



New South Wales Government
Independent Planning Commission

Bonshaw Solar Farm SSD 9438

Statement of Reasons for Decision

John Hann (Chair)

3 December 2020

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1 INTRODUCTION

1. On 5 November 2020, the NSW Independent Planning Commission (**Commission**) received from the NSW Department of Planning, Industry and Environment (**Department**) a State significant development application (SSD 9438) (**Application**) from Gaia Australia Pty Ltd (**Applicant**). The Application seeks approval for the Bonshaw Solar Farm (**Project**) in respect of part Lot 2, DP1039185 and Lot 201 DP879480 (the **Site**), under section 4.36 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**).
2. The Application was amended under clause 55 of the *Environmental Planning and Assessment Regulation 2000*, through submission of an Amendment Report, dated 27 March 2020. The Amendment Report's amendments to the Application were agreed to by the Department, under delegation from the Commission.
3. The Commission is the consent authority in respect of the Application under section 4.5(a) of the EP&A Act and clause 8A of the *State Environmental Planning Policy (State and Regional Development) 2011* because the Applicant made a disclosed political donation.
4. Professor Mary O'Kane AC, Chair of the Commission, nominated Mr John Hann (Chair) to constitute the Commission determining the Application.

2 THE APPLICATION

2.1 The Site

5. The Department's Assessment Report (**Department's AR**) describes the Site and locality in assessment report paragraph (**ARP**) 2.1.1 to 2.1.6. Other proposed and approved solar farms in the region are summarised in ARP 2.2.1 to 2.2.6.
6. The Site is located approximately 16 km south of Bonshaw, in the Inverell Shire Council Local Government Area. The Site includes a development footprint of 149.24 ha and is zoned RU1 Primary Production. The amended Site layout incorporates the Dumaresq Substation (Lot 201 DP879480), as the solar farm is proposed to be connected to the substation via overhead wires. Figure 1 shows the site layout.

