

15 February 2022

Hugh Sangster
Senior Development Manager
Ib vogt GmbH Level 6,
201 Kent St
Sydney, NSW, 2065

Hugh.sangster@ibvogt.com

cc: Simon.kerrison@ibvogt.com

Dear Hugh

Re: SSD 8847 - Dunedoo Solar Farm – Proposed relocation of battery storage and screen planting

NGH Pty Ltd (NGH) was engaged by ib vogt GmbH on behalf of Sun Spot 4 Pty Ltd (ib vogt) to prepare an Environmental Impact Statement (EIS) for the Dunedoo Solar Farm (the Project) and to coordinate the assessment undertaken by the specialist sub-consultants, including the Visual Impact Assessment performed by Moir Landscape Architecture.

The Project, which consists of a 55 megawatt solar farm, 60.45 megawatts of battery storage and associated infrastructure, received development consent from a delegate of the Minister for Planning and Public Spaces on 2 September 2021. The Project is currently the subject of proceedings in the Land and Environment Court, commenced by Altomonte (Nominees) Pty Ltd. These proceedings are at an early stage.

To address the concerns raised by Altomonte (Nominees) Pty Ltd and further mitigate any potential impact on visual amenity, ib vogt proposes to:

- consolidate the batteries, which are currently co-located with the inverters distributed across the solar array area, to one central location (referred to as the Central Battery Yard); and
- provide additional screen planting to further screen views of the Project from residence R4 (referred to as the Additional Screen Planting).

To accommodate the Central Battery Yard and Additional Screen Planting minor changes are also proposed to:

- the overall extent of the solar arrays which will reduce by approximately 0.12 ha
- the extent of vegetation clearing, which will increase by 0.76ha within Category 1 exempt land, and is therefore exempt from biodiversity offset credit requirements under *the Biodiversity Conservation Act 2016*; and



SYDNEY

Unit 17, 21 Mary Street, Surry Hills NSW 2010

T. (02) 8202 8333 E. ng@nghconsulting.com.au W. www.nghconsulting.com.au

NSW • ACT • QLD • VIC

ABN 31 124 444 622 ACN 124 444 622

- the location of the internal access road, onsite substation and site compound, which results in the additional vegetation clearing, but does not change the overall outcome of the impact assessment.

The current locations of the battery units and vegetation screening are identified in **Attachment A**. The proposed Central Battery Yard and Additional Screen Planting and corresponding minor adjustments to the extent of the solar arrays and onsite substation and site compound (collectively, the Proposed Changes) are shown in **Attachments B and C**.

NGH has been asked by ib vogt to review and assess the Proposed Changes. The detailed findings of the review are included in **Attachment D**, which includes input from Moir Landscape Architecture confirming the impact of the Proposed Changes on the visual impacts of the Project.

If you have any questions or require further information regarding the assessment requirements please contact me on 0477 095 273.

