

18 May 2025

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### **Submission in relation to application – RPI25/004 Arrow CASS tie-in**

LOCATION -Daandine Nandi Road, Ranges Bridge, Qld 4405. Approximately 25 km west of Dalby, Qld. (PAA Priority Agricultural Area) (SCA Strategic Cropping Area).

Response to this RIDA is essential to highlight the many misleading and deceptive statements presented by Arrow Energy.

## **INTRODUCTION:**

The development here is across extremely flat Condamine Floodplain and consists of PAA intensive agricultural land of gradients ranging from in some areas 0 to 0.03%. That equates to the natural fall in the land being less than 300mm over 1 kilometre.

The CSG industry espouses to creating employment and local economic growth. The agricultural industry creates many times the number of jobs claimed by the CSG industry. The reality is that these agricultural jobs are always there and not just in the development stage, as occurs with the CSG industry. Maintenance of CSG wells once developed only requires minimal staff.

The growth and enhancement of small community survival that Arrow claim to contribute to may be at risk by this resource activity. Drilling deviated wells near and under the Condamine River and within known Fault zones may well compromise the survival of these communities. Aquifer depletion – which is what this RIDA submission is facilitating for Walloon Coal Seam Aquifer -has not had any precautionary principle applied. Much work is yet to be done in relation to declining levels in both aquifers above and below the Walloon Coal Seams.

## **CONSULTATION PROCESS:**

Arrows claim of consultation with relevant nearby landholders is false. There has been and continues to be no AWP available to landholders of this part of the Surat Gas Development. A recent response 1 May 2025 from our Arrow nominated Land Liaison Officer (LLO) to my repeated requests to be informed of the AWP around our property has been copied below:

1. *Note → Development Plans - [REDACTED] requested Arrow provide a broad Duleen development plan map showing existing and planned wells.*  
*Post-meeting response:* Respectfully, **Arrow** will not be providing the requested map.

Being denied access to development plans and refused consultation has resulted in CSG induced subsidence now occurring across our PAA. As a neighbouring landholder to deviated

well development, we are completely alienated from any discussion, compensation or access to Land Ombudsman. **This is not coexistence.**

In relation to the subject of the RIDA RPI25/004 the only communication was the below email

*Arrow is planning its Condamine Alluvium Substitution Scheme (CASS) to offset the impact of natural gas-related activities on the Condamine Alluvium. Arrow's plan is to re-use well production water with a 'substitution of allocation scheme' among licensed water users of the Condamine Alluvium.*

*To support the project, a 'tie-in' - a pipeline valve and a 12m length of High-Density Polyethylene (HDPE) pipe - is required to connect key parts of the treated water pipeline distribution network. This 'tie-in' will enable Arrow to connect to landholders across the distribution network. The 'tie-in' is proposed for construction on 'Theten'. The approximate location of the 'tie-in' is shown on the following snip ('T' with a [blue](#) circle); it is approximately 1.1 kilometres from [REDACTED].*



Please note, Arrow has lodged an application for a Regional Interests Development Approval for this activity.

**Figure 1 above**

We are obviously a [REDACTED] neighbour to this application and respectfully, should have been consulted with and not just informed post a RIDA application.

As neighbouring landholders, we have serious concerns as to changed flow direction across our floodplain that has potential to impact the ability to harvest water into our water storage viewed in the right of the above image.

[REDACTED] has been referenced in the RIDA supporting documentation and is displayed below as found in Appendix D and Figure D3.

Being **told** an activity is about to occur is not involving landholders and direct neighbours in consultation.

## Surrounding Land Uses

The current agricultural land use of parcels surrounding this application is dryland and irrigated cropping of grain, legumes, cotton and oilseed crops, with some isolated patches of remnant vegetation and areas used for grazing of cattle. The area also hosts pre-existing CSG infrastructure (refer to Figure 2-1).

