NSW GOVERNMENT

Vales Point Solar Farm

State Significant Development

(SSD 8533)

October 2018

Cover photo

Source: Solar Panels at Moree Solar Farm, Department of Planning and Environment Image Database (https://images.planning.nsw.gov.au)

Executive Summary

Sunset Power International Pty Ltd, trading as Delta Electricity, proposes to develop a new 55 megawatt solar farm on a rehabilitated section of the Vales Point Power Station ash dam to at Mannering Park, near the southern shoreline of Lake Macquarie.

Engagement

The Department publicly exhibited the development application and received submissions from nine Government agencies, three members of the general public and two special interest groups.

None of the Government agencies objected to the project, however one public submission and one special interest group submission objected.

The Department has carefully assessed the concerns raised in the objections, including the potential traffic, air quality and water quality impacts of the project.

Assessment

The key issues considered in the Department's assessment are the clearing of native vegetation regrowth, potential impacts to traffic and transport, and the compatibility of the proposed land use.

Overall, the project has been well-designed to use a severely modified landscape. The clearing of native vegetation regrowth which has occurred on the ash dam would be offset in accordance with Government policy and the Department is sastisfied that this would enhance the biodiversity values of the region.

The potential traffic impacts would largely be short-term, relatively minor in nature and can be managed in accordance with strict conditions requiring adherence to specific construction hours, upgrade of local roads and implementation of a comprehensive Traffic Management Plan.

By placing the solar farm within the ash dam on land zoned for electricity generation, the project largely avoids potential land use compatibility conflicts.

Summary

In summary, the Department considers the site to be suitable for the project as it has good solar resources and there is available capacity on the nearby electricity network. It also considers the solar farm to be a productive use of the rehabilitated ash dam, which has limited potential for other development.

The project is consistent with both the Commonwealth's *Renewable Energy Target* and NSW's *Climate Change Policy Framework* as it would contribute 55 megawatts of renewable energy to the National Electricity Market.

The Department considers that the project would result in benefits to the State of NSW and the local community, and is therefore in the public interest.

Contents

1. Introduction

Sunset Power International Pty Ltd, trading as Delta Electricity (the Applicant), proposes to develop a 55 megawatt (MW) solar farm at Mannering Park, on a portion of the ash dam of the Vales Point Power Station within the Central Coast Council and Lake Macquarie City Council local government areas (see **Figure 1**).

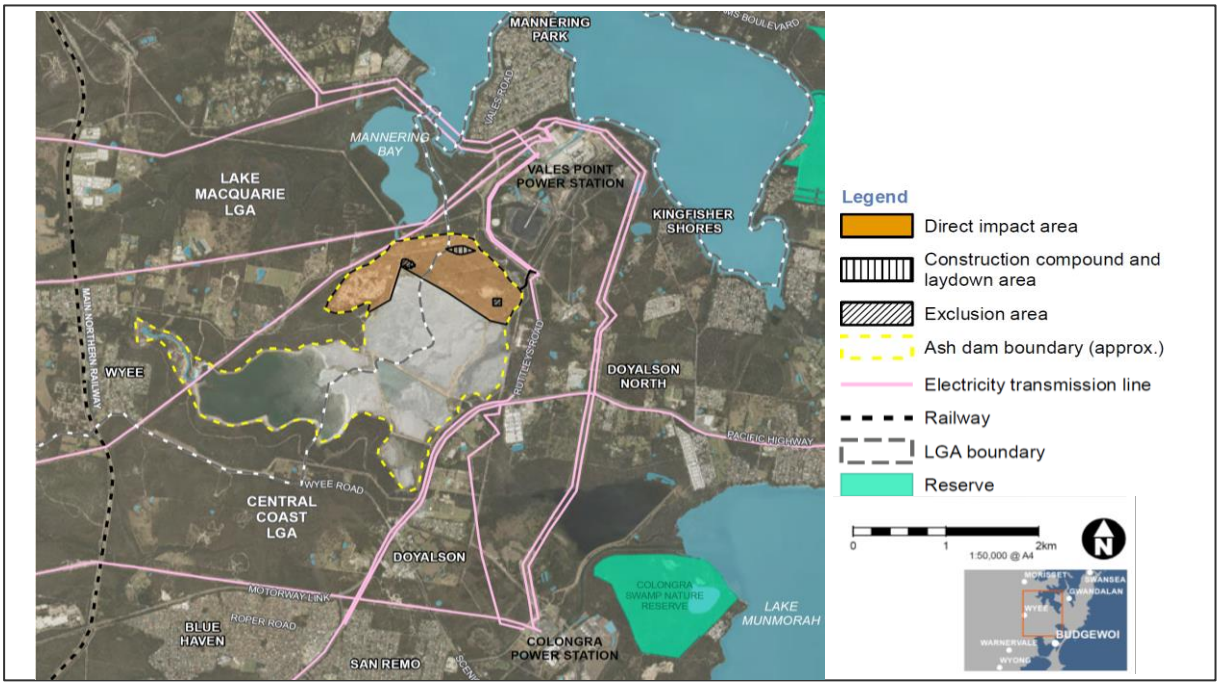

Figure 1 | Regional Context Map

Vales Point Power Station is a 1,320 MW coal-fired power station that has been operating since the 1960's. Ash is a major waste product of the coal combustion process. It is piped as a slurry and stored in the Vales Point ash dam, which covers an area of 524 hectares (ha).

The project would be located on the northern section of the ash dam (Ponds 1, 2 and 3), covering an 80 ha area which has been filled, capped and rehabilitated. The Applicant is progressively capping other areas of the ash dam immediately to the south of the site (Pond 4) and actively transferring more ash into ponds further south.