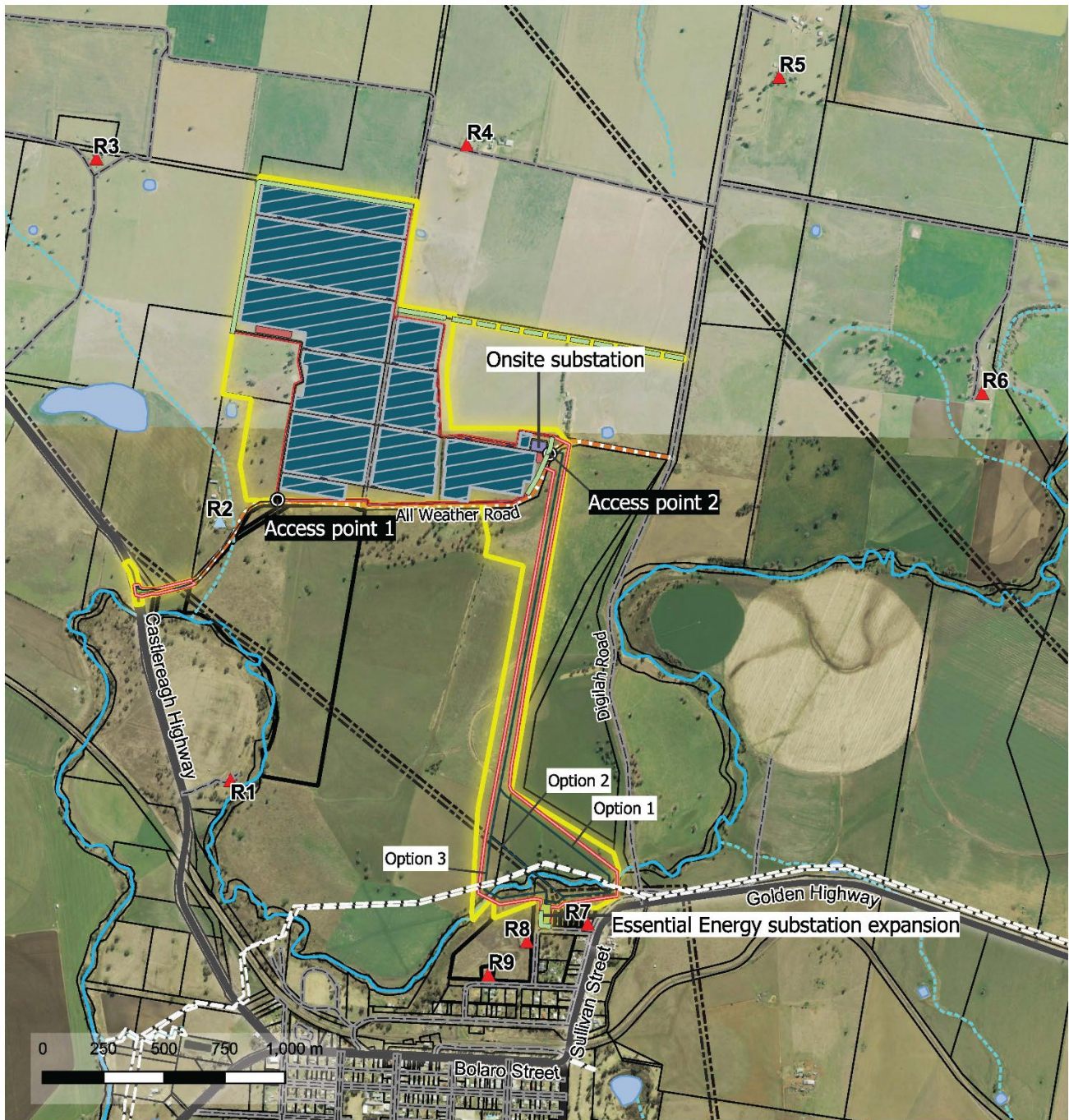
Yours sincerely,



Zeina Jokadar
Regional Manager

Attachment A	Current Project layout
Attachment B	Updated Project layout incorporating the Proposed Changes
Attachment C	Updated Project layout detailed
Attachment D	Assessment of the Proposed Changes

Attachment A Current Project layout



 Development site	 Transformer	 SubArterialRoad	 Perennial
 Subject land	 Essential Energy substation	 Local road	 Existing transmission line
Indicative infrastructure layout	 Batter	 Track-Vehicular	Receivers
 Fence	 Road pavement	 Lot boundary	▲ Involved receiver
 Road	 Passing bay	 Surveyed boundary	▲ Receiver
 Site compound	 Transmission Line	 LPI approx boundary	● Site access points
 Solar array	 Roads	 Farm dam	--- Existing gas main (indicative)
 Substation	 Primary road	 Waterway	 Indicative Screening
		 Non Perennial	