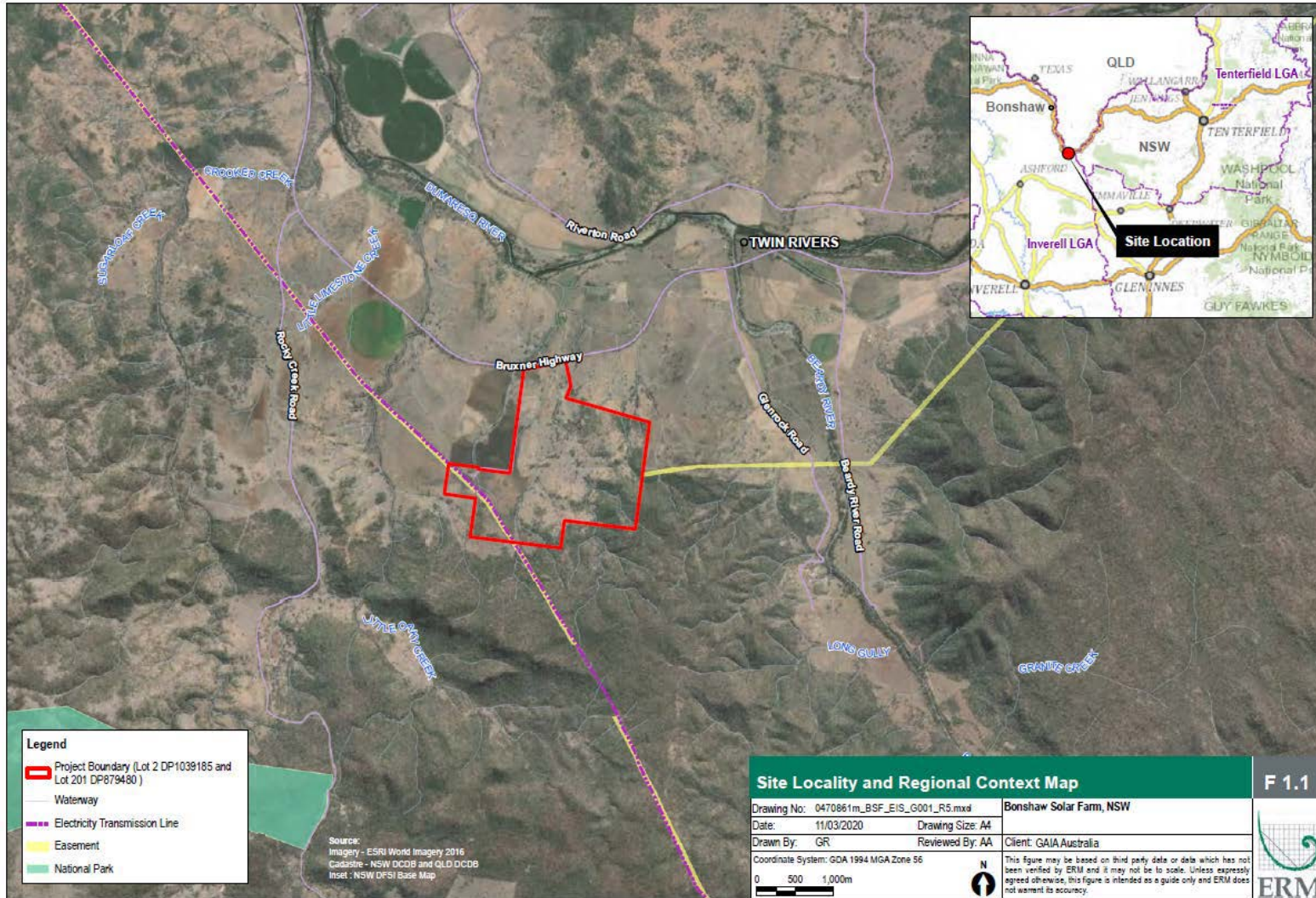


Figure 1: Site Layout (Source: Applicant's Amendment Report)

2.2 The Project

7. The Project is described at ARP 1.1.2, which states:

The project involves the construction of a new solar farm with a generating capacity of approximately 200 megawatts (MW) with up to 300 MW / 300 MW hour (MWh) of battery storage. It also involves the upgrading and 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 without further planning approval.

8. When discussing large solar power projects, installed capacity can be described as megawatts peak (MWp) and megawatts of AC power (MWac). The Environmental Impact Statement (EIS) confirms that the capacity of the project is given in MWac stating:

The Project will have a targeted 'sent out' electricity generating capacity of up to 200 megawatts (MW) (AC) and a BESS/battery storage with up to 300 MW (AC).

9. The Application was amended by the Applicant following consideration of submissions. ARP 4.4.2 summarises the amendments as follows:

- *reducing the development footprint from 167 ha to 149 ha;*
- *an additional overhead transmission connection to the Dumaresq substation and the substation site Lot 201 / DP 879480 to facilitate connection to the grid;*
- *reconfiguring the existing substation site access as the project site access, instead of constructing a new project site access;*
- *using single-axis tracking mounts to avoid potential glare impacts on Bruxner Highway that might result from fixed angle solar panels; and*
- *including an exclusion zone around an additional Aboriginal cultural heritage item AHIMS 11-3-0083).*

10. Section 1,1 of the EIS states that the project has a Capital Investment Value of \$237.68 million.

11. The Applicant's Response to Submissions Report (RtS) states that the Project includes the construction and operation of:

- *a network of PV modules in a fixed tilt or single axis tracking arrangement;*
- *associated battery energy storage system (BESS) / battery storage;*
- *a switch yard to be connected to the 330 kV TransGrid Dumaresq Substation, on the boundary of the Project Site;*
- *underground or overhead cabling for connection between arrays and inverters and transformers;*
- *operations and maintenance (O&M) infrastructure, including O&M buildings incorporating a control room, meeting facilities, a temperature controlled spare parts storage facility, supervisory control and data acquisition (SCADA) facilities, a workshop and associated infrastructure (e.g. kitchen, toilets and other facilities), and car parking facilities. These are proposed close to the substation in the south-west of the site;*

- *site access will be provided from the existing access road leading to the Dumaresq substation. A connecting road will join to the access road, connecting to the internal access road network at the north-western corner of the Project Site (refer to Figure 2-1);*
 - *a new internal road network to enable access from surrounding local roads to the array areas during construction and operations including internal access tracks, creek crossing & perimeter security fencing;*
 - *installation of an overhead grid connection to Dumaresq Substation; and*
 - *temporary facilities during construction.*
12. Section 2.3 of the RtS addresses the strategic context and justification for the Project, and states that the Project would generate 420 GWh of electricity per annum, and seeks to:
- *provide a source of renewable energy to supplement NSW and National energy requirements and assist in reducing greenhouse gas (GHG) emissions;*
 - *contribute to the additional generating capacity required to meet the growing energy demand in NSW;*
 - *contribute to NSW and Commonwealth targets for renewable energy;*
 - *provide economic benefits to the local and regional community provided directly and indirectly by the employments associated with the Project;*
 - *provide additional income streams for the involved landholder;*
 - *liaise and work with the community and all potentially affected stakeholders in the identification, mitigation and / or monitoring of any potential environmental effects;*
 - *contribute to local community facilities and infrastructure through the Community Benefit Fund;*
 - *ensure quality, safety and environmental standards are maintained;*
 - *recycle and reuse material where practical and economically feasible; and*
 - *minimise all potential and adverse environmental impacts and where practical, maximise all potential positive environmental effects.*
13. Section 2 of the Department's AR includes an assessment of the strategic context of the Project and emphasises the need for increased renewable energy supply to enable a reduction in coal-fired and gas-fired electricity generation and the associated greenhouse gas emissions.