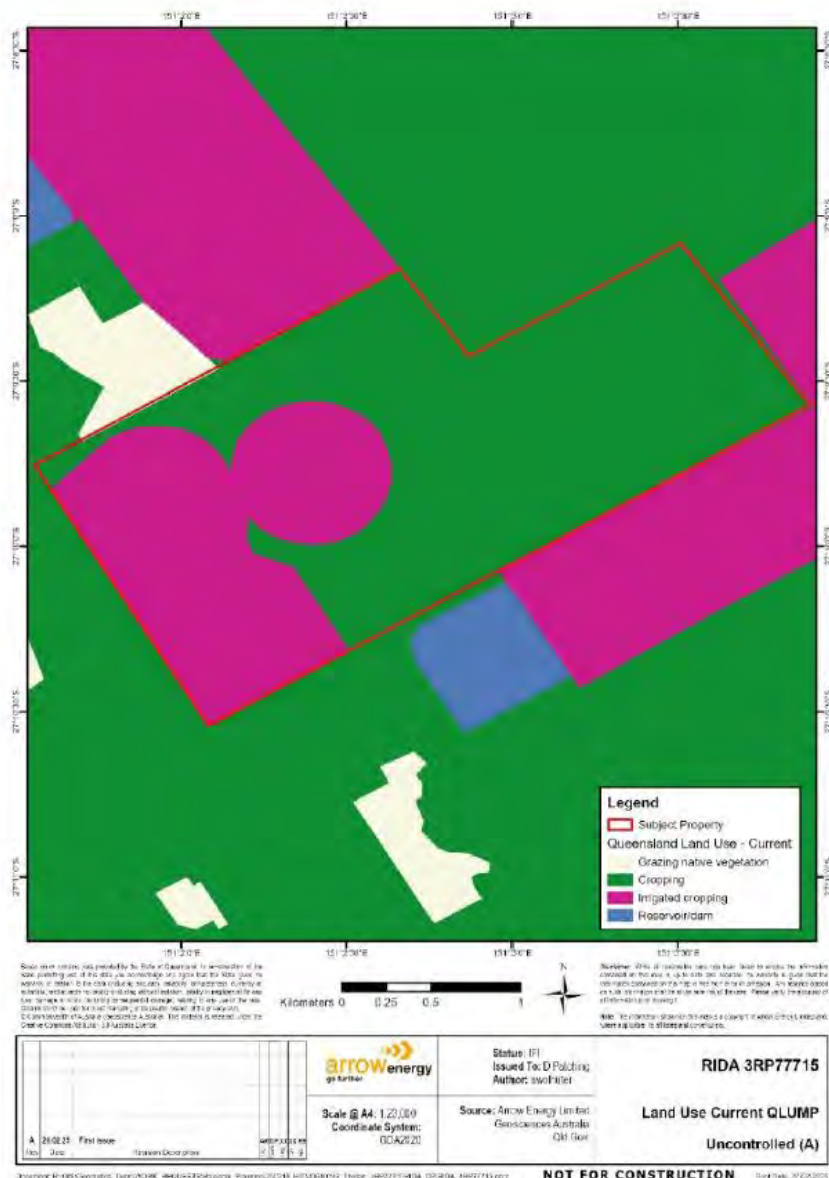
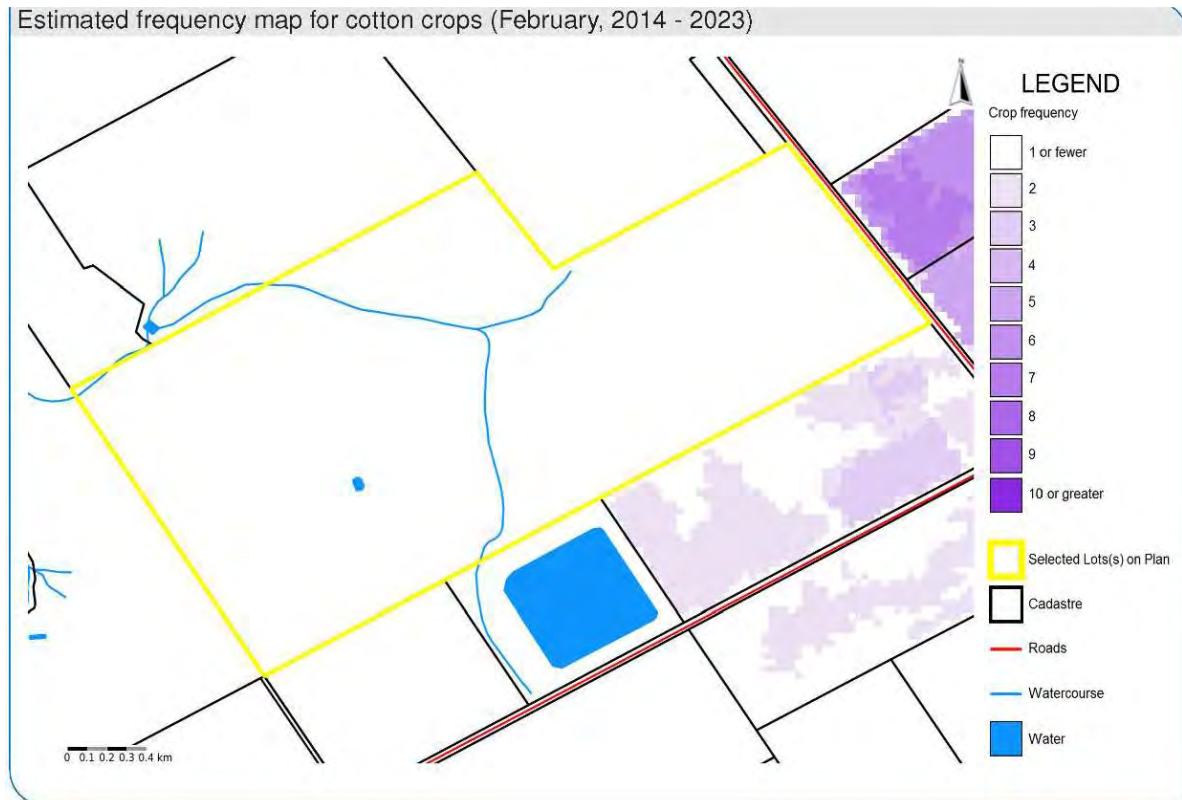


