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19 February 2026

Environmental Resources Management Australia Pty Ltd
Level 14, 207 Kent Street
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Attention: Meg Coles – Managing Consultant

RE: Flooding Response to DPHI Request for Additional Information regarding the Brewongle Solar Farm (SSD-64834490)

INTRODUCTION

A request for additional information was received from the Department of Planning, Housing and Infrastructure (DPHI) in response to the submissions report for the Brewongle Solar Farm (SSD-64834490). The following items relate to the *Brewongle Solar Farm Surface Water Impact Assessment* (SWIA) (Engeny, 2025):

- *Details of measures proposed to avoid or mitigate off-site flood impacts.*
- *Clarify the off site flood depth increases shown in Figure B12, including:*
  - *Whether the relevant landowner/council has been consulted* – to be addressed by lead EIS consultant.
  - *What the affected area comprises.*
  - *How impacts would be mitigated.*

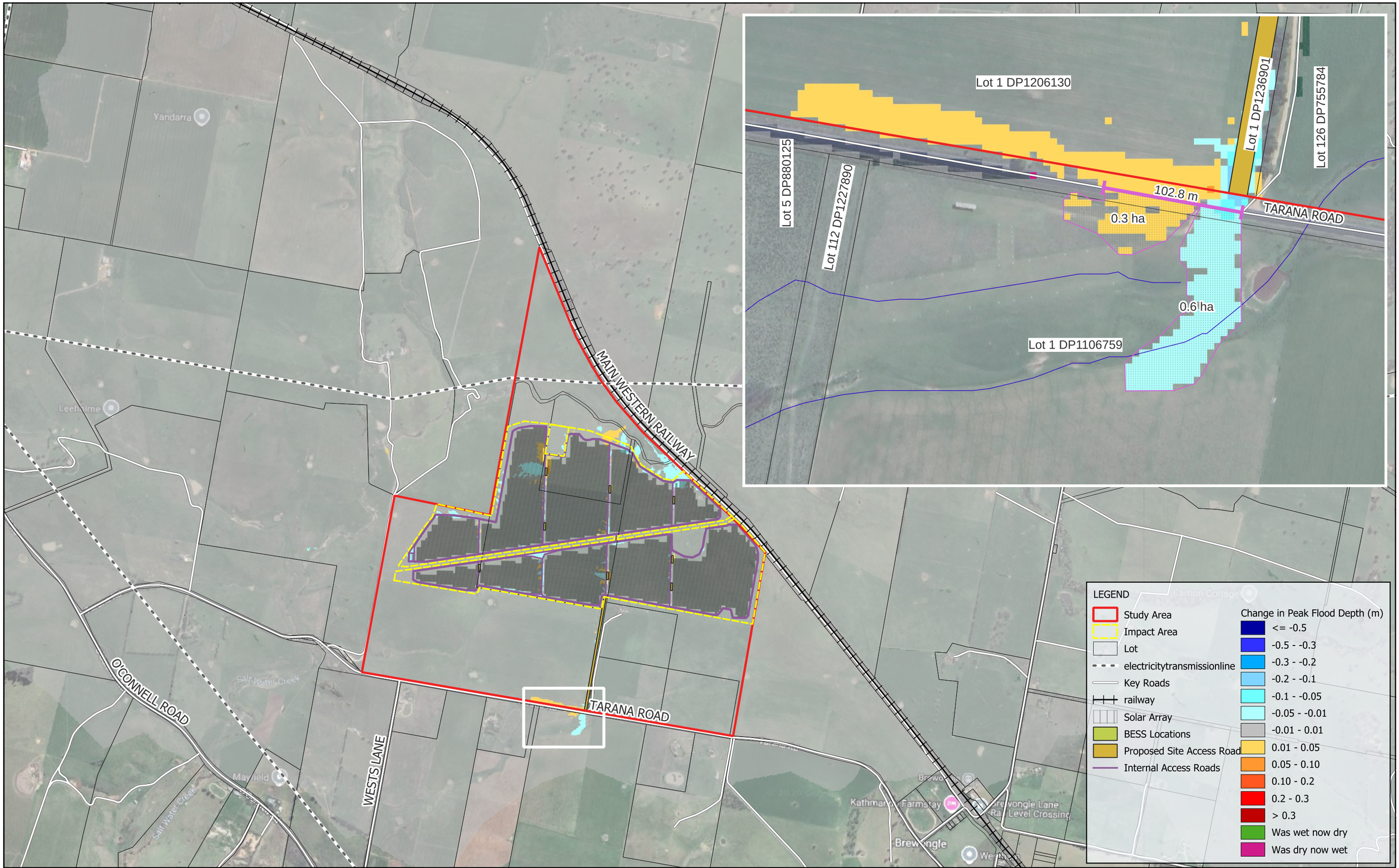
RESPONSE

Overview of Off Site Impacts and Affected Areas

Figure B12 in the *Brewongle Solar Farm SWIA* (Engeny, 2025) presents the change in peak flood depth results for a Probable Maximum Flood (PMF) event. As identified in DPHI's response, Figure B12 indicates changes in flood depths outside of the Study Area, that is off-site impacts, in the PMF are expected adjacent to the intersection of Tarana Road with the proposed site access road, extending to the downstream property (Lot 1, DP1106759). The extent of off-site impacts is also shown on Figure 1 and include:

- Approximately a 100 m stretch of Tarana Road with increases in flood depth of up to 30 mm (refer to Figure 2). It is noted that flood depths along Tarana Road in the impacted area reach up to approximately 680 mm under baseline conditions (Figure A5 of the SWIA (Engeny,2025)), which would already result in restricted access. Similarly, Figure A15 and Figure B9 in the SWIA show Flood Hazard in the H5 category under both baseline and developed conditions, with negligible change to the impacted section due to the development (Figure 3). The *Australia Disaster Resilience Handbook 7 – Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia* (AIDR, 2017) defines a H5 hazard category as unsafe for vehicles and people. The additional increase (30 mm) is therefore unlikely to cause additional access impacts or risks as the road is already impassable during the PMF event.
- Localised area (<0.3 ha) of downstream property (Lot 1, DP1106759) with increases in flood depth of up to 30 mm. The impacted area comprises of an access road. It does not appear to be a primary residential driveway. Figure A5 of the SWIA (Engeny, 2025) indicates that the entrance of this access road is expected to be inundated to depths greater than 500 mm, with a flood hazard category of H5 (unsafe for vehicles and people) under baseline conditions. Access in the impacted area would therefore already be restricted, and the additional increase (<30 mm) is therefore unlikely to cause additional risks as the access road is already impassable during the PMF event.
- Localised area (~0.6 ha) of downstream property (Lot 1, DP1106759) with decreases in flood depths of up to 80 mm. The impacted area is largely associated with an existing flow path, downstream of a farm dam. Changes to flow depths are considered minor.

Further impact assessment is included in the SWIA (Engeny, 2025). It is noted that negligible off-site impacts were observed in the other design flood events (5% Annual Exceedance Probability (AEP) and 1% AEP). In accordance with the *Floodplain Risk Management Guideline LU01 – Flood impact and risk assessment* (DPE, 2023), minor impacts and residual risks in the PMF can be expected and considered acceptable after management measures and development controls have been applied. Proposed mitigation measures are discussed in the following section.



R	DETAILS	DATE
1	Final Issue	16-02-2026

DRAWN	IR	CHECKED	LV
APPROVED	LV	DATE	16/02/26

NOTES:

N

0 0.4 0.8 km

SCALE @ A3 - 1:20,000

GDA 2020 / MGA Zone 55

DISCLAIMER
Engeny has endeavoured to ensure accuracy and completeness of the data. Engeny assumes no legal liability or responsibility for any decisions or actions resulting from the information contained within this map.

DATA SOURCE
Google Maps

ENGENY

Edify

Edify Brewongle Solar Farm

Figure 1 (Modified from Figure B12 in SWIA) Flood Afflux - Probable Maximum Flood (PMF) Change in Peak Flood Depth