3 THE DEPARTMENT'S CONSIDERATION OF THE APPLICATION

14. Under section 4.6(d) of the EP&A Act, the Department is responsible for some of the Commission's functions in respect of community participation. This includes responsibility for public exhibition of applications. The Department's engagement process for the Project is set out at Section 4 of the Department's AR. The EIS for the Project was publicly exhibited from 6 November 2019 to 4 December 2019.
15. The Department received submissions from the following agencies:

- Department of Primary Industries (**DPI**)
- DPIE Crown Lands (**Crown Lands**)
- DPIE Biodiversity and Conservation Division (**BCD**)
- DPIE Water
- Natural Resources Access Regulator (**NRAR**)
- Environment Protection Authority (**EPA**)
- Fire and Rescue NSW (**FRNSW**)
- Heritage NSW
- Inverell Shire Council
- NSW Health, Hunter New England Local Health District
- NSW Resources & Geoscience
- NSW Rural Fire Service (**NSW RFS**)
- Roads and Maritime Services (**RMS**)
- TransGrid

16. Key issues raised by government agencies are summarised at ARP 4.5.1 to ARP 4.5.12.
17. The Department also received comments from two members of the public, one objecting and one neither objecting to nor supporting the Project. Both submitters raised concerns regarding the potential visual impacts of the proposed solar farm and one submitter raised concerns regarding the potential impacts on the economic value of land near to the Site.
18. The Department's AR identifies the following key issues for the Project:
- compatibility of proposed land use
 - biodiversity
 - visual impacts
 - traffic and transport
 - other issues (including aboriginal cultural heritage, historic heritage, noise, hazards, water and erosion, onsite water use, workforce accommodation, and land values)
19. ARP 7.1.1 states:
- The Department has assessed the development application, EIS, submissions, Submissions Report, Amendment Report and additional information provided by GAIA and advice received from relevant government agencies.*
20. ARP7.1.15 states:
- ...the project achieves an appropriate 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.*
21. In ARP 7.1.16 the Department concludes:
- On balance, the Department considers that the project is in the public interest and is approvable, subject to the recommended conditions of consent*

4 THE COMMISSION'S CONSIDERATION

4.1 Public Comments

22. The Commission wrote to Council and the two individuals who previously made submissions to the Department to offer the opportunity to provide comments to the Commission. One submission was received by the Commission, objecting to the Project on the basis of the

visual impacts on the landscape and rural character.

4.2 Material considered by the Commission

23. As part of its Determination, the Commission has carefully considered the following material (**Material**):
- the Scoping Report, prepared by ERM, dated July 2018
 - the Secretary's Environmental Assessment Requirements (SEARs), dated 16 August 2018
 - the Environmental Impact Statement, prepared by ERM, dated 18 October 2019
 - all submissions made to the Department in respect of the Application during public exhibition of the EIS
 - the Applicant's Response to Submissions Report, prepared by ERM, dated 27 March 2020
 - the Applicant's Amendment Report, prepared by ERM, dated 27 March 2020
 - The Department's Request for Additional Information letter, dated 1 May 2020
 - The Applicant's Response to RFI letter, prepared by ERM, dated 19 June 2020
 - The Department's second Request for Additional Information, prepared by ERM, dated 31 July 2020
 - The Applicant's Response to RFI Dated 31 July 2020, prepared by ERM, dated 4 September 2020
 - the Department's Assessment Report, dated 5 November 2020
 - the Department's draft Development Consent, undated, received with referral
 - the Department's referral letter, dated 5 November 2020
 - the Department's response to the Commission's written question, dated 13 November 2020
 - the written submission received by the Commission on 26 November 2020

4.3 Mandatory considerations

24. The Commission has taken into consideration the following mandatory considerations, as provided in s 4.15(1) of the EP&A Act (**mandatory considerations**), as are relevant to the Application:
- the provisions of all:
 - relevant environmental planning instruments including:
 - *Inverell Local Environment Plan 2012*
 - *State Environmental Planning Policy (State and Regional Development) 2011*
 - *State Environmental Planning Policy (Infrastructure) 2007*
 - *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*
 - *State Environmental Planning Policy Primary Production and Rural Development 2019*
 - *State Environmental Planning Policy No. 55 – Remediation of Land*
 - *State Environmental Planning Policy No. 44 – Koala Habitat Protection*
 - proposed instruments that are or have been the subject of public consultation under the EP&A Act and that have been notified to the Commission (unless the Secretary has notified the Commission that the making of the proposed instrument has been deferred indefinitely or has not been approved); and
 - development control plans; and
 - planning agreements that have been entered into under s 7.4 of the EP&A Act, and draft planning agreements that a developer has offered to enter into under s 7.4;
 - the *Environmental Planning and Assessment Regulations 2000*
 - to the extent that they prescribe matters for the purposes of s 4.15(1) of the EP&A Act;

- that apply to the land to which the Application relates;
 - the likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality;
 - the suitability of the site for development;
 - submissions made in accordance with the EP&A Act and Regulations; and
 - the public interest.
25. At ARP 3.5.1 and 3.5.2 the Department confirms it has considered all mandatory considerations, as set out in paragraph 24 above.