Figure D3 - Australian Land Use Management (ALUM) classification

Some neighbouring properties to the south and east of the Subject land have established collection of overland flow water for use in irrigated cropping activities.





**Figure 2.**

and unlike the legend indicates has grown cotton almost consistently year on year from 2014 to 2023. This could have easily been confirmed with some level of communication.

**Communication with neighbours does not occur.**

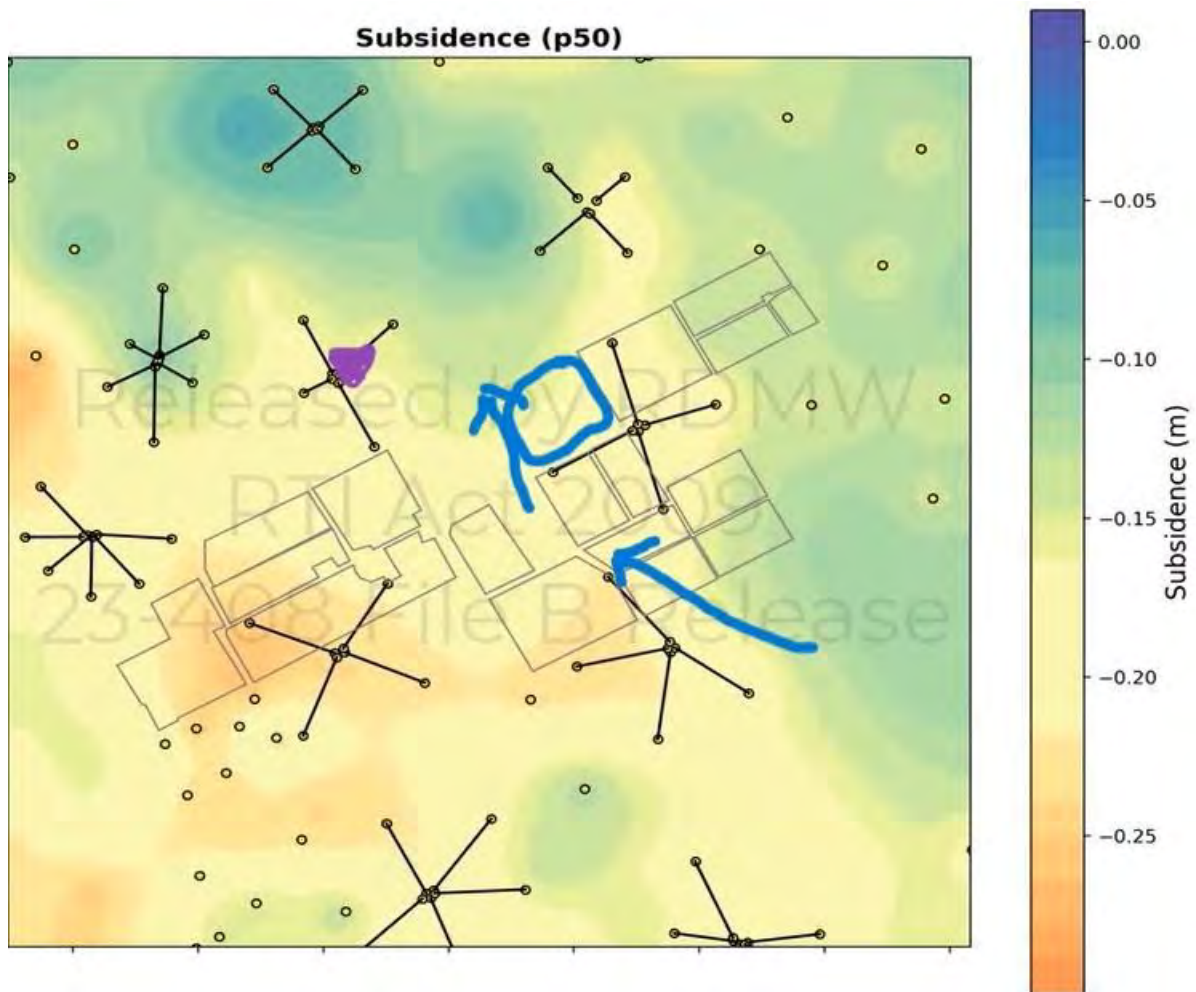
## **RISK TO OVERLAND WATER FLOW:**

OGIA has produced a model of the predicted CSG induced subsidence likely to occur over a hundred-year period. A timeline has revealed the below level of subsidence by the year 2055.

To help understand the significance of this portrayal I have added:

- Blue arrow to indicate current direction of overland flood path

- Blue square is our ring tank above ground storage that pumps from only this flood path
- Purple region adjacent to deviated well pad where proposed tie-in valve and pipework the subject of this RIDA RPI25/004 is planned.



**Figure 3. OGIA model of predicted CSG subsidence by 2055.**

The risk of altering overland flow path is portrayed in this image. The path of water flow to the north is indicated to not subside significantly and most likely 0.05m.

The lower blue arrow is where the flood flow first enters [REDACTED] and is shown here to be likely to fall some 0.25-0.30 m. This is some 5-6 times the amount subsided in the direction of water flow. We now have the real possibility of flood water cutting back to the Wilkie Creek through the areas marked as orange. Water will always flow to the lowest point. If/when this eventuates, [REDACTED] lost some or a significant amount of water that [REDACTED] been able to harvest to enable [REDACTED] irrigation of intensive cropping on PAA.

This shall be a huge impact to [REDACTED] farming business and has the potential to significantly reduce the amount of both food and fibre produced.

