4th December, 2018

[redacted]

Independent Planning Commission

Dear Chairman,

Re: Gunnedah Solar Farm, Ref SSD8685

My wife and I have owned and lived at our property since 2006 which borders the eastern side of the proposed solar farm.

In 2016 First Solar approached us as a future site for a solar farm which at the time seemed to be a great opportunity for us the land owners and the community of Gunnedah. Over time, whilst working with First Solar it became apparent that the positives were outweighed by the negatives with flooding being the major problem which contributed to a range of underlying issues.

Due to the site being on a flood plain First Solar completed a flood study which involved surveying the complete site of RL's to give an indication of actual flood depths (copy attached "Monteath and Powy's Pty Ltd Study Survey"), in a 1 in 100 year flood which was much higher than expected.

In 2006 we built a new house at the southern end of our property (VP1). This site was surveyed for a 1 in 100 year flood level by Stewart Surveys (detail site plan proposed residence & pad) and this plan was used as a reference to show the actual depths in conjunction with the surveying of RL's from First Solar's flood study (completed by Monteath and Powys Surveyors).

Interpolated 1955 flood level at site (VP1) is 270.1 m, as quoted on detail site plan proposed residence & pad completed by Stewart Surveys and documented heights from Monteath and Powys flood survey on RL's compared to Figure 4, page 15 of the Gunnedah Assessment Report as detailed below:

Point 1 B 269 m

270.1 minus 269 = 1.1 m not .45 m

Point 2 B 269.6 m

270.1 minus 269.6 = .5 m not 0.17 m

Assuming these two points differ by 500 to 600 mm the points in figure 4 would differ a similar amount, for example **Point 3A = 1.64 not 1.04 m.**

These huge differences in flood measurements would have an enormous impact on flood level heights and redirection of floodwater.

Flood level at Myalla house levee bank is 1.4 metres as reference was used from our house site survey in conjunction with Stewart Surveys to build the bank. The levee bank and house floor level had to be elevated to 1.9 metres due to 1 in 100 year flood levels.

Page 14 of assessment states there are no natural water courses on the prosed site. There is one running north west entering the property from the southern boundary and one running west south west entering the property from the north east boundary in the event of a major flooding.

As there has been no proposed design provided for a dropdown fence, will the design work effectively to prevent water backing up on the eastern side or upstream causing excessive flooding into residents' property including homes and fenced in livestock causing them to perish. When the fence drops down what effect will the huge body of water and its velocity have as it accelerates? Will it impact on soil erosion and will it affect the flood level as it moves down stream in a wall of water.

Page 3 Assessment Report states the land is not effectively able to be cultivated. As seen on the Farm Tour on 30th November, 2018 complete proposed area was either cultivated or had established crops and a network of irrigation channels. This is misleading information as obviously the land is prime irrigated farming land which supports cotton and grain processing businesses in the Gunnedah Community.

In reference to access road the solar farm from the Orange Grove Road, the road is proposed to be all weather gravel with estimated 50 truck movements a day plus light vehicles. The dust levels will be horrendous due to amount of movements and high levels of wind on the flood plain.

If the solar farm is approved, when there is a 1 in 100 year flood event and water causes damage due to the redirection of flood water, who will be responsible for paying for damages caused to private property? Will it be the Government, will it be Photon or will it be the Land owner?

My concerns are that the flood study undertaken by Photon Solar, are not consistent with the flood studies provided to us by First Solar (Monteath & Powy's). It's appears to be misleading information as the flood levels quoted by Photon are approximately 600 mm lower than the flood studies provided to us by First Solar and also Stewart Surveys.

Due to involvement with First Solar and the issues of flooding that confronted the proposal at the time, it would has demonstrated the uncertainty of the impact of a solar farm in this major floodway.