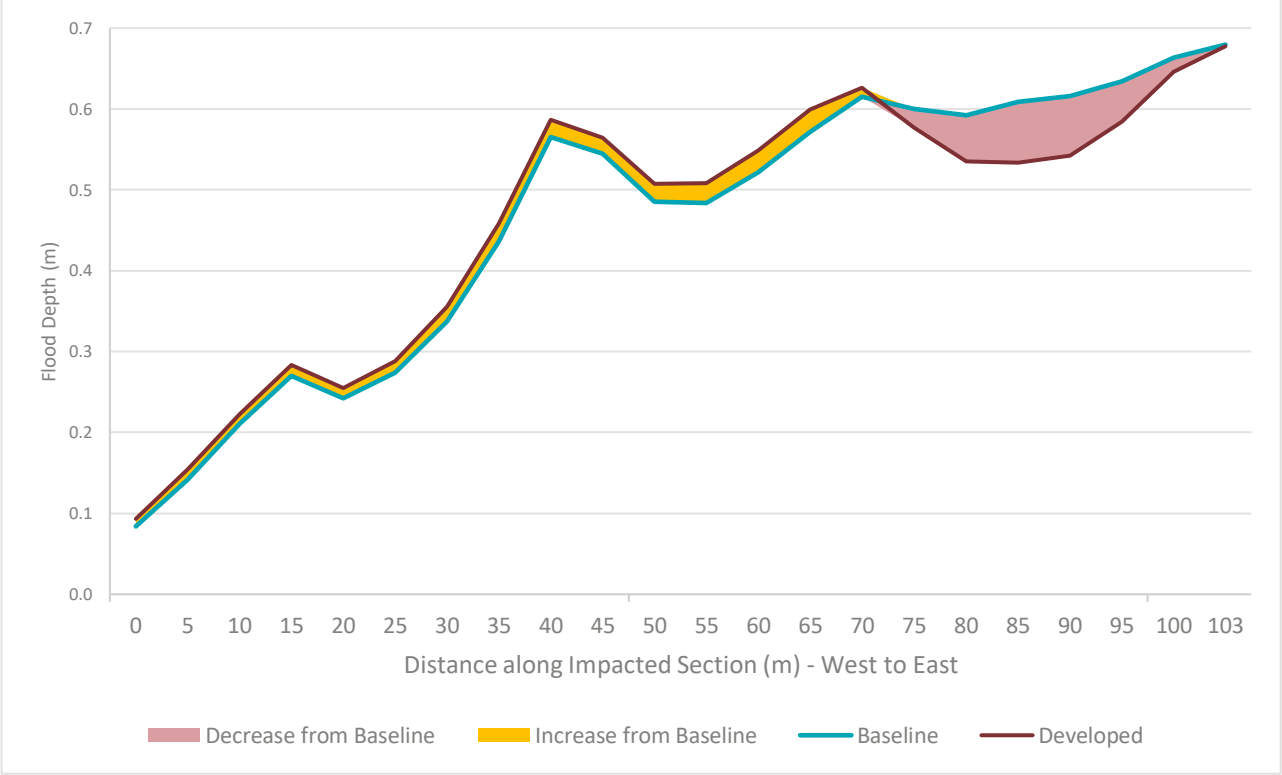
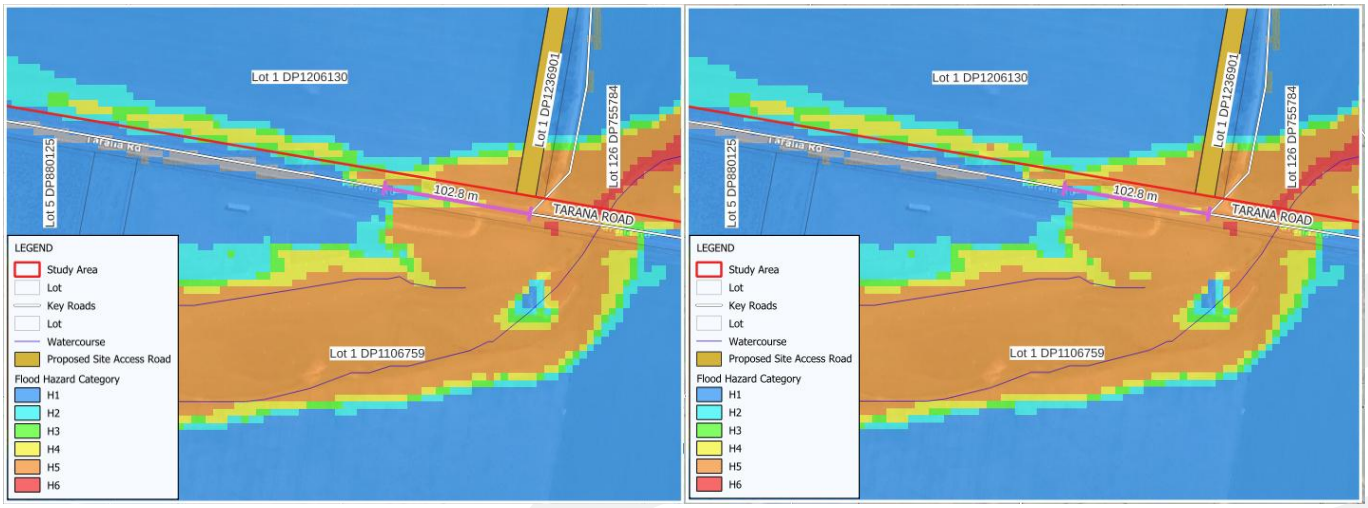


Figure 2: Modelled Flood Depth along the Impacted Section of Tarana Road – Baseline and Developed



A. Baseline Conditions – PMF Flood Hazard Categorisation (Modified from Figure A15 in SWIA (Engeny, 2025))

B. Developed Conditions – PMF Flood Hazard Categorisation (Modified from Figure B9 in SWIA (Engeny, 2025))

Figure 3: Modelled Flood Hazard along the Impacted Section of Tarana Road – Baseline and Developed

Mitigation Measures

The observed off-site impacts are likely attributed to the assumed reduction in Manning's 'n' roughness (surface resistance) and increased impervious nature of the proposed site access road. Within the road footprint, Manning's 'n' roughness decreases from 0.045 (Grassland with Low Density Vegetation) to 0.015 (Roads and Other Hardstands). This reduction in surface roughness (i.e. resistance), combined with higher runoff potential of impervious areas, increases flow conveyance through the road alignment. As a result, flows become more concentrated downstream, contributing to the observed off-site impacts.

It is considered that the off-site impacts can be minimised through appropriate road design, which would be addressed during the detailed design stage (post approval). This is expected to include optimising road grading, and drainage controls to maintain baseline flow paths and reduce downstream impacts. Future flood modelling during post approval is recommended to inform the detailed design.

Regards,

Laura Vincent
Principal Engineer – Water Resources

DISCLAIMER

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