Likewise, the area of the proposed tie-in valve and pipework is predicted to fall 0.20m whilst the path the water should be taking does not fall. The water may well divert through the region the subject of this RIDA.

Both Federal EA and State EA prohibits the change of direction of water flow.

The Australian Government Department of Climate Change, Energy, the Environment and Water's Matters of National Environmental Significance Significant Impact Guidelines 1.1 provides guidance on what may constitute a 'significant impact' on a matter of national environmental significance under the Environment Protection and Biodiversity Conservation Act 1999. This guidance has been used to assist with understanding the exemption under Section 22 of the RPI Act.

To determine whether an activity is likely to have a significant impact, consideration needs to be given to the probability of the negative effects of the impact occurring. For example, to be 'likely', it is not necessary for a significant impact to have a greater than 50 per cent chance of happening; it is sufficient if a significant impact on the area of regional interest is a real and not a remote chance or possibility.

If there is scientific uncertainty about the impacts of an activity and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an activity will not itself justify that the activity is not likely to have a significant impact on the area of regional interest.

One example of where an activity may be considered not likely to have a significant impact on a PAA may be where the activity will not:

- result in a decrease in the particular agricultural product supplied from the PAA or region
- result in a decrease in the PAA or region's ability to undertake a particular PALU in the future.

The impact of lost water able to be pumped certainly results in a decrease in agricultural product supplied from the PAA.