Yours sincerely,

[redacted]

Stephen Woods

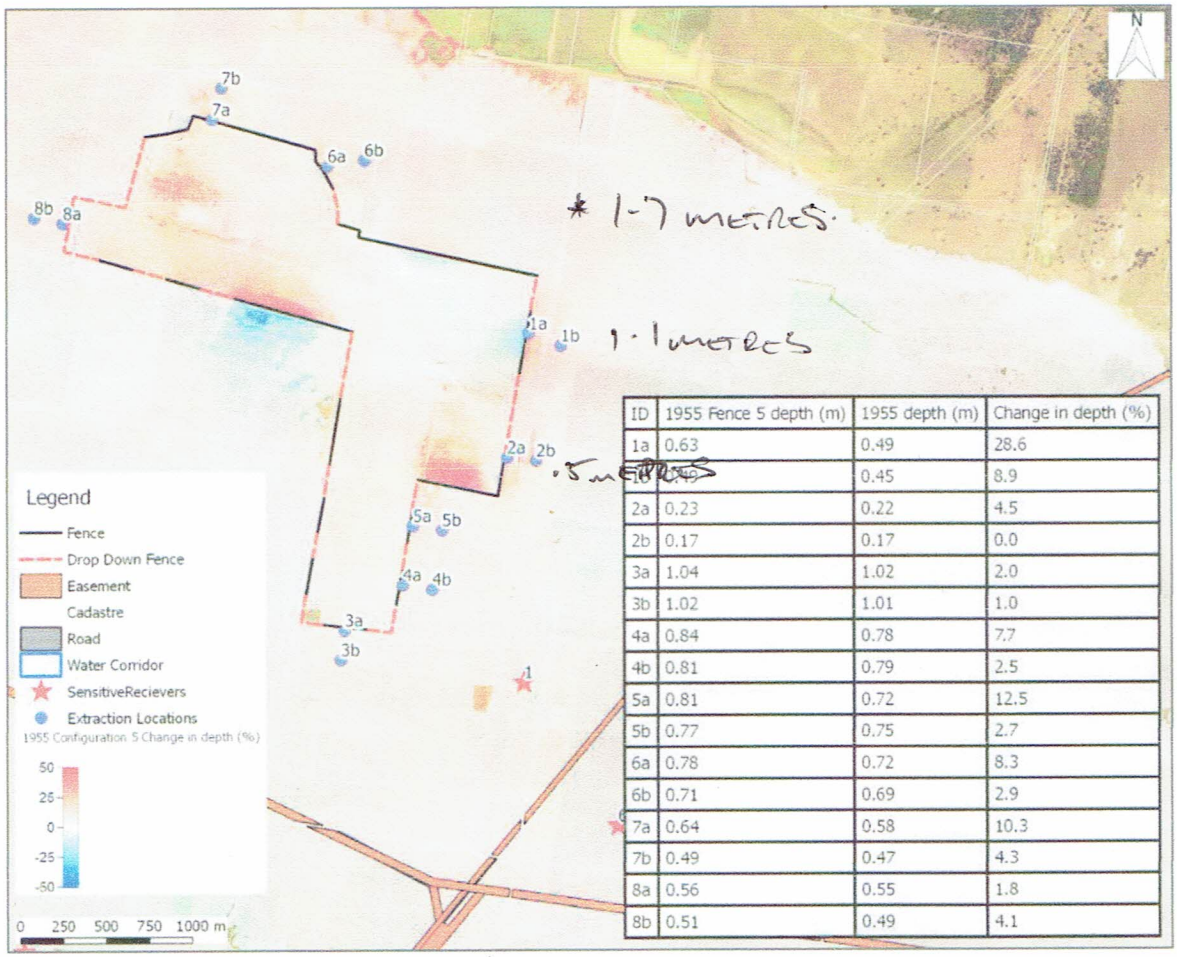
Figure 2 | Project Layout

The Updated Flood Impact Assessment and subsequent studies combined ground surface data from a number of sources into a single flood model to estimate 1%, 5%, 10% AEPs and Probable Maximum Flood (PMF) flows, including:

- Light Detection and Ranging (LiDAR) survey data from 2000 which was collected for the Carroll to Boggabri Flood Study (SMEC, 2003),
- LiDAR survey data obtained by drone for Photon in 2017; and
- the construction drawing for the ring levee around the residence at the project site.

The assessments demonstrated that in a 1% AEP and PMF event, the project would comply with the Gunnedah LEP and the relevant FMPs' assessment criteria for permissible development on a floodplain, without sections of drop-down fencing incorporated into the security fencing.

Notwithstanding, in response to community concerns the Applicant evaluated a range of alternative perimeter fencing options in order to determine the optimum configuration for mitigating any residual flood impacts whilst meeting safety and security requirements. The modelled impact of the optimum fencing configuration (i.e. fencing configuration 5) in a 1% AEP flood event is shown in **Figure 4** and compared to the applicable assessment criteria of the FMPs in **Table 3**.