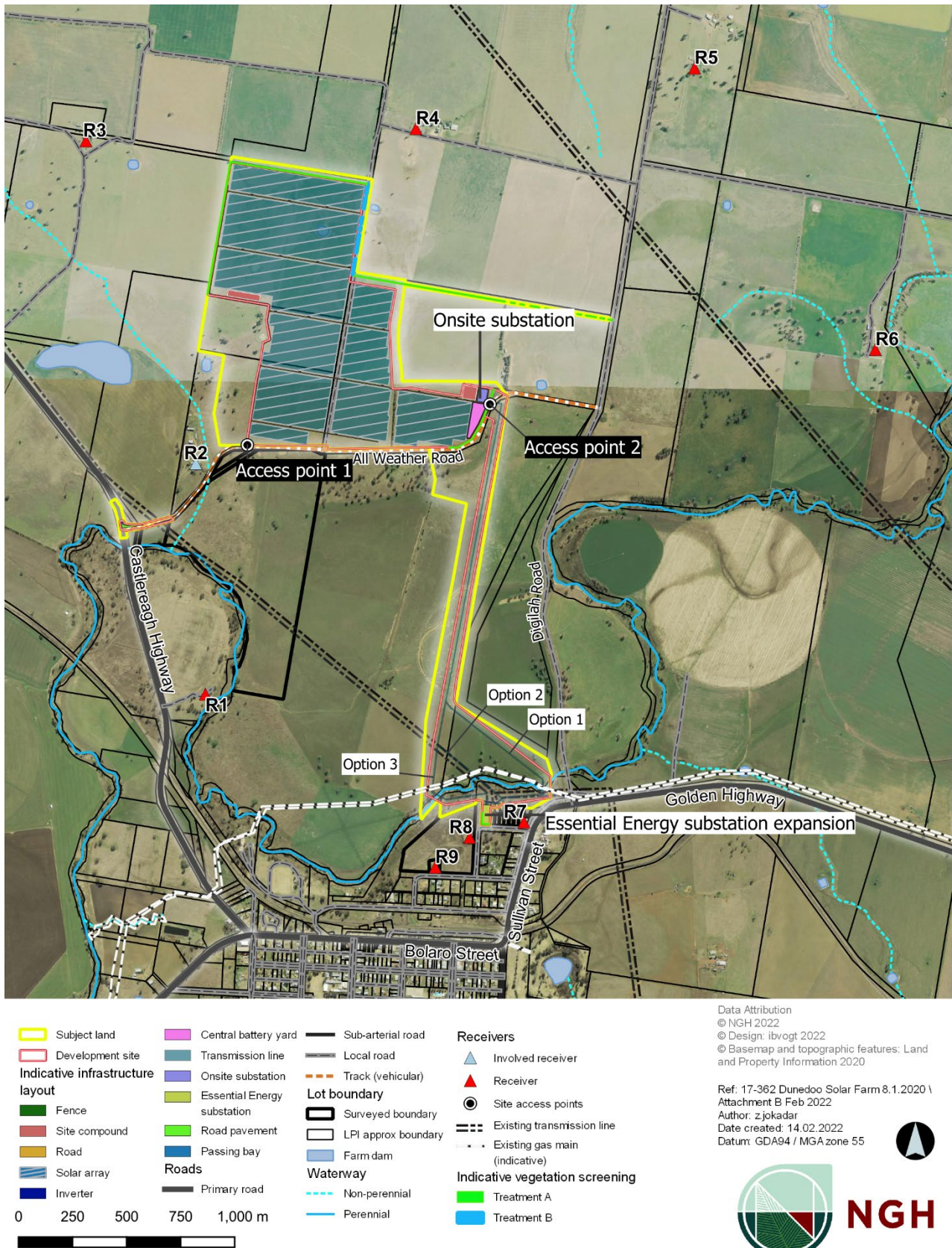
Data Attribution
 © NGH 2021
 © Design: ibvogt 2020
 © Basemap and topographic features: Land and Property Information 2020

Ref: 17-362 Dunedoo Solar Farm 8.1.2020 \ Overview map option3
 Author: z.jokadar
 Date created: 12.08.2021
 Datum: GDA94 / MGA zone 55



NGH

Attachment B Updated Project layout incorporating the Proposed Changes



Attachment C Updated Project layout detailed



Attachment D Assessment of the Proposed Changes

Issue	Application to Proposed Changes	Assessment of the Proposed Changes	Conclusions
Biodiversity	Minor additional vegetation clearing in Category 1 exempt land, as a result of the Proposed Changes.	<p>The Proposed Changes are located wholly within the approved development site, previously assessed by the Biodiversity Development Assessment Report (BDAR) (NGH BDAR, 2020), to support the EIS. Refer to Attachment A and B.</p> <p>The BDAR (NGH BDAR, 2020) and (NGH Amendment, 2021) surveyed the full area contained within the approved development site (refer to Attachment A) and the assessment of biodiversity impact has considered vegetation clearing for the construction and operation of the solar array and associated construction and operation facilities within this development site.</p> <p>The Proposed Changes are (refer Attachment B and C) located wholly within the approved development site. As such, the total area, shape and location of the development site have not changed. No additional biodiversity surveys are required.</p> <p>The Proposed Changes would involve approximately 0.76 ha of additional vegetation clearing within the development site.</p> <p>The additional clearing required for the Proposed Changes is located wholly within Category 1 exempt land and is therefore exempt from biodiversity offset credit requirements under the <i>Biodiversity Conservation Act 2016</i>. Accordingly, an update to the biodiversity development assessment report (BDAR) submitted for the Project is not required.</p>	<p>No further assessment is required.</p> <p>The BDAR does not need to be updated.</p>
Aboriginal heritage	Minor additional ground disturbance as a result of the Proposed Changes.	<p>The Proposed Changes are located wholly within the approved development site, previously assessed by NGH in the Cultural Heritage Assessment Report (NGH, 2020), to support the EIS. Refer to Attachment A and B. As such no additional surveys are required and the Proposed</p>	No further assessment required.