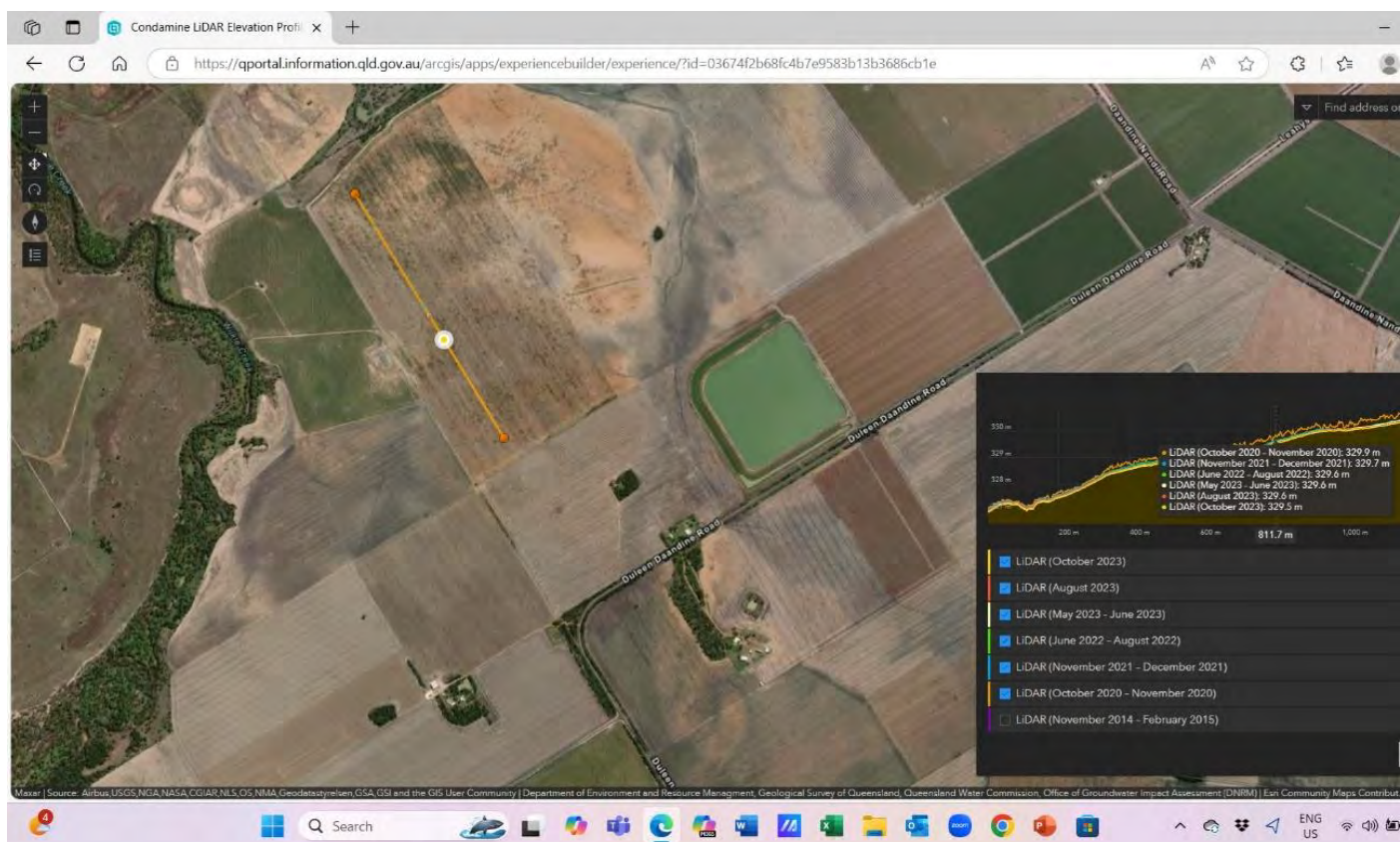


Figure 4. OGIA LiDAR tool section near Tie-in valve.

The OGIA LiDAR tool available online clearly shows the above area in the vicinity of the tie-in valve to have already subsided 0.4m (400mm). This is twice that predicted by the OGIA model and has occurred over some 3 years and not the 30 years predicted by the model.

The OGIA model and data has been developed as an indicator of CSG induced subsidence on a regional basis and is not accurate for individual property or field analysis or predictions.

As individual landholders now suffering from CSG induced subsidence, we have had to engage our own privately funded survey to monitor changes to our paddocks.

The OGIA model predicted up to 300mm CSG subsidence by 2055 some 30 years away.