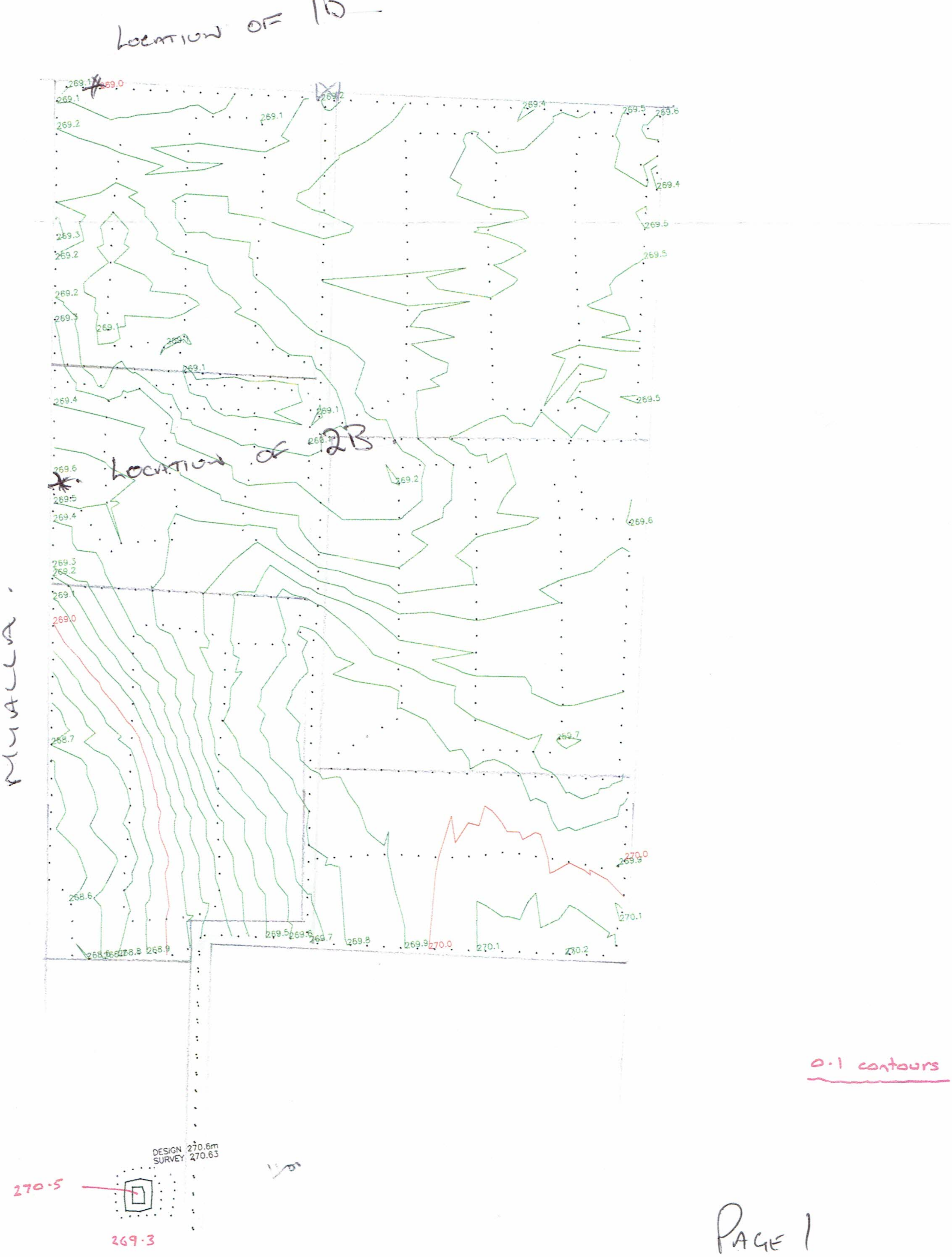


ID	1955 Fence 5 depth (m)	1955 depth (m)	Change in depth (%)
1a	0.63	0.49	28.6
1b	0.49	0.45	8.9
2a	0.23	0.22	4.5
2b	0.17	0.17	0.0
3a	1.04	1.02	2.0
3b	1.02	1.01	1.0
4a	0.84	0.78	7.7
4b	0.81	0.79	2.5
5a	0.81	0.72	12.5
5b	0.77	0.75	2.7
6a	0.78	0.72	8.3
6b	0.71	0.69	2.9
7a	0.64	0.58	10.3
7b	0.49	0.47	4.3
8a	0.56	0.55	1.8
8b	0.51	0.49	4.1