The ash dam is a highly disturbed site in an area with a long history of industrial land uses, including numerous coal mines, power stations, electricity transmission lines and other associated infrastructure.The majority of the project site is zoned SP2 – Electricity Generation Works under the *Lake Macquarie Local Environment Plan 2014* (Lake Macquarie LEP) and predominantly SP2 – Electricity Generation Works under the *Wyong LEP 2013* (Wyong LEP).

A mature woodland vegetation corridor, with intermittent disturbance by power station infrastructure and transmission lines, surrounds the site, with native vegetation regrowth occurring on the ash dam. Beyond the site, Mannering Bay to the north is a natural water body that flows into Lake Macquarie, and the Mannering Colliery and Chain Valley Bay Colliery underground mines are located to the east.

There are five residences located within 1 km of the site along Summerhayes Road, with the nearest dwelling located 100 m north-west of the site. Residential areas in the locality include the suburbs of Mannering Park to the north, Doyalson North to the east, Doyalson to the south and Wyee to the west.

2. Project

The project involves the construction of a new solar farm with a generating capacity of 55 MW. It also involves any upgrading or decommissioning of infrastructure and equipment in the future. While the capacity of the project may increase over time as technology improves, the footprint of the development would not increase.

While the project shares the same site as the Vales Point Power Station and is proposed by the operator of the power station, the scope of the Department's assessment is limited to impacts associated with the construction, operation and decommissioning of the proposed solar farm.

The key components of the project are summarised in **Table 1**, depicted in **Figure 2**, and described in the Environmental Impact Statement (EIS) (see **Appendix B**) and Response to Submissions (RTS) (see **Appendix E**).

Table 1 | Main Components of the Project

Aspect	Description
Project summary	The project includes: • around 220,000 solar panels (2.5m high) and around 12 inverter units (2.9 m high); • a new 33 kilovolt (kV) transmission line approximately 600 m in length connecting to the Ausgrid Vales Point Zone Substation; and • internal access tracks, operations and maintenance facility, staff amenities, site offices, car parking, laydown areas.
Project area	524 ha (including a 80 ha development footprint).
Access route	Access to the site would be via Ruttleys Road and the Pacific Highway.
Site entry and road upgrades	The site would be accessed via an existing access point on Ruttleys Road. Key road works would include safety improvements at the site access point, including constructing an auxiliary left-turn treatment.
Operational life	• The expected operational life of the infrastructure is approximately 30 years. However, the project may involve infrastructure upgrades that could extend the operational life. • The project also includes decommissioning at the end of the project life, which would involve removing all above ground infrastructure.
Construction	• The construction period would last for up to 18 months from the commencement of site establishment works and include a peak period of up to 12 months. • Heavy vehicles up to 26 m in length would require access to the site. No oversized vehicle movements are proposed. • Construction hours would be limited to Monday to Friday 7am to 6pm, and Saturday 8am to 1pm.
Hours of operation	• The project would operate during daylight hours. • Daily operations and maintenance would be undertaken Monday to Friday 7am to 6 pm and Saturday 8 am to 1 pm.
Employment	Up to 100 full time equivalent construction jobs, and 5 full time equivalent operational jobs.
Capital investment value	$117 million