4.4 Additional considerations

26. In determining this application, the Commission has also considered:
- Large Scale Solar Energy Guideline (2018)
 - NSW Renewable Energy Action Plan (2013)
 - NSW Noise Policy for Industry (2017)
 - Interim Construction Noise Guideline (2009)

4.5 Compatibility of Proposed Land Use

Applicant's Consideration

27. Section 4.4.2 of the EIS discusses the provisions of the Inverell Local Environment Plan 2012 (**ILEP 2012**) and notes that the development for the purpose of electricity generation is not specifically permitted in land zoned RU1 Primary Production under the ILEP 2012.
28. Table 4-2 of the EIS notes that the Project is permitted by clause 34(7) of the *State Environmental Planning Policy (Infrastructure) 2007*, which states:

Except as provided by subclause (8), development for the purpose of a solar energy system may be carried out by any person with consent on any land.

The EIS notes that subclause (8) relates to residential zones and does not apply to the Site. The Applicant finds that the Project is therefore permissible with development consent.

29. Section 3.2.1 of the EIS addresses Site selection and refinement of the proposed development footprint, stating:

...site selection and refinement occurred on the basis of environmental constraints and opportunities analysis, stakeholder engagement and project conceptual design considerations. This ensured a Project Site and Development Footprint were selected that gave due consideration to and minimisation of environmental impacts whilst achieving a feasible and efficient concept design and Development Footprint. The process has sought to actively identify and minimise environmental impacts as part of the Project development.

30. Table 3-1 of the EIS sets out the detailed considerations that informed the Site selection and refinement of the development footprint.
31. Table 3-2 of the EIS sets out the environmental constraints and opportunities influencing site selection and refinement, including biodiversity, heritage, land-use and agriculture, visual impacts, noise, transport, water, hazards and risks, topography, and natural hazards.
32. Section 3.3.2 of the EIS discusses the Applicant's consideration of alternative sites, stating:

Initial site selection investigations [were] undertaken by GAIA through consultation with the network operator to understand the capacity to export electricity from the Project to the National Electricity Market (NEM). The Bonshaw area was selected due to its suitability for large-scale solar PV and lower level of large-scale solar PV development compared with other suitable regions. As such, excess capacity available at the Dumaresq substation was used as a primary identifier.

...The Bonshaw Site was identified as the preferred location due to its abundant solar source, proximity to Dumaresq substation, low population density surrounding the site, landholder support, and topography of site likely to limit visual impact. The initial PEA Site Boundary contained additional landholdings however these have not progressed to the final project

Council's Consideration

33. Council's submission to the Department dated 25 November 2019, states:

Council acknowledges the benefits of the project at a local and regional scale. It is understood that the project will improve security of electricity supply, create employment opportunities, and will contribute to the State and Federal Governments' targets for renewable energy and reduction in green house [sic] gas emissions. Council anticipates that the project has the potential for economic benefits to the local economy through the use of the local contractors and local services, particularly during the construction phase.

Council's submission also emphasises that one of Council's priorities is that potential impacts to the local road network are controlled. Council did not raise any objections to the Project.

Department's Assessment

34. Section 5.1 of the Department's AR addresses the compatibility of the proposed land use. ARP 5.1.1 notes that the Application is not permissible under the ILEP 2012. ARP 5.1.2 to 5.1.8 set out the wider strategic justification for the project, with reference to objectives for the RU1 zone, the New England North West Regional Plan 2036, and the Inverell Community Strategic Plan 2009-2020. ARP 5.1.9 notes that the Council is supportive of the proposal.
35. ARP 5.1.10 to 5.1.19 discuss the potential impacts on the agricultural potential of the land. ARP 5.1.18 states:

The temporary change of use for a small area of Class 3 / BSAL land in the region must be balanced against:

- *the broader strategic goals of the Commonwealth and NSW Governments for the development of renewable energy into the future;*
- *the environmental benefits of solar energy, particularly in relation to reducing greenhouse gas emissions;...*

36. ARP 5.1.19 concludes:

Based on these considerations, the Department considers that the proposed solar farm represents a compatible use of the land within the region.

Commission's Findings

37. The Commission notes that the Applicant selected the Site and refined the development footprint with an aim to minimise adverse environmental impacts of the Project.

38. The Commission notes that no objections were raised in submissions regarding potential impacts upon the agricultural potential of the land, and that DPI Agriculture advised that all infrastructure, including buried cabling, must be removed at the end of the project, but did not object to the use of the Site as a solar farm.
39. The Commission has amended the Department's recommended Condition 33, regarding rehabilitation, to include a requirement to remove all underground cabling following the cessation of operations. The Commission has also imposed an additional condition requiring the Applicant to prepare a Decommissioning and Rehabilitation Plan prior to the cessation of operations and to the satisfaction of the Secretary.
40. Subject to the conditions imposed, the Commission agrees with the Department's finding that the proposed solar farm is a compatible land use for the Site.