Figure 4 | Change in floodwater depth at perimeter incorporating fencing configuration 5

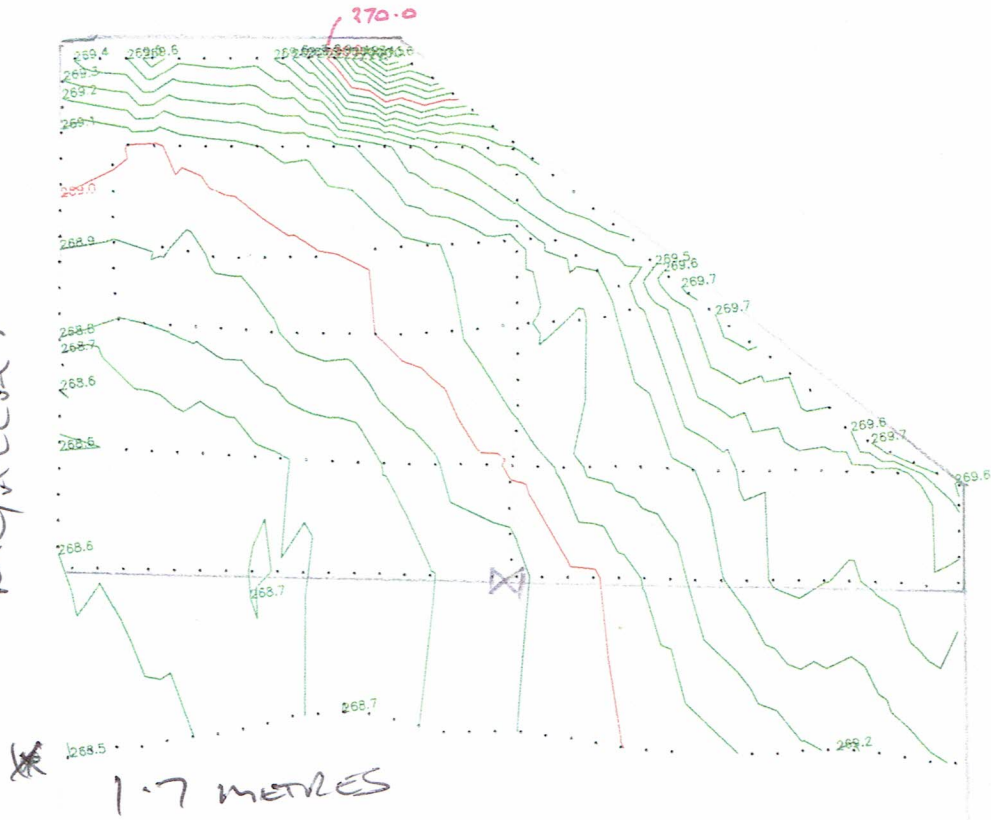
FIRST SOLAR FLOOD STUDY SURVEY
COMPLETED BY MONTEATH + POWYS

GUNNEDAH SOLAR FARM
MULLALEY.