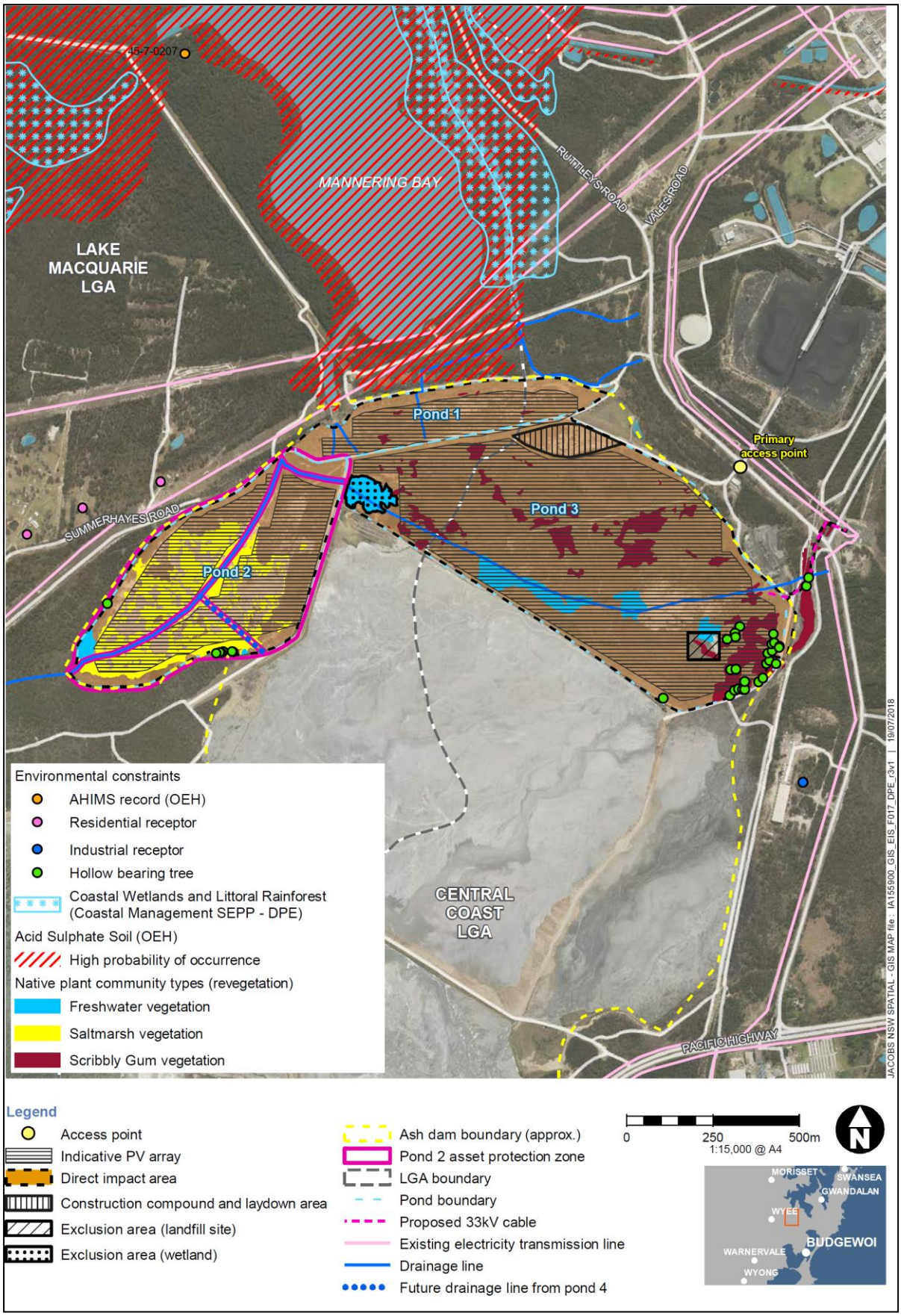

Figure 2 | Project Layout

3. Strategic Context

In 2017, NSW derived approximately 15.8% of its energy from renewable sources. The rest was derived from fossil fuels, including 79.3% from coal and 4.8% from gas. However, there are currently no plans for the development of new coal power stations in NSW, and the development of renewable energy sources, like wind and solar farms, is experiencing rapid growth.

This is highlighted in the *Independent Review into the Future Security of the National Electricity Market* (the Finkel Review), which outlines a strategic approach to ensuring an orderly transition from traditional coal and gas fired power generation to renewable energy with lower emissions. It notes that Australia is heading towards zero emissions in the second half of the century.

The *United Nations Framework Convention on Climate Change* (UNFCCC) has adopted the Paris Agreement, which aims to limit global warming to well below 2°C, with an aspirational goal of 1.5°C. Australia's contribution towards this target is a commitment to reduce greenhouse gas emissions by 26% to 28% below 2005 levels by 2030.

One of the key initiatives to deliver on this commitment is the Commonwealth Government's *Renewable Energy Target*. Under this target, more than 20% of Australia's electricity would come from renewable energy by 2020. It is estimated that an additional 5,000 MW of new renewable energy capacity will need to be built by 2020 to achieve the *Renewable Energy Target*.

The *NSW Climate Change Policy Framework*, released in November 2016, sets an aspirational objective for NSW to achieve net zero emissions by 2050. The NSW Government also has a *Renewable Energy Action Plan*, which promotes the development of renewable energy in NSW.

NSW is currently leading Australia in large-scale solar, with five major operational projects, including the largest solar farm in Australia.

Over the next 18 years, four of the State's coal-fired power stations, including Vales Point will have reached the end of their technical life and could be decommissioned. The NSW Government is committed to ensuring significantly disturbed landscapes such as ash dams are rehabilitated and put to productive use.

The Department is generally supportive of the development of renewable energy projects on constrained industrial sites, such as existing coal-fired power stations and associated ash dams, as these sites are:

- generally highly disturbed, which means that they often have low ecological and heritage value, and can present geotechnical constraints for other land use purposes;
- usually located in close proximity to the existing transmission line network; and
- readily accessible via established transport routes that can easily accommodate heavy vehicle traffic.

With a capacity of 55 MW, the project would generate enough electricity to power up to 20,000 homes and is therefore consistent with both the Commonwealth's *Renewable Energy Target* and NSW's *Renewable Energy Action Plan*.

4. Statutory Context

4.1 State Significant Development

The project is classified as State significant development (SSD) under Section 4.38 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is because it triggers the criteria in Clause 20 of Schedule 1 of *State Environmental Planning Policy (SEPP) (State and Regional Development) 2011*, as it is development for the purpose of electricity generating works with a capital investment value (CIV) of more than $30 million.

Consequently, the Minister for Planning is the consent authority for the development. However, under the Minister's delegation of 11 October 2017, the Executive Director, Resource Assessments and Business Systems, may determine the development application as there were less than 25 objections and a political donations disclosure statement has not been made.

4.2 Permissibility

The site is located on land zoned SP2 – Electricity Generation Works under the Lake Macquarie LEP, and on land zoned SP2 – Electricity Generation Works and W1 – Natural Waterways under the Wyong LEP.

Solar farms are a permissible land use on land zoned SP2 under the Lake Macquarie LEP and Wyong LEP, as discussed further in **section 6.3**.

Additionally, under the *SEPP (Infrastructure) 2007* (Infrastructure SEPP) electricity generating works are permissible on any land in a prescribed rural, industrial or special use zone (including SP2). However, the Infrastructure SEPP does not permit development for the purposes of electricity generating works on land zoned W1.

Under Section 4.38(3) of the EP&A Act, development consent may be granted despite the development being partly prohibited by an environmental. As such, despite the provisions of the Infrastructure SEPP, consent could be granted for the development on the land zoned W1. While the consent authority has the power to override a partial prohibition for SSD, it must assess the planning merits of such a decision. This is discussed further in **section 6.3** of this report.

In accordance with the Infrastructure SEPP, the Department has given written notice of the project to Ausgrid as the electricity supply authority for the area. Ausgrid has provided landowner's consent for the development application.