Issue	Application to Proposed Changes	Assessment of the Proposed Changes	Conclusions
		Changes will not result in any additional impacts on impact on Aboriginal Cultural Heritage.	
Visual amenity and landscape character	Minor orientation adjustments of structures as a result of the Proposed Changes.	<p>The Proposed Changes are proposed to address the concerns raised by Altomonte (Nominees) Pty Ltd by further mitigating the potential visual impacts of the Project.</p> <p>The Proposed Changes are located wholly within the approved development site, with the Project being previously assessed by Moir Landscape Architecture in the Visual Impact Assessment Report (Moir, 2020) to support the EIS and the addendums to this report dated 3 June 2021, 18 June 2021, 26 July 2021 and 23 August 2021.</p> <p>The Landscape and Visual Impact Assessment Addendum Report dated 3 June 2021 (LVIA Addendum) found that the Project would have an acceptable visual impact on the surrounding landscape character. In particular, the LVIA Addendum concluded:</p> <ul style="list-style-type: none"> • In relation to residence R3 that the unmitigated impacts of the Project on residence R3 was assessed as having a Moderate Visual Impact Rating. However, "[e]xisting vegetation to the south east of the dwelling is likely to fragment views to the Project" and the "screen planting along the western edge of the Project" (as shown in Attachment A) will "reduce the visual impacts from the dwelling to nil-low". • In relation to residence R4 that the unmitigated "Visual Effect has been assessed as low / moderate, resulting in a Moderate Visual Impact Rating". However, the "[p]roposed screen planting along the northern boundary of the Project" (as shown in Attachment A) "would reduce the potential visual impact rating" to "Nil - Low". <p>While Moir Landscape Architecture do not consider that the Proposed Changes are required to further mitigate the visual impacts of the Project, Moir Landscape Architecture considers that:</p>	No further assessment required.

Issue	Application to Proposed Changes	Assessment of the Proposed Changes	Conclusions
		<ul style="list-style-type: none"> the Additional Screen Planting proposed as shown in Attachment B and C will further reduce the already "Nil - Low" mitigated visual impact of the Project on residence R4 by filling the gaps in the screen planting and introducing additional screening along the north-south boundary of the Project, nearby to residence R4; consolidating the batteries into the Central Battery Yard, which is located adjacent to the onsite substation and site compound will further reduce potential visual impacts on residence R3 and R4; and the minor corresponding adjustments proposed to the extent of the solar arrays and the location of the onsite substation and site compound will not result in any changes to the visual impacts of the Project. 	
Hydrology and flooding	Minor orientation adjustments of structures as a result of the Proposed Changes.	<p>The Proposed Changes are located wholly within the approved development site, previously assessed by BMT (BMT, 2020), to support the EIS.</p> <p>Per the BMT flood assessment (BMT, 2020) the 1% AEP flood levels are shown in Figure 1. The Proposed Changes are outside the modelled inundation regions. As such the Proposed Changes will not change the flood risk of the site and no further studies are required.</p>	No further assessment required.
Soils and landforms	Minor additional ground disturbance as a result of the Proposed Changes.	<p>The Proposed Changes are wholly within the approved development site, previously assessed by Soilmtg (Soilmtg, 2018), to support the EIS.</p> <p>The additional ground disturbance associated with the Proposed Changes would occur wholly within soils mapped as Brown Chromosol (Soilmtg, 2018). These soils are not associated with any Biophysical Strategic Agricultural Land (BSAL) (Soilmtg, 2018) and would not increase the impact to BSAL.</p>	No further assessment required.

Issue	Application to Proposed Changes	Assessment of the Proposed Changes	Conclusions
Land use	Minor additional land use as a result of the Proposed Changes.	<p>The Proposed Changes are located wholly within the approved development site, previously assessed by NGH (NGH EIS, 2020), to support the EIS.</p> <p>An additional 0.76 ha of construction footprint would be required as a result of the Proposed Changes. Much of this would comprise of hardstand area for the Central Battery Yard and the onsite substation and site compound near Access Point 1.</p> <p>This additional ground disturbance required to accommodate the Proposed Changes would be wholly within land mapped as Class 2 Prime Agricultural Land. As per the EIS (NGH EIS, 2020), the percentage of Class 2 land impacted by the Project is less than 0.01% of Class 2 land within the Warrumbungle Shire LGA. As such the increased impact of the Proposed Changes is negligible.</p>	No further assessment required.
Water use and water quality	Minor reduction in solar array area as a result of the Proposed Changes t.	The net solar array area has decreased by approximately 0.12 ha as a result of the Proposed Changes. This is expected to reduce the operational water use for photovoltaic (PV) panel cleaning.	No further assessment required.
Noise and vibration	Minor orientation adjustments to the localised infrastructure layout within the development site.	Renzo Tonin (Renzo, 2020) assessed the worst case construction and operation noise and vibration impacts within the Project footprint. The modified battery location and associated facilities are wholly contained within the Project footprint assessed by the Construction and Operational Noise and Vibration Assessment (Renzo, 2020). The Proposed Changes would not change the noise levels during construction or operation, therefore the results and recommendations for noise and vibration are not changed.	No further assessment required.

