

Gunnedah Solar Farm, EIS submission, Geoff Hood

It looks like in relation to the information presently available for the Gunnedah Solar Farm Development, the consultants have not done the proponent or landholders any favours by not fully accessing the flooding situation, for the Environmental Impact Statement of which people have been asked to comment

If the proposed Solar Farm did not require a full perimeter security fence, then the Namoi River floodplain would be enhanced by this sort of development, especially if existing channel banks were lowered or removed, however that is not the Solar Farm plan

I draw on my experience as a farmer and sharefarmer previous, on various properties in the Orange Grove Road area, My Family Company presently owning and leasing four small farms close to Gunnedah, and conducting extensive cotton contracting operations over several thousand acres, irrigation farms incorporating levee banks, mainly Gunnedah and Narrabri Shire, extending to Cunnamulla Queensland

From 2002 I was a landholder representative along with seven others, as well as several govt appointees, that oversaw the Carroll to Boggabri Floodplain Management Plan, which was summarized and printed September 2006

I missed the initial media on the Gunnedah Solar Farm, and assumed that the developers in due course of document discovery, would have full access to the extensive research of the Carroll - Boggabri Floodplain Management Plan, inclusive of extensive Mike 11 floodplain model runs. As a floodplain committee, we commissioned airborne laser survey and ensured that Flood Models for various flood events were ground truth against historic flood level recordings across the Namoi River Floodplain. Of the printed 2006 Carroll - Boggabri floodplain management plan booklet, the preamble at the front mentions ongoing reports 2005 and 2003 of investigations in detail leading to the preparation of the plan. Consultants to a developer should have chased these historical documents

Unfortunately by incomplete survey and by not making use of the extensive research that went into the "Gazetted" Carroll to Boggabri Floodplain Management Plan, the consultants have not correctly identified and quantified the Namoi River High Velocity North floodwater breakout, which occurs across the Orange Grove Road, into the properties "Myalla"/"Daisy Plain"

Unfortunately also the consultants (Pitt/Sherry) in the EIS, from their modelling of floodwater work, have flood velocities that are different to those identified in the comprehensive "Mike II" model used to compile the Carroll to Boggabri Flood Plain Management Plan, they have underestimated flood velocity and flow volumes in the south of the proposed Solar Farm footprint (Namoi River high velocity breakout - north) and over estimated flood volume and velocity in the North of the Myalla Solar Farm Footprint.

The EIS for the "Myalla" Solar farm has estimated 1/100 (1%) flood velocity at 2.1 metres /second flood flow through the solar footprint, The Carroll- Boggabri Floodplain Plan Compendium of Data (Draft for Public Exhibition -August 2005) Mike II model has the High Velocity Namoi River North Breakout at an extreme level of 4.7 metres /second across the Orange Grove Road into "Myalla" with more floodwater volume in the breakout than the Namoi River itself, the Mike 11 model then has value's lowering to 2.6 metres second once floodwaters enter "Daisy Plain"(with no development), still above the numbers estimated by Pitt/Sherry, Conversely the Mike 11 model of the Carroll- Boggabri Floodplain Management Plan, has a much reduced than estimated by the consultants, North Myalla Solar Farm footprint flood velocity, in the range Low to Moderate 0.4 - 0.6 mt/sec velocity.

The central red soil ridge of the centre of "Myalla" Property is a most suitable area for Solar Farm Development, even with a well designed security fence, The ridge is free of flooding in the likes of an 1984 Namoi River Flood(Les Shaw owner Myalla/Reutama - Deceased+ govt airphoto's),however not enough ground truth survey work has been done to make accurate decisions and identify this unique property feature

The Flood maps produced as part of the Flood Impact Assessment of the Environmental Impact Statement, appear to have inaccuracies with four areas extending towards Gunnedah that area shown as not flooded, that do. And residual flow path of water that is out by horizontally by hundreds of metres, indicating that inaccurate survey has taken place, very difficult to make long term decisions on this information

More Survey work should have occurred

The Consultant has acknowledged this in their EIS Section 7 - Further improvement to flood modelling

7.1 Terrain

7.2 Hydrology

These Points in 7, should have been instigated, cross sectional ground truth ground survey completed across the floodplain, compared against the Mike II flood modelling of the Carroll to Boggabri Floodplain Management Plan process- **before** the **Neighbours** and **Community** have been asked to comment **Yes** or **No**, on the merits of a solar farm!

I understand that floodplain modelling is still work in progress for both Solar Farm projects that are proposed for along the Orange Grove Road

Flood Debris in a Flood floats, wood, grass, crop stubbles, roly poly, livestock, snakes, whatever?, . It is a big call by the consultant, that the effect of a chain mesh security fence on floodwater will decrease with water height, above 0.5 mt. Especially doubtful, if the floodwater is at extreme velocity (extreme = more than 2 metres /second).

It would be best to assume that a security fence(if used) would be mostly blocked by debris,, and plan for that with the possibility of designated floodway through the development (no solar development) in areas of greatest flood pressure, this would reduce floodwater afflux onto adjoining lands, also a design of areas of "gated floodway" that is utilized and opened only on major flood occurrence, These floodway's modelled for size (width) , I believe that one designated floodway and one gated floodway would suit this development and property aspects

Irrigation Farms with total flood protection levee use this approach of floodway's

In relation to other areas of the EIS, I support the Linking of Remnant Vegetation through native species planting (a very good example "Daisy Plain" along the Orange Grove Road) a goal of the former Nobby Rock Landcare group, that has now been amalgamated into Gunnible Landcare Group, which covers the area North of the Namoi River to the hills(melville range), I was previous chairperson of both these groups.

Whilst I support the idea that a red soil ridge in the centre of "Myalla" is very suitable for a Solar Farm Development, with a proper design that would not greatly affect neighbours with floodwater afflux. However with the information and design that is currently presented for community consideration in the Environmental Impact Assessment for the Gunnedah Solar Farm, survey inaccuracies and patchiness clouding the actual situation, my comment has to be at present, No, not in Favour of present EIS material for consideration

I have included a sketch of a possible alternate property design, with two Solar footprint cells(with a permanent floodway and also a gated floodway) that with suitable modelling to decide on floodway width's, which may enable a development with Little Floodwater afflux on neighbours even with a totally blocked security fence, this would be a strong point, there is also setback (50-100mt) on the "Warrawee" boundary to allow for free flow of Rangari Creek /runoff water from hills,Namoi River water confluence's, that can occur

Yours Faithfully

Geoff Hood

Lodge Farm

85 Wean Road/Gunnedah

lodgefarm85@bigpond.com