4.3 Integrated and Other NSW Approvals

Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the SSD approval process, and consequently are not required to be separately obtained for the proposal.

Under Section 4.42 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any development consent for the proposal (e.g. approvals for the intersection works under the *Roads Act 1993*.)

The Department has consulted with the relevant government authorities responsible for the integrated and other approvals, considered their advice in its assessment of the project, and included suitable conditions in the recommended conditions of consent to address these matters (see **Appendix F**).

4.4 Mandatory Matters for Consideration

Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. These matters could be summarised as:

- the provisions of environmental planning instruments (including draft instruments), development control plans, planning agreements, and the EP&A Regulations;
- the environmental, social and economic impacts of the development;
- the suitability of the site;
- any submissions; and
- the public interest, including the objects in the EP&A Act and the encouragement of ecologically sustainable development (ESD).

The Department has considered all of these matters in its assessment of the project, as well as the Applicant's consideration of environmental planning instruments in its EIS, as summarised in **section 6** of this report. The Department has also given consideration to the relevant provisions of the environmental planning instruments in **section 4** and **Appendix C**.

5. Engagement

5.1 Department's Engagement

The Department publicly exhibited the EIS from 16 February until 18 March 2018 and advertised the exhibition in the Central Coast Express Advocate.

The Department inspected the site with the Applicant on 1 June 2018 and has consulted with the relevant Government agencies throughout the assessment process.

5.2 Submissions and Response to Submissions

During the exhibition period, the Department received a total of 14 submissions, including:

- nine from government agencies (all comments);
- two from special interest groups (one comment, one objecting); and
- three from the general public (one comment, one support and one objecting).

None of the government agencies objected to the project, however one special interest group and one member of the general public objected to the project.

Full copies of the submissions are attached in **Appendix D**. The Applicant provided a response to all matters raised in submission on the project (see **Appendix E**).

5.3 Key Issues – Government Agencies

The **Office of Environment and Heritage (OEH)** emphasised that the clearing of native vegetation in accordance with the Framework for Biodiversity Assessments (FBA) requires offsets and the preparation of a Biodiversity Offset Strategy would be required. The Department has incorporated this requirement into the recommended conditions of consent. OEH supports this approach and would assist with the implementation of these conditions.

Roads and Maritime Services (RMS) recommended rationalising all site access to one location at Ruttleys Road. The Applicant removed the Pacific Highway access point from the project design in its Response to Submissions and RMS considers that any residual traffic and transport matters can be addressed by the recommended conditions of consent.

Department of Industry Lands and Water Division (DoI L&W) recommended that any works in proximity to existing drainage lines and the freshwater wetlands include appropriate scour and erosion measures in accordance with the *Guidelines for Controlled Activities on Waterfront Land*. The Department has included this requirement into the recommended conditions.

Lake Macquarie City Council supported the project from a land use planning perspective but initially raised concerns about the proposed clearing of saltmarsh. The Department has comprehensively assessed biodiversity impacts, in consultation with OEH and Council, and recommended strict conditions requiring the preparation of a Biodiversity Management Plan and the provision of biodiversity offsets. This is discussed further in **section 6.1**.

Central Coast Council advised that Ruttleys Road has one of the highest crash rates within the local government area (LGA) and recommended that a road safety assessment be undertaken to ensure the safety of all vehicles travelling along the road. The Applicant included a road safety audit in its Response to Submissions. The Department has consulted with Council and RMS, and has required the Applicant to carry out road upgrades to address the findings of the audit, as discussed in **section 6.2**. Council also requested local contributions under section 7.12 of the EP&A Act. This issue is further discussed in **section 6.4**.

The **Environment Protection Authority (EPA)** advised that the power station is regulated under Environmental Protection Licence (EPL) 761 and that the mitigation measures proposed by the Applicant to manage noise and dust generation from the emplaced ash in the short and long term were appropriate. These matters are further discussed in **section 6.4**. The EPA further noted that it would regulate environmental pollution matters for the power station by virtue of EPL 761, however the solar farm would not require an environmental protection licence.

Rural Fire Service and **Fire & Rescue NSW** recommended bushfire and emergency response plan conditions, which have been incorporated into the recommended conditions of consent.

The **Division of Resources and Geoscience (DRG)** confirmed that it considers the project would have no resource sterilisation issues.

5.3 Key Issues – Community

The Department received three submissions from members of the public, one objecting, one commenting and one supporting the project.

The objection came from a landowner located approximately 34 km from the project raising concerns with TransGrid's existing transmission line infrastructure which would not be altered as part of the project.

The submission providing comments requested that consideration be given to sealing the surface of Summerhayes Road, which is adjacent to the project boundary. Traffic and transport considerations are discussed in **section 6.2**.

5.4 Key Issues – Special Interest Groups

Two submissions were received from special interest groups, one objecting to and one commenting on the project.

The **Northern Lakes Disability Tourism Precinct** objected to the project on the basis that ash dams create air and water quality issues which the project would exacerbate by disturbing the ash and placing increasing pressure on the dam walls. The submission also raised concerns around the need for more government operated air quality

monitoring stations and the lack of information detailing land use options after the solar farm is decommissioned. These matters are addressed in **section 6.4**.

The **Mannering Park Precinct Committee** commented on the existing congestion and debris on the road caused by trucks exiting the ash dam on Ruttleys Road. The group ralso requested consideration of the establishment of a local community benefit program in relation to the Vales Point Power Station as a whole. These matters are considered in **sections 6.2** and **6.4**, respectively.

6. Assessment

The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the three key issues below, including biodiversity impacts, traffic impacts, and the compatibility of the proposed land use.

The key constraints for the project are depicted in **Figure 2**.