Our suitably qualified professional Consulting Cadastral Engineering and Mining Surveyors have revealed that up to 350mm of CSG subsidence has occurred on a nearby farming paddock [REDACTED] which is also surrounded by CSG wells. **This is alarming.**

This field has now subsided unevenly and CSG subsidence varies from 200 to 350mm in patches whilst other areas have not subsided at all. Naturally this has now impacted the drainage of the field and caused [REDACTED] significant impact.

This change has eventuated in **30 months NOT 30 years.**

The subsidence experienced above is only a third of the term through its greatest expected water drawdown that occurs in the first 7-8 years.

The uncertainty is that the level of subsidence now seen here may be repeated another 2 or 3 times before settling back to a slower rate. Models predict that subsidence shall continue for considerable time after that.

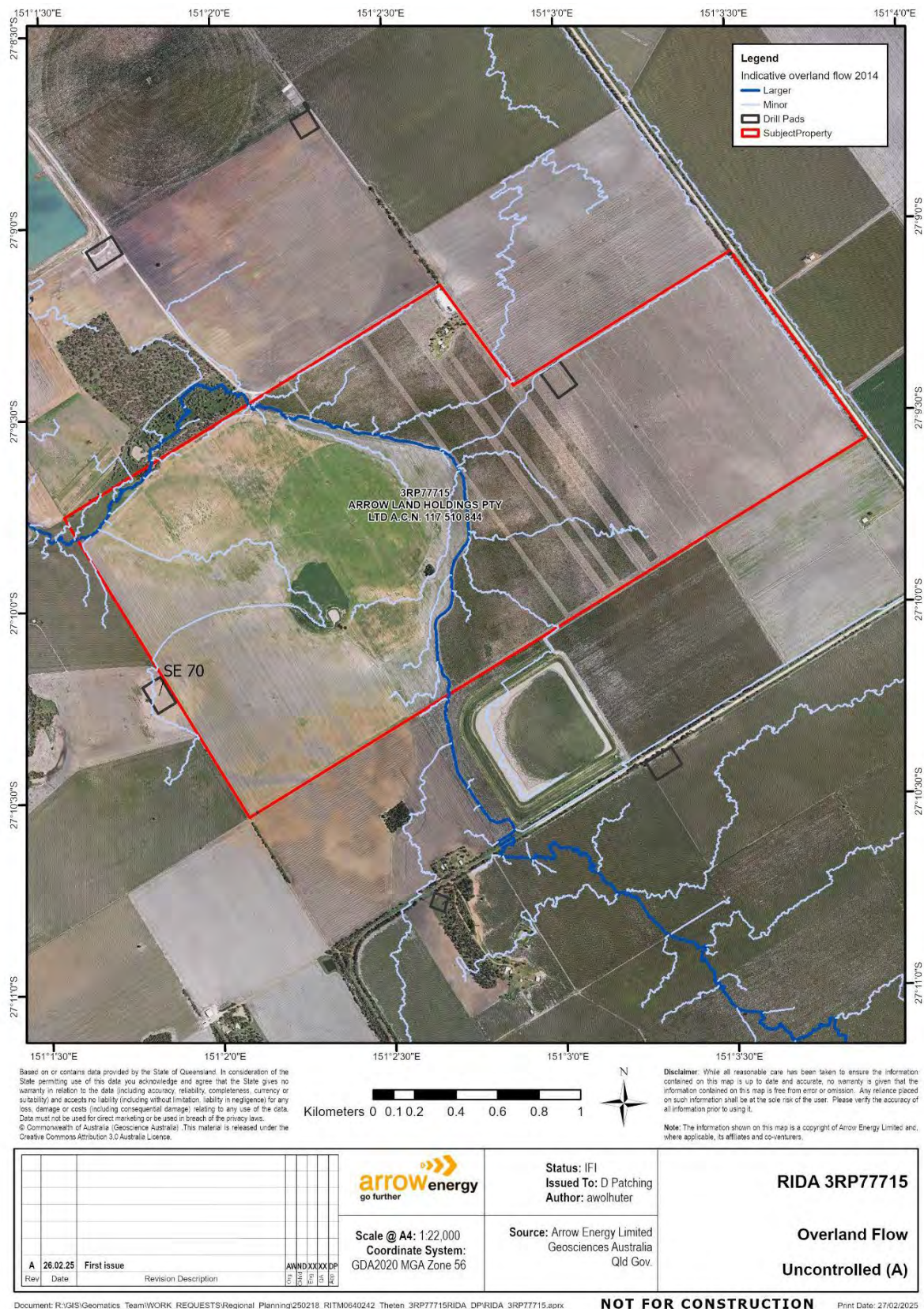
To summarise the above.