4.6 Biodiversity

Applicant's Consideration

41. The Applicant submitted a revised Biodiversity Assessment Report (BDAR) prepared by ERM (Appendix C of the RtS) which incorporated changes recommended by BCD. Section 10 of the revised BDAR states:

Based on the results of extensive field surveys, a total of 12 vegetation zones were identified on the Subject Land pertaining to the following four plant community types (PCTs):

- *PCT 516 – Grey Box grassy woodland or open forest of the Nandewar Bioregion and New England Tableland Bioregion;*
- *PCT 544 - Rough-barked Apple - White Cypress Pine - Blakely's Red Gum riparian open forest/woodland of the Nandewar Bioregion and New England Tableland Bioregion;*
- *PCT 594 – Silver-leaved Ironbark – White Cypress Pine shrubby open forest of Brigalow Belt South Bioregion and Nandewar Bioregion; and*
- *PCT 596 – Tumbledown Red Gum - White Cypress Pine - Silver-leaved Ironbark shrubby woodland mainly in the northern Nandewar Bioregion*

PCT 544 is considered to represent the following Threatened Ecological Community, which is listed as Endangered under the NSW Biodiversity Conservation Act 2016:

- *White Box Yellow Box Blakely's Red Gum Woodland*

The occurrence of this TEC on the Subject Land is not considered to satisfy the minimum condition criteria for the Commonwealth listing of this TEC. This determination has been made on the basis of very small patch sizes occurring on the Subject Land, low diversity of native understorey species and absence of "important species" as described in the Threatened Species Scientific Committee listing advice and National Recovery Plan for the TEC.

...The proposed Bonshaw Solar Farm development in its current footprint requires a total offset of 598 ecosystem credits and 3,570 species credits. Retirement of these credits will be carried out in accordance with the Biodiversity Conservation Regulation 2017 and the NSW Biodiversity Offsets Scheme.

Department's Assessment

42. ARP 5.2.2 states that the Applicant has:

...designed the development footprint to avoid large areas of intact vegetation communities in the eastern and south eastern areas of the project site.

and:

...In addition to native vegetation...the development footprint has completely avoided:

- seven identified native vegetation communities (woodland and grassland);*
- five of the eleven rocky areas recorded on the site, which provide habitat for amphibians and reptiles; and*
- second and third order streams, with riparian buffers on both sides of the streams (20m on each side for second order and 30 m for third order streams)*

43. ARP 5.2.7 states:

The project would clear 40.97 ha of native woodland and derived grassland representing potential habitat for a range of threatened fauna species and 107.79 ha of highly disturbed grassland (previously cleared). It would also impact 34 hollow-bearing trees.

44. ARP 5.2.13 states that the Applicant:

has indicated that it intends to set up a biodiversity stewardship agreement on the remainder of the project site, and any residual obligation would be retired by payment into an offset fund.

45. ARP 5.2.16 states that the Department considers that the project is unlikely to result in a significant impact on the biodiversity values of the locality, subject to the recommended conditions.

Commission's Findings

46. The Commission agrees with and has imposed the Department's recommended conditions relating to biodiversity, including Condition 15, prohibiting clearance outside of the approved disturbance footprint, Condition 16 requiring the Applicant to retire biodiversity credits prior to commencing construction, and Condition 17 requiring the Applicant to prepare and implement a Biodiversity Management Plan.
47. The Commission agrees with the Department's finding that the project is unlikely to result in significant impact on the biodiversity values of the locality, subject to the recommended conditions.

4.7 Aboriginal Heritage

Applicant's Consideration

48. An aboriginal cultural heritage assessment was submitted by the Applicant (Appendix D of the EIS). Section 6.2.3 of the EIS summarises:

The Project Site contains 35 Aboriginal sites and three associated PADs (all recorded as part of the CHA). The majority of these sites are stone artefact sites including open camp sites and isolated finds. The sites recorded in the CHA study have been assigned scientific significance in terms of rarity, representativeness, archaeological landscape, connectedness, integrity and condition, complexity, and archaeological sensitivity.

Of the 35 Aboriginal heritage sites (and three associated PADs) that have been recorded within the Project Site, 26 have been assessed to incur a possibly or partially be impacted by the Project... Overall, 29 of these sites were stone artefacts including isolated finds and stone artefact scatters. Seven scarred trees were also identified, one of the scarred trees was identified as part of an artefact scatter site. Careful detailed design of the Project footprint has successfully avoided several of these sites, including BSF1 and BSF14 which are considered to have moderate archaeological significance...