The Department has also considered the full range of potential impacts associated with the project and has included a summary of the conclusions relating to these in **section 6.4**.

A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

6.1 Biodiversity

The site is situated on extensively disturbed land, with the substratum comprising of ash and waste material from the Vales Point Power Station. Vegetation regrowth has occurred on site following rehabilitation works which involved capping Ponds 1, 2 and 3 with sandy clay and topsoil.

Three native plant community types (PCTs) have regrown on the site following rehabilitation, including Saltmarsh Estuarine Complex, Scribbly Gum – Red Bloodwood – Angophora inopina heathy woodland on lowlands of the Central Coast (Scribbly Gum Woodland), and Phragmites australis and Typha oerientalis coastal freshwater wetlands of the Sydney Basin Bioregion (Coastal Freshwater Wetlands).

The presence of the Saltmarsh Estuarine Complex regrowth was unexpected as all naturally occurring communities are found within estuarine mudflats that are exposed to intermittent tidal inundation.

Vegetation Clearing

Up to 19.2 ha of native vegetation regrowth would be removed, comprised of 9.9 ha of Saltmarsh Estuarine Complex, 2.6 ha of Coastal Freshwater Wetlands and 6.7 ha of Scribbly Gum Woodland which includes 32 dead hollow bearing trees. The dead hollow bearing trees were left standing when the site was converted into the ash dam.

While the species composition of the Saltmarsh Estuarine Complex is characteristic of the Coastal saltmarsh in the NSW North Coast, Sydney Basin and South East Corner bioregions Endangered Ecological Community (Coastal Saltmarsh EEC), OEH confirmed that the PCT found on site does not satisfy the definition of the Coastal Saltmarsh EEC as the site is located well above the intertidal zone and outside of its natural habitat range.

Biodiversity Offsets

Under the transitional arrangements of the recently commenced *Biodiversity Conservation Act 2016*, offsets for this project are to be assessed under the existing NSW *Biodiversity Offset Policy for Major Projects* and the *Framework for Biodiversity Assessment* (FBA). The Applicant calculated that the disturbance of 19.2 ha of native vegetation would generate 243 ecosystem credits.

Under the FBA, these credits would need to be offset either through the retirement of like-for-like credits from the biodiversity register or by contributing substantial funds for supplementary measures when offsets are not available. The Department acknowledges that the FBA does not differentiate between naturally occurring PCTs and vegetation regrowth that has occurred on an extensively modified landscape.

The Department considers the scale of offsets required in the form of like-for-like or fund contributions for the regrowth that has occurred on the ash dam is not warranted or appropriate in these circumstances. This is because the project footprint occurs within the approved operational disturbance footprint of the existing coal-fired power station and the regrowth has occurred in an area outside of the PCTs natural habitat range.

Nevertheless, OEH has advised that the vegetation regrowth may provide habitat for several threatened species and recommended that the Applicant should still be required to prepare a biodiversity offset strategy to ensure these impacts are adequately offset.

In that regard, the Department has identified two alternative offset options that the Applicant could pursue to ensure an environmental benefit is achieved without the requirement to retire the 243 ecosystem credits calculated.

Firstly, there are existing communities of Coastal Saltmarsh EEC present within the broader Vales Point Power Station land holdings in Mannering Bay and Wyee Bay. The conservation of these sites which have a higher ecological value could potentially partially offset the clearing for the project.

The second option would involve the Applicant reaching an agreement with Lake Macquarie City Council to contribute towards and expand the Council's ongoing saltmarsh and wetland rehabilitation programs.

These offset options would enhance the Coastal Saltmarsh EEC which holds a higher ecological value in comparison with the regrowth on site. OEH are supportive of this approach, provided the contributions from the Applicant are commensurate with the clearing proposed for the project.

Recommended Conditions

To formalise the Applicant's proposed approach, the Department has recommended conditions requiring the Applicant to prepare a Biodiversity Offset Strategy at least three months prior to commencing construction, followed by the preparation of a Biodiversity Management Plan prior to commencement of construction. This plan would outline the proposed monitoring, management and rehabilitation measures that would be implemented throughout the life of the development.

Summary

The Department acknowledges that repurposing an extensively disturbed ash dam into a solar generation project has benefits in avoiding the need to disturb well established vegetation communities and EECs. While the strict adherence to like-for-like offsets or fund contributions for disturbing regrowth is not appropriate as the vegetation regrowth has occurred within the approved operational footprint of the existing coal-fired power station, the Department and OEH agree that other offset options are available.

Subject to the recommended conditions, the Department and OEH are satisfied that the project could be undertaken in a manner that maintains or improves the biodiversity values of the locality over the medium to long term.

6.2 Traffic and Transport

Transport Routes and Site Access

The Vales Point ash dam is an existing industrial site with light and heavy vehicle movements generated from various operational activities, including ongoing capping and rehabilitation works and trucks exporting recycled ash products. These existing activities involve up to 10 heavy vehicles per hour accessing and departing the ash dam from Ruttleys Road.

The main transport route to be used for the project would be via the Pacific Highway and Ruttleys Road. The Pacific Highway is an RMS road while Ruttleys Road is a local road controlled by the Councils. The Chain Valley Bay Mine haulage route also utilises this section of Ruttleys Road between 5:30 am to 6:30 pm with up to 32 heavy vehicles per hour.

Delta Electricity originally proposed to use an additional access point located on the Pacific Highway, however both RMS and the Department recommended site access be consolidated to one location for road safety purposes and to minimise disruptions to traffic flow on the Pacific Highway. Delta Electricity removed the Pacific Highway access point from the project design in its Response to Submissions.