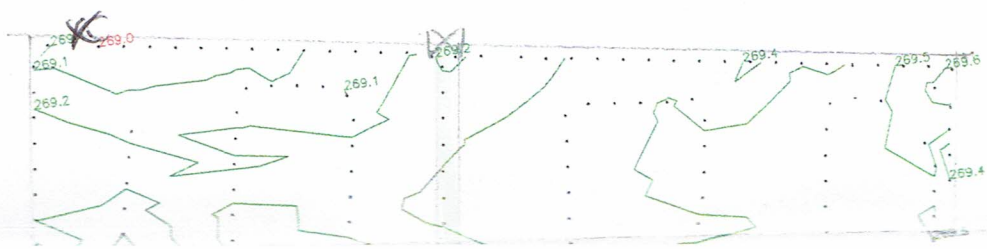


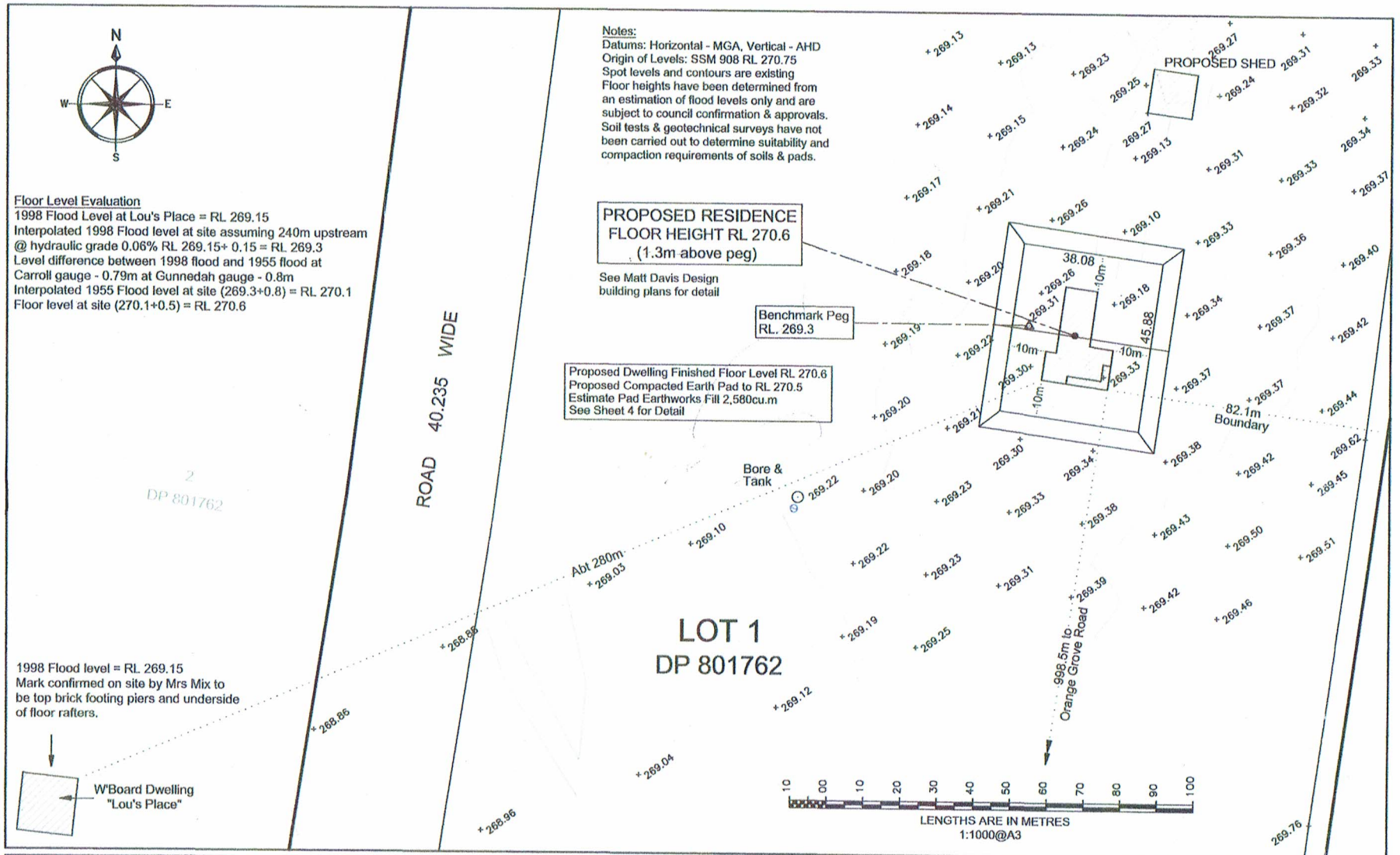
FIRST SOLAR FLOOD STUDY · SERVEY
COMPLETED BY MONTEATH + POWYS.

GUNNEDAH SOLAR FARM
MYALLA.



LOCATION OF 1B.





STEWART SURVEYS
Pty Ltd Inc in NSW
ABN 65 002 886 508
SURVEYORS
109 Conadilly Street
P.O. Box 592
GUNNEDAH NSW 2380
Ph: 02-67422966 Fax: 02-67420684

CR Stewart
SURVEYOR, Registered under the Surveying Act 2002

Drawn: CRS	Date: 3 July 2007	File Ref: 3232.dwg	Scale: 1:1000@A3	Drawing No.	Sheet: 3 of 4

CLIENT: SD & L WOODS

PROJECT: "WENSLEYDALE", GUNNEDAH

DESCRIPTION: DETAIL SITE PLAN
PROPOSED RESIDENCE & PAD
LOT 1 DP 801762