Department's Assessment

49. Table 7 of the Department's AR states that 20 sites of low significance (artefacts scatter) are expected to be impacted by the Project, and that the Applicant has committed to:
- o *physical demarcation of sites prior to construction, allowing for RAPs to ensure significant cultural heritage sites are appropriately managed;*
 - o *surface collection/salvage of aboriginal heritage sites expected to be impacted to be undertaken by Aboriginal stakeholder groups and an appropriately qualified archaeologist prior to commencement of works;*
 - o *prepare a Aboriginal Cultural Heritage Management Plan including a methodology for avoidance and procedures for surface collection, test excavation and archaeological salvage; and*
 - o *cease all works and implement an unexpected finds procedure if Aboriginal artefacts or skeletal material are identified during construction.*
50. Tables 7 of the Department's AR states:
- With these measures, the Department and Heritage NSW consider that the project is unlikely to result in significant impacts on the heritage values of the locality.*

Commission's Findings

51. The Commission agrees with and has imposed the Department's recommended Condition 23, identifying heritage items which must not be impacted and those that must be salvaged prior to disturbance, and Condition 24, which requires the Applicant to submit a Aboriginal Cultural Heritage Management plan prior to carrying out any development which could disturb the heritage items.
52. The Commission agrees with the Department's finding that, subject to the conditions imposed, the Project is unlikely to result in significant impacts on the heritage values of the locality.

4.8 Visual Impacts

Applicant's Consideration

53. The Applicant's EIS includes a visual and glare assessment, and states at section 5.3.4:
- The VGA has identified that other than for a location immediately north of the Project Site on the Bruxner Highway, all visual impacts are low to none.*

The impact from the Bruxner Highway is deemed as medium to low impact, however given the short frontage and period of time the facility is seen, the low traffic volumes along this route and the setback from the road means that the overall impacts from this locality are localised and therefore low. The provision of a five meter landscape strip along the northern and a 400 m portion of the north-western boundaries will reduce visual impacts from the Bruxner Highway.

No photomontage has been undertaken as the visual impacts are low to medium and the level terrain close to the Bruxner Highway means that the arrays in the foreground would effectively screen the views of those further back. The dark grey colour of the panels are also considered to be in-keeping with the rural landscape where cattle yard structures, large sheds and irrigation systems are scattered in the landscape. The inverter structures are relatively small and largely screened by the solar arrays and where visible are not dissimilar to small rural structures. No glare impacts are predicted and therefore no mitigation measures are required for glare.

Department's Assessment

54. ARP 5.3.1 states:

The two public submissions raised concerns about the visual impacts of the project. The submissions cited impacts on the landscape and the scenic rural qualities of the area. One of the submitters is a nearby landowner, located about 550 m south of the southern edge of the development footprint and there is no dwelling on the land. The other submitter resides about 60 km from the project site

55. The Department's AR notes that the Site is visible from residences R06 and R07, to the north of the Site. ARP 5.3.10 states:

The visual impact at R07 would be negligible to low due to less than 20 % of the site being visible from the residence, screening and dominance of the ridge line and intervening vegetation. The visual impact at R06 would be low, due to topography screening the central and southern portions of the site. Further, existing vegetation would be retained along fence lines and GAIA has proposed additional planting in a 5m landscaping buffer along the northern boundary.

56. ARP 5.3.14 states:

The Department recognises that the introduction of a solar farm represents a material change to the local rural landscape, but based on its assessment considers that the impacts would not be significant. The solar arrays are relatively low-lying structures and the proposed vegetation buffers, once established, would assist in reducing potential impacts on the landscape from nearby residences and public vantage points. Glare and glint impacts are unlikely from the solar arrays themselves, while any glare impacts from the metal panel mounts would be minor, short term and diminish further over time as the metal surfaces dull.

57. ARP 5.3.17 states

Subject to the implementation of the recommended conditions, the Department considers that there would be no significant visual impacts on surrounding residences, and any impacts on the rural character and visual quality of the area would be minimised.

Commission's Finding

58. The Commission has noted the public submissions to the Department which raised concerns regarding the visual impacts of the Project.

59. The response received by the Commission reiterated concerns regarding the visual impact of the proposed large-scale solar farm on the landscape and rural character of the area.
60. The Commission agrees with and has imposed the Department's recommended Condition 12, requiring the Applicant to plant a vegetation screen prior to commencement, and maintain the screen thereafter, and Condition 21 requiring the Applicant must minimise off-site visual impacts and ensure ancillary infrastructure blends into the landscape as far as possible.
61. The Commission agrees with the Department's finding that the Project does not present a risk of significant visual impacts on surrounding residences, and that any impacts on rural character and visual quality of the area would be minimised.

4.9 Traffic and Transport

Applicant's Consideration

62. Section 6.7.3 of the EIS states:

The construction period of the Project will have the largest vehicular movement, with the typical vehicle movements during the peak construction period (over 6 months) are in the order of 65 light and 20 heavy vehicles two-way (65/20 inbound, 65/20 outbound) per day.

Department's Assessment

63. ARP 5.4.11 states that the predicted traffic increase during construction and operation:

...represent a small proportion of the existing traffic on the haul routes, which have capacity to cater for the additional traffic. Aside from the site access upgrade, no other road upgrades are necessary for the project.