The road safety audit provided as part of the Response to Submissions identified several safety issues with the site access point via Ruttleys Road, including the proposed configuration of the dedicated cycle lane and length of the acceleration lane for trucks leaving the site. The audit acknowledged that both the detailed design and implementation of safety measures for the proposed reconfiguration would be prepared to the satisfaction of the Central Coast Council.

Traffic Volumes

The main increase in traffic volumes associated with the project would occur during the 18 month construction period, with a peak period of 12 months. The estimated maximum daily vehicle movements during peak construction would be 108 movements, comprising 90 light vehicles (cars) and 18 heavy vehicles (trucks). No over-dimensional vehicle movements are proposed for the project. During operation, the project would generate an average of five light vehicle movements a day.

The key intersections between Ruttleys Road and the Pacific Highway, and between Ruttleys Road and the site access point, would continue to operate at acceptable levels of service during both construction and operation of the project.

Central Coast Council has requested the Applicant to construct an Auxiliary left-turn (AUL) treatment for site access at the existing intersection on Ruttleys Road.

A submission from a neighbouring property raised concerns about the condition of Summerhayes Road and whether the road could be upgraded to accommodate traffic generated by the project. The Department notes that Summerhayes Road does not form part of the proposed site access route and has therefore not recommended any treatment for this road as part of the project.

Recommended Conditions

The Department has recommended conditions of consent requiring the Applicant to:

- upgrade the existing site access point on Ruttleys Road in accordance with Central Coast Council requirements prior to the commencement of construction;
- ensure the length of vehicles accessing the site does not exceed 26 m and the number of vehicles does not exceed the volumes predicted in the EIS; and
- prepare and implement a Traffic Management Plan with in consultation with RMS and Councils.

Subject to the recommended conditions, the Department, RMS, and Councils are satisfied that the project would not result in significant impacts on road network capacity, efficiency or safety.

6.3 Compatibility of Proposed Land Use

The majority of the site (approximately 99%) is located within land zoned SP2 – Infrastructure under the Lake Macquarie LEP and Wyong LEP, however a small portion of the site is located within land zoned W1 – Waterways under the Wyong LEP. As discussed previously, both the LEPs and Infrastructure SEPP prohibit electricity generating works on land zoned W1.

The portion of the site zoned W1 – Natural Waterways is the former alignment of Mannering Creek. Mannering Creek was dammed and filled in as part of the development of the Vales Point Power Station in order to facilitate the construction of the Vales Point ash dam. As such, that portion of the site no longer meets the characteristics of the W1 zone, and Central Coast Council has advised that the W1 land zoning should be updated to reflect the fact that Mannering Creek was converted into an ash dam.

As such, based on the assessment of the project on its merit against the zoning provisions, the Department considers consent could be granted for the development, overriding the partial prohibition under the LEPS and the Infrastructure SEPP, as allowed under Section 4.38(3) of the EP&A Act.

In summary, the Department considers the reuse of an ash dam as a solar farm presents a productive use of land with limited land use options. In selecting a site which has been severely disturbed and zoned specifically for the purpose of electricity generating works, further land clearing and potential land use conflicts associated with establishing a new solar farm have largely been avoided. Based on these considerations, the Department considers that the proposed solar farm represents an effective and compatible use of the land within the region.

6.4 Other Issues

The Department's consideration of other issues is summarised in **Table 4**.

Table 4 | Other Issues

Issue	Findings	Recommended Condition
Visual	• The proposed solar farm is a relatively low-lying development with panel heights of up to 2.5 m. • The project site is well screened from external views by a large vegetated buffer. No residential properties have views of the project. • The photovoltaic panels are designed to absorb rather than reflect sunlight and the project would not cause noticeable glint or glare compared to other building surfaces. • The proposed new transmission line connecting the site to the existing Vales Point Zone Substation (located 600 m east of the site) would be adjacent to an existing power line and conveyor gantry.	• Ensure that external lighting is minimised and complies with the relevant Australian Standards. • Prohibit any signage or advertising on the development, unless for safety purposes.

Issue	Findings	Recommended Condition
Air quality	• The ash dam is capped with clean fill and top soil with a nominal capping thickness ranging between 100-450 millimetres. • Low levels of airborne dust would be generated during construction of the solar farm which would be managed in accordance with best practice. • Mitigation measures proposed by the Applicant include keeping exposed ash wet until it can be recapped or transferred to the operational portions of the ash dam for management and using best practice construction techniques. • The Department and the EPA consider the proposed dust mitigation measures for works on the ash dam to be appropriate. • The ongoing operation of Vales Point Power Station is separate from this project and is regulated under EPL 761 administered by the EPA.	• Minimise dust generated by the development.
Noise	• The proposed construction, upgrading and decommissioning activities would be well below the highly noise affected criteria of 75 dB(A) specified in the EPA's *Interim Construction Noise Guideline* (ICNG). • However, four residences on Summerhayes Road may be subject to temporary noise up to 20 dB(A) above the 'noise affected' criterion of 45 dB(A) during site preparation, clearing and demolition works. • These exceedances would be short-term when works are in the vicinity of the receiver and limited to standard construction hours. • The Department considers construction noise can be minimised by implementing the noise mitigation work practices set out in Tables 5 and 8 of the ICNG. • Therefore, the Department considers that any noise impacts would be limited to the construction period, short-term and minor. • There would be negligible noise during operation.	• Minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG. • Restrict construction hours to Monday to Friday 7 am - 6 pm, and Saturday 8 am - 1 pm.
Heritage	• An archaeological field survey did not identify any Aboriginal heritage sites in the vicinity of the project site. This is attributed to the substantially disturbed nature of the ash dam and proposed transmission line corridor which is located within a conveyor belt and pipeline easement. • OEH did not raise any concerns about Aboriginal heritage.	• Cease works and notify the NSW Police and OEH if human remains are identified over the life of the project. • Prepare a Chance Finds Protocol.
Contaminated lands	• A section of Pond 3 used for asbestos disposal associated with power station operations is fenced and clearly signposted. This area is excluded from the project's development footprint. • 46 test pits were excavated within the ash dam capping material and compared to industrial land usage criteria contained under the *National Environmental Protection Council (NEPC) National Environment Protection Measure 1999 (as revised 2013)* (NEPM). • All soil samples recorded contaminant concentrations below the adopted site assessment criteria. Exposure risks associated with site users (i.e. workers) and to ecological receptors is considered low. • As such, the Department considers the site is suitable for the development of a solar farm.	• Prohibit works from occurring within the asbestos landfill exclusion area within Pond 3.

