

Submission on behalf of:

Moree Gun Club 157 Back Pally Rd Moree

In Reference to:

Narrabri to North Star Phase 2 EIS

Introduction

The gun club initially moved to this location in the early 1970's and began operation as a shotgun clay target range in 1971. The land was previously owned by the Livingston Family and was part of the existing property, "Booloroo". The land/location was carefully selected by the club patrons and the Livingston family as it contained a "Red ridge" undeveloped parcel of predominantly Bimble Box country known to be flood free. At this time the Rail corridor to the north and west was in it's current location. The line was reportedly lower and contained a number of expansive wooden culverts across the floodway's to our north and northwest.

During the seventies, a number of developments occurred, including several floods 1971, 1974 and 1976 a major event. Irrigation also came to the valley and with it the construction of two supply channels to our west. The wooden culverts on the rail line were replaced with corrugated steel pipe culverts, see P1* below, during an upgrade which also included elevating the line to its current height. The capacity of these structures is in no way matched to what preceded them.

P1



- *Example of a culvert of similar design. This structure is blocked and north of town on the southern side of the Gwydir river (Nov 22)*

Since this time our location has become susceptible to flooding, the highest prior to the current event was 2012. Aerial photographs of this location during that event have previously been supplied to the Hydrology group for reference.

The Current Status

The club has just experienced it's highest ever recorded flood for this location rising to at least 10cms higher than 2012. This event saw water up to the club house slab.

At this point in time, it's not known whether or not, the line to our north and west has survived this event intact. We are assuming it has survived intact, as there is no evidence of a rapid decline in water level as scene in the 2012 event. The current event was very different to previous events due in part, to the amount of accumulated water in the floodway systems from local runoff, prior to the river flood arriving.

On the southern side of the river the railway line has sustained massive damage as shown in the following sequence of photo's P2 – P5. I have included them to show what happens to a bank of any construction which is suddenly subjected to substantial hydraulic head and then overtopped. Despite the culvert system on this side of the river also currently inadequate to handle more recent events, this event was exacerbated by a windrowed canola crop floating into and blocking the structures.

P2



Culvert north of P1 “A more recent upgrade and current design”

Like P1 this culvert also became substantially blocked prior to this failure. The following three photos are of line sections between these two structures and represent but a small sample of the damage sustained in this location.

Of interest is this area was not badly affected in previous events with the damage on those occasions being further north.

P3



P4



P5



Back on our side of the river: We appreciate that there are more factors involved in our flood experience changing over time than just the railway line and its drainage. However, it is obvious that it is the main driver in the overall height we get to experience. We became aware of this in the 2012 event when as the pictures provided show our levels peaked then dropped rapidly as soon as the line failed to our west. The height of the line, to us, only becomes an issue if the culverts cannot discharge enough water volume to equalise the levels in a reasonable time frame.

Our Concerns: The Current Projects Proposed Design And Design Parameters.

In our previous meetings with the hydrology group it was spelt out to us that a major design constraint for the project, is to maintain the status quo of the rail infrastructure in regards to its impact on flood dynamics. IE; maintain heights and flow rates of the existing flood experience. That sounds great but what does it mean? The flood dynamics before or after the current rail infrastructure fails? We have not had a major flood in this district to our knowledge where that has not occurred. Surely we all have the same ideal “move any flood through the environment as quickly as possible, generating as little height as possible, and as little damage as possible”

The current design of a dual height culvert system just defies common sense, its still going to create the damming effects of the current infrastructure, possibly without the release, hold floods in the local environment for longer with elevated heights. A failure in that system should a blockage occur as above would be seriously catastrophic.

Conclusion:

We are supporters of the inland rail project and think it's a great step forward, we want it to succeed, be resilient and sustainable. Basing its design on seventies cheap infrastructure we believe is fundamentally flawed. Should common sense prevail we have a once in a lifetime opportunity here to create great infrastructure which has little risk of failure and next to no impact on the passage of flood waters through the environment. A re-think on the current design parameters and structures especially given the most recent event is an imperative.

We look forward to seeing how the models being used to predict event heights and impacts for this project validate against this event.

Author:

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