64. ARP 5.4.13 identifies the Department's recommended conditions of consent, including requirements to:

- *upgrade the site access with AUL(S) and BAR treatments;*
- *limit the number of heavy vehicles per day during construction;*
- *prohibit particular turns for heavy vehicles on the haul routes as noted in this report;*
- *ensure the length of heavy vehicles does not exceed 19 m, except where authorised by an over dimensional vehicle permit issued by TfNSW; and*
- *prepare a Traffic Management Plan in consultation with TfNSW and Council, which includes provisions for road dilapidation surveys and measures to address road safety, consideration of school buses, haulage scheduling conflicts, and conflicts other motorist and road users.*

65. ARP 5.4.14 states:

With the above conditions of consent, the Department, Council and TfNSW are satisfied that the project would not result in significant impacts on road network capacity, efficiency or safety.

Commission's Finding

66. The Commission agrees with the Department's finding that, subject to the recommended conditions, the Project would not result in significant impacts on road network capacity,

efficiency or safety.

4.10 Historic Heritage

Department's Assessment

67. Table 7 of the Department's Assessment Report states:

No heritage items listed on Commonwealth, National or State registers are located within the site.

Two areas with historical items were observed during the field survey: a surface scatter of several miscellaneous historical items and a smaller surface scatters of glass bottles.

The assessment of the sites concluded that are not considered to be of local historic heritage significance.

The Heritage Council was consulted regarding the project, but raised no concerns regarding the project, and advised it did not need to be further consulted regarding the proposal.

The Department is satisfied that, in light of the above, the project would not have any adverse impacts on local or State heritage items in the local area. Any unexpected finds of potential heritage significance on site can be appropriately managed by an unexpected finds protocol.

Commission's Finding

68. The Commission agrees with the Department's finding that the Project would not have any adverse impacts on local or State heritage items in the local area.

4.11 Noise

Department's Assessment

69. Table 7 of the Department's Assessment Report states:

Noise generated by the proposed construction activities was predicted to be well below the 'highly noise affected' criterion of 75 dB(A) in the EPA's Interim Construction Noise Guideline (the ICNG) at all nearby residences.

Of the 15 non-associated nearby residences, only one would experience construction noise above the 'noise affected' criterion of 45 dB(A) in the ICNG.

This residence is the closest non-associated residence (R06) and it is predicted to experience up to 49 dB(A) during construction in the two northern areas of the proposed project. The construction noise would be short term, intermittent and limited to standard day time construction hours.

...The Department has recommended conditions requiring GAIA to minimise noise during construction, upgrading or decommissioning by implementing noise mitigation work practices set out in the ICNG.

Commission's Finding

70. The Commission agrees with and has imposed the Department's recommended conditions restricting the operating hours at the Site and requiring the Applicant to minimise noise during

construction, upgrading and decommissioning.

71. Subject to the conditions imposed, the Commission finds that the Project does not present risks of unacceptable noise impacts.

4.12 Hazards

Department's Assessment

72. Table 7 of the Department's Assessment Report states:

The eastern and southern portions of the site are vegetated and mapped as bushfire prone land.

- *The development includes a 300 MW battery energy storage system (BESS).*
- *To manage fire hazards, GAIA would be required to comply with the RFS's Planning for Bushfire Protection 2019:*
 - *managing the site as an Asset Protection Zone (APZ), including a defensible space of at least 10 m around the perimeter of the solar array areas;*
 - *a 50,000 litre water supply, fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection, located adjacent to the internal access road; and*
 - *the development and implementation of a comprehensive Emergency Plan.*
- *GAIA completed a Preliminary Hazard Analysis (PHA) for the project and screening accordance with SEPP No.33 – Hazardous and Offensive Development (SEPP 33).*
- *The screening concluded that the storage and transport of hazardous materials for the project (including the risks associated with the battery storage facility) would not exceed the relevant risk screening thresholds and the project is not considered to be 'potentially hazardous'.*
- *The BESS would be located at least 2 km away from the nearest residence and 200 m away from the TransGrid substation.*
- *In addition, the BESS would be certified with UL9540A (an international standards for batteries), which requires any fire to be contained within the BESS unit.*
- *The PHA concluded that the BESS was located in the most appropriate location regarding surrounding hazards and constraints and potential risks could be managed.*
- *The Department has included a recommended condition that requires a Fire Safety Study for the BESS as required by the Department's Hazardous Industry Planning Advisory Paper No. 2 – Fire Safety Study Guidelines.*
- *The project would comply with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for electric, magnetic and electromagnetic fields.*
- *Subject to the recommended conditions, the Department is satisfied that risks associated with the facility would be negligible.*

Commission's Finding

73. The Commission agrees with and has imposed the Department's recommended Condition 28, requiring preparation of a fire safety study addressing potential fire risk from the battery storage, Condition 29, controlling the handling of dangerous goods, and Condition 30, specifying a range of operating conditions required to manage the bushfire risk at the Site, including maintenance of an Asset Protection Zone.
74. The Commission agrees with the Department's finding that, subject to the recommended conditions, the risks associated with the facility would be negligible.

4.13 Water and Erosion

75. Table 7 of the Department's Assessment Report states:

Second and third order ephemeral unnamed tributaries of the Dumaresq River traverse the site from south to north.