Issue	Findings	Recommended Condition
Soil and water	• The project would require around 70 megalitres (ML) of water during construction and 0.15 ML of water annually during operation. • Water demands would be met via the existing treated effluent pond and stormwater retention ponds located on the power station site. • Any potential erosion and sedimentation risks associated with the project can be effectively managed using best practice construction techniques. • The Applicant's existing obligations under EPL 761 to monitor and manage surface and groundwater quality would provide additional mitigation for potential offsite impacts.	• Prohibit water pollution in accordance with Section 120 of the *Protection of the Environment Operations Act 1997*. • Undertake activities in accordance with OEH's Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual and with the *Guidelines for Controlled Activities on Waterfront Land* (DPI Water).
Hazards	• The project would comply with the National Health and Medical Research Council standards for electro-magnetic fields. • The fire risks can be suitably controlled through the implementation of standard fire management procedures. • RFS recommended a Bush Fire Management Plan and Fire & Rescue NSW requested a detailed Emergency Response Plan be prepared for the development outlining how risk would be managed. • The Applicant has committed to maintaining Asset Protection Zones and preparing a Bush Fire Management Plan and Emergency Response Plan to manage fire risk. • The Department considers that the fire risks can be suitably controlled through the implementation of standard fire management procedures.	• Ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2006*. • Prepare a Fire Management and Emergency Response Plan in consultation with RFS and Fire & Rescue NSW.
Decommissioning and rehabilitation	• Some submissions raised concerns about decommissioning of the solar farm and use of the land after the operational life of the project. • The Department has developed standard conditions for solar farms to cover this stage of the project life cycle, including clear decommissioning triggers and rehabilitation objectives (see opposite). • With the implementation of these measures, the Department considers that the solar farm would be suitably decommissioned, either at the end of the project life if they are not operating for more than 18 months, and the site appropriately rehabilitated for its intended land use.	• Include rehabilitation objectives requiring the Applicant to rehabilitate the site within 18 months of the cessation of operations.
Community benefit fund	• Mannering Park Precinct Committee suggested a community benefit program be provided to compensate the local community for impacts associated with the operation of the existing Vales Point Power Station. • While the project shares the same site as the Vales Point Power Station and is proposed by the operator of the power station, the scope of the Department's assessment and the recommended conditions are limited to impacts associated with the proposed solar farm. • In that regard, the Department considers the solar farm provides a beneficial reuse of the land that would allow Lake Macquarie Council to work towards its Emission Reduction Target and does not consider the establishment of a community benefit program for the solar farm to be necessary.	• No specific conditions reqired.

Issue	Findings	Recommended Condition
Development contributions	• Central Coast Council requested consideration of a 1% development contribution under section 7.12 of the EP&A Act. • As the project is SSD, the Department would only require the Applicant to enter into a voluntary planning agreement (VPA) under section 7.7 of the EP&A Act and in accordance with the terms of an offer made by the Applicant. • The Department considers that a VPA should only be required where a development would increase demand on local infrastructure or services, and the local council would need to recoup the costs associated with this infrastructure. • In that regard, the Department has carefully considered the potential impacts of the project, particularly regarding the construction workforce, and considers there are strong reasons against the need for a VPA. • Firstly, the construction workforce is likely to be drawn from the surrounding communities given the size and demographics of the population living in the Central Coast area. • Secondly, the project would only have a large workforce for a limited time and would be reduced to only five employees during operation of the project. • Finally, there would be no increased demand on Council's public amenities or services as the requisite road upgrades and necessary repairs would be completed at the Applicant's expense. The Department has recommended conditions requiring road upgrades and the implementation of a Traffic Management Plan to manage any repairs of local road infrastructure. • As such, the Department does not consider a VPA is warranted.	• No specific conditions required.

7. Evaluation

The Department has assessed the development application, EIS, submissions, Response to Submissions and additional information provided by the Applicant and relevant government agencies. The Department has also considered the objectives and relevant considerations under section 4.15 of the EP&A Act.

The Department considers the site to be appropriate for a solar farm as it has good solar resources and available capacity on the existing electricity network. In addition, the area surrounding the site has a long history of industrial land uses, including numerous coal mines, power stations, and electricity transmission lines.

Overall, the project has been well-designed to use a severely modified landscape. The clearing of native vegetation regrowth which has occurred on the ash dam would be offset in accordance with Government policy and the Department is sastisfied that this would enhance the biodiversity values of the region.

The potential traffic impacts would largely be short-term, relatively minor in nature and can be managed in accordance with strict conditions for requiring adherence to specific construction hours, upgrade of local roads and implementation of a comprehensive Traffic Management Plan.

By placing the solar farm within the ash dam on land zoned for electricity generation, the project largely avoids potential land use compatibility conflicts and the site is well screened from surrounding landowners and none of the nearby landowners have objected to the project.