Issue	Application to Proposed Changes	Assessment of the Proposed Changes	Conclusions
Socio-economic and community	No change in construction timing, duration or methodology.	The Proposed Changes would not change the construction timing, duration or construction methodology. No change in construction employees or operational employees would result from the Proposed Changes.	No further assessment required.
Traffic, transport and road safety	No change in construction traffic numbers, haulage route, access road or construction hours. No change in construction site access.	The Proposed Changes will not impact on the traffic impacts of the Project on the public road network or the site access points. As a result of the Proposed Changes, the internal road will traverse the outer border of the onsite substation, resulting in an additional 60 m ² of new internal access road. The additional ground disturbance associated with the Proposed Changes would occur wholly within soils mapped as Brown Chromosol (Soilmgt, 2018), which are not associated with any BSAL(Soilmgt, 2018). The Proposed Changes would not increase the impact to BSAL.	No further assessment required.
Hazards	Minor infrastructure adjustments as a result of the Proposed Changes.	<p>Hazardous materials</p> <p>The Proposed Changes are located wholly within the approved development site, previously assessed by the PHA (NGH Amendment (a), 2021), to support the EIS.</p> <p>A PHA was undertaken as part of the Amendment Report (NGH Amendment (a), 2021). The Proposed Changes would have no material change on the quantities of hazardous materials used in the Central Battery Yard. Therefore the results and recommendations in the PHA would not change.</p> <p>Electromagnetic Fields (EMF)</p>	No further assessment required.

Issue	Application to Proposed Changes	Assessment of the Proposed Changes	Conclusions
		<p>The Proposed Changes are located wholly within the approved development site, previously assessed by NGH (NGH EIS, 2020), to support the EIS.</p> <p>The Proposed Changes do not change the location of the electricity transmission infrastructure (Transmission Line and substation), the design of the infrastructure or the transmission capacity of this infrastructure.</p> <p>The Proposed Changes do not increase the impact from EMF, as such the impact assessment and mitigation measures recommended in the EIS is not changed.</p> <p>Aviation</p> <p>The Proposed Changes are located wholly within the approved development site, previously assessed by NGH (NGH EIS, 2020), to support the EIS.</p> <p>The net solar array area has decreased by approximately 0.12 ha as a result of the Proposed Changes. This is expected to reduce any potential impact from glint or glare to aviation. The impact assessment and mitigation measures in the EIS do not change.</p>	
Fire and bushfire	Consolidation of battery units to the Central Battery Yard.	<p>The Proposed Changes are located wholly within the approved development site, previously assessed by NGH (NGH EIS, 2020), to support the EIS. A Preliminary Hazard Analysis (PHA) was undertaken as part of the Amendment Report (NGH Amendment (a), 2021), to support the EIS. As a result of the Proposed Changes, the potential fire risks arising from the Li-ion batteries would be limited to a central source rather than multiple potential sources throughout the development site. The likelihood of a fire spreading to other areas would be lower given the centralised</p>	No further assessment required.

Issue	Application to Proposed Changes	Assessment of the Proposed Changes	Conclusions
		location and the impact to neighbouring facilities or receivers from a fire would therefore be lower. As such, the proposed consolidation of batteries is expected to lower the overall residual fire risks throughout operation.	
Historic heritage	None identified.	No identified areas of potential historic heritage are located with the approved development site or would be impacted by the Proposed Changes.	No further assessment required.
Air quality and climate	Minor reduction in the extent of the solar arrays by 0.12 ha.	The Proposed Changes are wholly within the approved development site and will not change the potential dust impacts during construction which will continue to be managed as per the measures outlined in the EIS.	No further assessment required.
Waste	None identified.	The Proposed Changes are located wholly within the approved development site and will not have any material impact on the waste generated during construction and operation.	No further assessment required.
Cumulative impacts	Overall the differences from the previous layout are not more than minor.	The cumulative impacts of the Project as described by the EIS (NGH EIS, 2020) remain applicable and are unchanged by the Proposed Changes.	No further assessment required.