The project has largely been designed to avoid streams in the site, and GAIA has committed to implement buffer zones consistent with the Guidelines for Controlled Activities on Waterfront Land.

Watercourse crossings would be required for internal access tracks, electrical cabling and security fencing and consistent with advice from DPIE Water, GAIA would design, construct and maintain crossings in accordance with the relevant guidelines.

GAIA would also minimise any potential impact to overland flow by installing drop-down fencing where necessary and this satisfies DPI Water's request for information about the impact of security fencing on floodwater and adjacent watercourses.

BCD and Council raised no concerns about flooding.

There are 6 farm dams within the site, which would be filled for construction of the project.

Any erosion and sedimentation risks associated with the project can be effectively managed by following the Managing Urban Stormwater: Soils and Construction (Landcom, 2004). The Department has included these requirements in the recommended conditions.

Fuels and chemicals would be stored to prevent water pollution and the project is not expected to affect groundwater resources.

The Department considers that the risks of impacts to soil and water from the project are acceptable because: the project has been designed to minimise impacts, GAIA has committed to implement mitigation measures, and recommended conditions would further mitigate any soil and water impacts.

Commission's Finding

76. The Commission agrees with and has imposed the Department's recommended condition requiring the Applicant to ensure that the Project is designed, constructed and maintained to reduce impacts on surface water, flooding, groundwater at the Site, as well as minimising soil erosion.
77. The Commission agrees with the Department's finding that, subject to the recommended conditions, the risks to soil and water from the project are acceptable.

4.14 Decommissioning and Rehabilitation

78. Table 7 of the Department's Assessment Report states:

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 such as removing all above and below ground infrastructure and restoring land capability to its pre-existing agricultural use.

DPI Agriculture noted that GAIA did not provide details about the type of piers to be used for the solar panels, which would impact the capacity to rehabilitate land. GAIA confirmed that piers for solar panels would be screw type, allowing easy removal and ground rehabilitation. GAIA also committed to remove all infrastructure at decommissioning.

With the implementation of the standard conditions, the Department considers that the solar farm would be suitably decommissioned at the end of the project life, or within 18 months if operations cease unexpectedly, and that the site be would appropriately rehabilitated.

Commission's Finding

79. The Commission notes the Department's recommended Condition 33, requiring the Applicant to rehabilitate the Site in accordance with specified rehabilitation objectives. The Commission has amended the Department's recommended condition to add the requirement to remove underground cabling as part of the decommissioning and rehabilitation process.
80. The Commission is of the view that the decommission and rehabilitation of operations should be planned appropriately ahead of the cessation of operations and brought together into a consolidated Decommissioning and Rehabilitation Plan. For this reason, the Commission has imposed a condition requiring the Applicant to prepare such a plan prior to the cessation of operations and to the satisfaction of the Secretary.
81. Subject to the imposed conditions, the Commission agrees with the Department's finding that the Site will be appropriately rehabilitated.

4.15 Other Issues

82. In addition to aboriginal cultural heritage, historic heritage, noise, hazards, and water and erosion, Table 7 of the Department's Assessment Report also includes the Department's assessment of onsite water use, workforce accommodation, and land values. The Commission agrees with the Department's assessment regarding onsite water use, workforce accommodation, and land values.

4.16 Objects of the EP&A Act & Public Interest

Applicant's Consideration

83. Section 8.4 of the EIS states:

The Project is considered to be justified and in the public interest as:

- *it is generally consistent with the objects of the EP&A Act and will enable the orderly and logical use of natural, physical and human resources existing within the local area and greater New England North West region;*
- *it is consistent with the principal of inter-generational equity. It will contribute to the sustainable transition to cleaner energy generation and following decommissioning, the land can return to agricultural production;...*

Department's Assessment

84. The Department's AR has undertaken an assessment of the Application against the objects of the EP&A Act. These are set out in Appendix H of the Department's AR.
85. Section 7.1.16 of the Department's AR states:

On balance, the Department considers that the project is in the public interest and is approvable, subject to the recommended conditions of consent (see Appendix I).

Commission's Findings

86. The Commission agrees with the Department's Assessment in Appendix H of the Department's AR and agrees that the Project is in accordance with the EP&A Act and is in the public interest.

5 CONCLUSION: THE COMMISSION'S FINDINGS AND DETERMINATION

87. The Commission has carefully considered the Material (paragraph 23) before it.
88. For the reasons set out in this Statement of Reasons, the Commission has determined that the Application should be granted consent subject to conditions which have been designed to:
- prevent, minimise and/or offset adverse environmental impacts;
 - set standards and performance measures for acceptable environmental performance;
 - require regular monitoring and reporting; and
 - provide for the on-going environmental management of the development.
89. The reasons for the Decision are given in this Statement of Reasons for Decision dated 3 December 2020.

A handwritten signature in black ink, appearing to be 'JH', with a long horizontal stroke extending to the right.

John Hann (Chair)
Member of the Commission