storage and maintenance of firefighting equipment, including siting and provision of adequate water supplies for bush fire suppression. This includes access to the onsite dam if required for fire emergency situations. o The below requirements of *Planning for Bush Fire Protection 2006* - ▪ Identifying asset protection zones ▪ Providing adequate egress/access to the site ▪ Emergency evacuation measures	C	O	D

Safeguards and Mitigation Measures	C	O	D
o Operational procedures relating to mitigation and suppression of bush fire relevant to the solar farm.			
• The Community Consultation Plan would be implemented to manage impacts to community stakeholders, including but not limited to: o Protocols to keep the community updated about the progress of the proposal and proposal benefits. o Protocols to inform relevant stakeholders of potential impacts (haulage, noise etc.). o Protocols to respond to any complaints received.	C		
• Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials.	C		
• Liaison with local representatives regarding accommodation options for staff, to minimise adverse impacts on local services.	C		D
• Liaison with local tourism industry representatives to manage potential timing conflicts with local events.	C		D

APPENDIX B FLOOD MAPS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SNAKES PLAIN
NEVERTIRE
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BAN BAN CREEK
MACQUARIE RIVER
F1
F2
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P3
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11
FMP Floodway Network
Map 3 of 7
Legend
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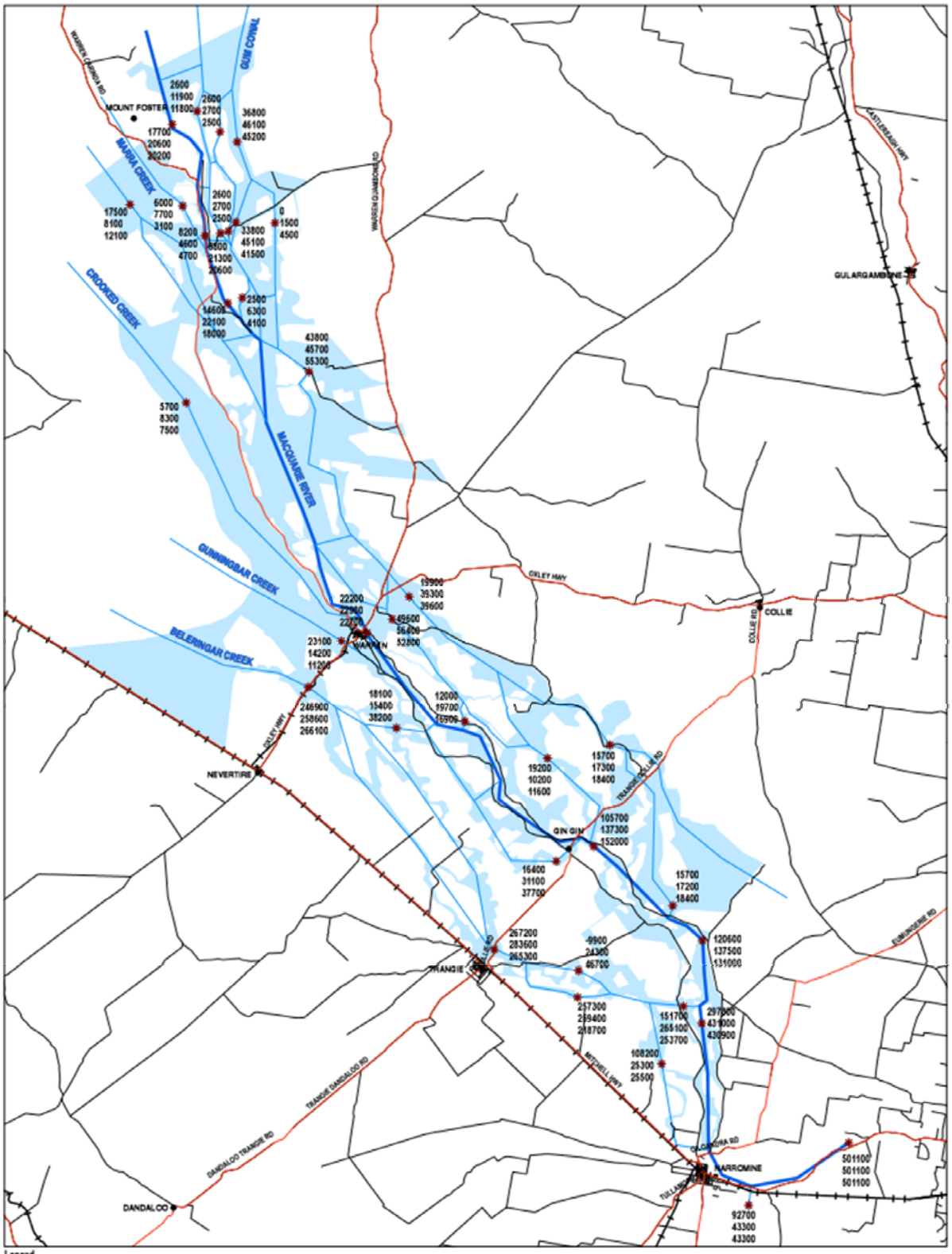

Figure 4.1 Flow Distribution 1955 Flood