1. The OGIA model based on many calculations and scenarios predicts a trend.
2. The magnitude of this trend has been grossly underestimated
3. Actual water and gas drawdown figures from the CGS wells immediately impacting the individual paddocks should be used for paddock-by-paddock prediction of CSG subsidence.
4. Subsidence is now confirmed of 200 to 350 mm over a short 30-month period.
5. Total CSG subsidence likely to be 3 times the above levels recently measured from March 2025.
6. 600mm to over 1000mm of uneven CSG subsidence should be considered as “real and not a remote chance of occurring” – refer above highlighted definition.

**Overland water path is likely to change as the present downstream direction of water flow does not subside as much as better farming soil where greater amounts of Walloon water is being extracted - (OGIA model.)**

Minister Ann Leahy has been informed of the above situation. As such, the Department of Local Government Water and Volunteers should have input into this overland water flow issue.





**Figure 5. RPI25/004 Appendix J.**

Arrow Energy have submitted the above Appendix J as part of the RIDA. The above representation shows that with CSG subsidence of the level now being experienced, the likelihood of change to water path away from present blue mainstream is real.



## RESTORATION PLAN

Issue 3 of Requirement Notice rightly recognised the absence of any Restoration Plan as required by the Statutory Guideline 09/14.

Restoration is not rehabilitation and the land must be restored to “pre-activity condition”.

Given that Figure 4 in relation to the OGIA LiDAR tool is showing 400mm (329.9m to 329.5m) of subsidence over a short time frame from Oct 2020 to Oct 2023, land levelling involving land planning would be required to the region in order to re-instate the land to the original PALU following construction activities.

If the “pre-activity condition” is not returned, then anticipated impacts to overland flow are likely to be realised.

Issue 8 of Requirement Notice requires explanation as to how the applicant expects to mitigate impacts to PALU on the property as well as PALU on surrounding properties. This would involve plans involved to mitigate the impact of change to overland flow path that reduced [REDACTED] ability [REDACTED] [REDACTED] to now harvest water from a changed overland flow path.

Department of Water must have input in relation to additional Requirement Notice for this issue.

Any Restoration Plan should not relate to the restoration of only the immediate area the subject of this RIDA.

Broader drainage issues now related to CSG induced subsidence that would impede regional drainage must also be addressed.

Regional restoration is essential to achieve “pre-activity” condition of PAA across our Kupunn floodplain.

## CASS PIPELINE AND BUN HYPOCRICY

Condamine Alluvium Substitution Scheme (CASS) and Beneficial Use Network (BUN) are but a smokescreen to be seen to be doing something that is meaningful in a completely non sustainable action that results in irreversible depletion of a vital aquifer.

Issue 4 of the Requirement Notice seeks clarification of the RIDA reference to 'supporting pipeline'. Information in relation to the purpose, location and depth of the supporting pipeline is requested.

Points of relevance to refuse this RIDA application and disallow the supporting pipeline to be joined are listed below:

- 1. Australia is one of the driest continents on earth.**
- 2. Arrow Energy have been allowed by government to pump the Walloon Coal Seam aquifer down.**
- 3. This Walloon Coal Seam aquifer is a part of the Great Artesian Basin (GAB).**
- 4. The water that is pumped out is treated as a 'Waste Product' and substituted back as I believe up to 2.4 times the amount of water given up by landholders taking water from the Condamine Alluvium (CA).**
- 5. Whilst this may temporarily increase the productivity of a handful of landholders, this increased productivity is short lived. Once the Walloons are pumped down, these few landholders go back to taking from the CA.**
- 6. Any attempt to compensate for water leakage from CA into the lower aquifers is therefore only temporary and does nothing to present an ongoing solution.**
- 7. The Walloon Coal Seam Water is thousands of years old so shall not replenish quickly.**
- 8. Minister Ann Leahy's Department of Local Government, Water and Volunteers (DLGWV) has a Strategic Plan 2024-2025.**
- 9. This Strategic Plan clearly outlines 'Improved regulatory outcomes to ensure fair, sustainable and equitable use of water.'**
- 10. The Plan states it is to 'Maximise water supply planning for future sustainability and security for the next generations.'**

Arrow claim "CASS is designed to offset the impact of Arrow's natural gas-related activities on the Condamine Alluvium's groundwater resources".