To address the residual impacts of the project, the Department has recommended a range of detailed conditions, developed in conjunction with agencies and Council, to ensure these impacts are effectively minimised and/or offset. The Applicant has reviewed the conditions and does not object to them.

Importantly, the project would assist in transitioning the electricity sector from coal and gas fired power stations to renewable energy sources. It would generate up to 120,000 MW of clean electricity annually, which is enough to power approximately 20,000 homes and save up to 116,000 tonnes of greenhouse gas emissions per year. It is therefore consistent with the goals of the Commonwealth's *Renewable Energy Target* and NSW's *Climate Change Policy Framework*.

The Department considers that the project achieves a reasonable balance between maximising the efficiency of the solar resource development and minimising the potential impacts on surrounding land users and the environment. The project would also stimulate economic investment in renewable energy and provide flow-on benefits to the local community through job creation and capital investment.

On balance, the Department believes that the project is in the public interest and should be approved, subject to the recommended conditions of consent.

8. Recommendation

It is recommended that the Executive Director, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report; and
- **accepts** and **adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants consent to** the application in respect of the Vales Point Solar Farm (SSD 8533);
- **signs** the attached development consent and recommended conditions of consent (see **Appendix F**).

Recommended by:

21/09/2018

Anthony Ko
Senior Environmental Assessment Officer
Resource and Energy Assessments

Recommended by:

22/9/18

Clay Preshaw
Director
Resource and Energy Assessments

9. Determination

The recommendation is **Adopted** / **Not adopted by:**

25/10/2018

David Kitto
Executive Director
Resource Assessments and Business Systems

Appendices

Appendix A – List of Documents

Vales Point Solar Farm Environmental Impact Statement, GHD, 2018.

Vales Point Solar Farm Response to Submissions Report, GHD, 2018.

Appendix B – Environmental Impact Statement

See the Department website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8533

Appendix C – Statutory Considerations

In line with the requirements of Section 4.15 of the EP&A Act, the Department's assessment of the project has given detailed consideration to a number of statutory requirements. These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable enivornmental planning instruments and regulations.

The Department has considered all of these matters in its assessment of the project and has provided a summary of this assessment below.

Aspect	Summary
Objects of the EP&A Act	The objects of most relevance to the Minister's decision on whether or not to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&A Act. The Department considers that the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 5(c)), particularly as the project is: • for the majority, a permissible land use on the subject land, and where prohibited, the prohibition is redundant as it is protecting a feature that no longer exists due to previous decisions to allow the ash dam to be built; • located in a logical location for efficient solar energy development; • able to be managed such that the impacts of the project could be adequately minimised, managed, or at least compensated for, to an acceptable standard; and • consistent with the goals of the Renewable Energy Action Plan, and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions. The Department has considered the encouragement of ESD (Object 1.3(b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences. The Applicant has also considered the project against the principles of ESD. Following its consideration, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD. Consideration of environmental protection (Object 1.3(e)) is provided in **section 6.2** of this report. Following its consideration, the Department considers that the project is able to be undertaken in a manner that would improve or at least maintain the biodiversity values of the locality over the medium to long term, and would not significantly impact threatened species and ecological communities of the locality. The Department is also satisfied that any residual biodiversity impacts can be managed and/or mitigated by imposing appropriate conditions and retiring the required biodiversity offset credits. Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is provided in **section 6.4** of this report. Following its consideration, the Department considers the project would not impact the built or cultural heritage of the locality. The Department satisfied that any residual impacts on heritage can be managed and/or mitigated by imposing appropriate conditions.

Aspect	Summary
State Significant Development	Under Section 4.38 of the EP&A Act the project is considered a State Significant Development. The Minister for Planning is the consent authority for the development. Under the Minister's delegation of 11 October 2017, the Executive Director, Resource Assessments and Business Systems, may determine the project.
Environmental Planning Instruments	The Lake Macquarie LEP and Wyong LEP apply and are discussed in **sections 4.2** and **6.3** of this report. The majority of the project is permissible under the Infrastructure SEPP. Lake Macquarie and Wyong local government areas are listed under *SEPP No. 44 – Koala Habitat Protection*. There are patches of regrowth around the site which which contains tree species that would be considered suitable habitat for koala. However, these areas are substantially degraded making it unlikely to provide core koala habitat and there are no records of koalas within the site. As such, the Department is satisfied that the project is consistent with the aims, objectives and requirements of SEPP 44. Parts of the project site are located on land mapped as proximity area for coastal wetlands, and Coastal Environment Area and Coastal Use Area under the SEPP (Coastal Management) 2018. A consent authority must not grant development consent on land identified as proximity area for coastal wetlands unless it is satisfied that the development will not significantly impact on the biophysical, hydrological or ecological integrity of the adjacent coastal wetland or the quantity and quality of surface and ground water flows to and from the adjacent wetland. As the project is wholly located within land used as an ash dam and no changes to the surface water discharges and groundwater flows which are closely regulated by the Environment Protection Authority (EPA) are proposed, the Department is satisfied that the development of a solar farm would not significantly impact on the integrity of the adjacent wetlands located in Mannering Bay. The Department has considered the provisions of *SEPP No. 55 – Remediation of Land*. A series of waste streams generated on site have been approved by the NSW EPA for disposal within the ash dam under Environmental Protection Licence (EPL) 761. All soil samples recorded contaminant concentrations below the adopted site assessment criteria and a known asbestos disposal site has been avoided. The Department is satisfied the site is suitable for the development.

Appendix D – Submissions

See the Department website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8533

Appendix E – Response to Submissions

See the Department website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8533

Appendix F – Recommended Conditions of Consent

See the Department website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8533