**This very statement is an admission that gas-related activities do impact the CA.**

The CASS does not fulfill either of the conditions of the Strategic Plan 2024-2028 listed above in points 8 and 9.

CASS is NOT a solution to the ongoing impact to be experienced on the Condamine Alluvium and nowhere do Arrow alert to this. Landholders need to know what damage control measure Arrow and government propose to protect the leakage from the Condamine Alluvium once Beneficial Use Water is exhausted. Remember subsidence and CA leakage continue well after the Tenure Holder has departed.

The supporting pipeline should not be allowed to be hooked up via this tie-in valve. BUN water is achieved for a short period of time and once used leaves further stranded infrastructure.

# ARROW COEXISTENCE CLAIMS

## Appendix I

1. *Arrow claim Surat Gas Project is a move to a cleaner energy system.*

Fugitive methane gas, once Walloons are dewatered, equates to methane freely escaping via hundreds of uncapped bore holes, – the precise locations of which remain unknown. Methane now is measured escaping through fissures, rivers and waterways. Methane is 80 times more damaging to our atmosphere than carbon dioxide. How is this cleaner?

2. *Arrow claim to provide over 600 tera joules per day of gas to the market to meet the needs of over four million homes.*

Unfortunately, these homes they reference are not Australian homes.

3. *Improvement of local roads is claimed to ensure a safer road network.*

The drilling of each CSG well requires an additional 130 vehicle movements per day. This is **not a safer road network** but has meant quiet country roads have become heavy industrial work areas. Heavy vehicle movements continue across our floodplain roads even in wet times and this destroys bitumen road and flood inverts. The increase in people movement has meant the crime rate for our previous isolated communities has alarmingly increased. Multiple fuel and machinery theft is now an ongoing issue.

4. *Progress to Date.*

Arrow claims phase one includes record-high daily gas production. To the detriment of the landholder, extraction of large volumes of gas and water equates to greater than average levels of CSG induced subsidence.

5. *Community Benefits.*

Arrow claims to compensate landholders for using their land. Much of the land being impacted by CSG induced subsidence has been illegally deviated drilled under and deemed to be a preliminary activity. Not a cent is paid to the landholder that has been illegally drilled under.

CSG induced subsidence is more than a 'minor impact' and as such, by definition, is an **advanced activity**. Any advanced activity requires a CCA for these landholders now trespassed under by the deviated well. As no CCA exists, these wells are now **illegal**. To date, Arrow has paid NO compensation to any landholder for impacts created by their resource activities.

**This is not Coexistence.**



## CONCLUSION.

The Arrow CSG mining activity is a short-term industry compared to long-term agriculture enterprises of the Kupunn floodplain region. To maintain certainty for future growth of communities it is essential that the CSG industry does not impair the ongoing productive capacity of the agricultural sector.

CSG induced subsidence across our flat floodplain has now been recorded as 2-3 times that listed in the UWIR 2021. This has occurred in the first 30 months of a 7-8 year period of most rapid water drawdown. Logic concludes that further significant subsidence shall still occur. CSG subsidence impact not only makes farming PAA more difficult but has the real possibility of changing the overland flood path direction.

Once Walloon Coal Seam Water has been extracted, it is not possible to reinject or replace this dewatered aquifer.

The only way to address a CSG subsidence issue is to stop pumping any further Walloon Coal Seam water.

Department of Water (DLGWV) need to be involved in this application due to the impact of depleting the Walloon Coal Seam Aquifer – a part of the Great Artesian Basin.

DLGWV are responsible for ensuring flood waterflow path is not altered.

Any RIDA issued must include strict conditions that there be no interruption or redirection of water used for PALU from the natural path of water flow and for established uses.

**The Kupunn floodplain forms a part of the greater Murray Darling Basin – the preservation of which is paramount.**

Until the science is understood further CSG well development across this region should be halted.

The intent of the RPI Act 2014 was to protect this valuable PAA land and yet government inaction has allowed this land to be jeopardised irreversibly for the sake of a short-term CSG industry. The legislation that does exist must be enforced.

If the drilling of CSG wells is not continued for these highly sensitive PAA areas, then due to the decreased water available, the BUN pipeline **in this region** shall not be required. Hence a Tie-in valve is not required.

For the reasons outlined in this submission, I respectfully request **this RIDA application RPI25/004 Arrow CASS Tie-in be denied.**

[REDACTED]

[REDACTED]