# CUBBIE GROUP ST GEORGE PTY LTD

Po Box 608

St George Qld 4487 Phone: (07) 4625 1100 Fax: (07) 4625 1099

Email: stgeorgeadmin@cubbie.com.au



## CUBBIE GROUP DIRRANBANDI

Po Box 7

Dirranbandi Qld 4486 Phone: (07) 4625 8366

Fax: (07) 4625 8399

Email: dirranadmin@cubbie.com.au

30<sup>th</sup> June 2006

The Committee Secretary

Ms Roxane Le Guen

Senate Rural and Regional Affairs and Transport Committee

Department of the Senate

PO Box 6100

Parliament House

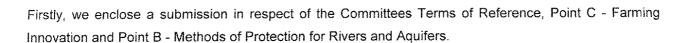
**CANBERRA** 

ACT

2600

Dear Ms Le Guen

Further to our letter of 8<sup>th</sup> May last, we write to the Committee on two counts.



In so doing, we are aware that the closing date for the receipt of submissions to the Committee was 30 November 2005 and we seek the Committee's indulgence to receive our late submission.

Our reasons for seeking the Committee's grace in this respect is that as previously noted, Cubbie has been vilified about its irrigation practices, not only in Committee proceedings by one member but also by that member publicly.

We believe that Cubbie is state of the art and a world leader in the efficient use and conservation of water for irrigation farming. We wish to show the Committee what can be done in respect of these objectives by innovative farming and the favourable consequences that derive from them for the river environment.

We had not intended to make a submission to the Committee and have not done so previously, because our innovative methods and environmental practices are well known in the irrigation community and if anything, we would have expected favourable comparison in the Committee context. The fact that the very opposite has occurred leads us to conclude that at least one member of the Committee has a very bad and wrongful impression of our practices. We feel wrongly accused and are concerned that this wrongful view of us may pollute any Committee finding in respect of us.



Our second purpose in writing is to seek permission for us to make a presentation to the Committee. Ideally, we would like to do this on-site at Cubbie but we realise that the Committee's time commitments may not allow this. We would therefore seek to do a PowerPoint presentation and answer all and every question we can at a Canberra hearing date at the Committee's convenience. It would be our intention to leave open our offer of a full inspection of Cubbie for the Committee.

We submit that by receiving our submission and by way of a presentation allowing us to answer questions before the Committee, that the lessons that Cubbie has learnt in practice and by way of scientific research can be of very considerable benefit to the Committee's work in helping other water users and the environment.

We look forward to your earliest response.

J. J. Grahh.

Yours faithfully

John Grabbe

Joint Managing Director

## **SUBMISSION**

#### **LOCATION AND DESIGN**

We submit that in the Committee's consideration of Terms of Reference B and C, the most crucial aspect of sustainable irrigation farming which governments can assist farmers to address is the location and design of the productive irrigation farm.

#### Location

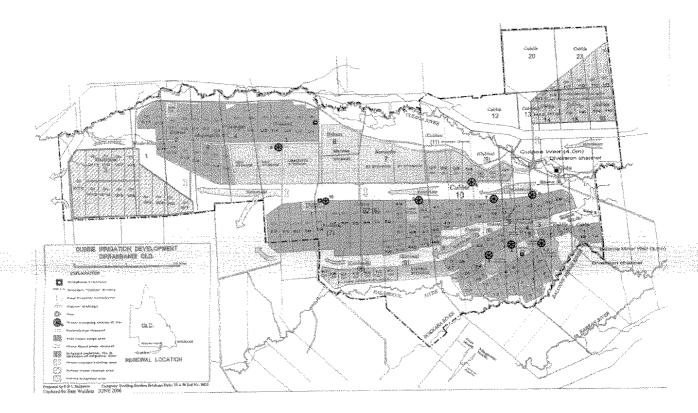
Cubbie Station first commenced operation in 1984. Its founder, the late Des Stevenson, was one of the first Australians to really understand river hydrology, the cyclical nature of dry and wet, flood and drought on the economics of large scale irrigation, and hence the issue of water reliability. Cubbie was therefore situated on the Lower Balonne floodplain between the Culgoa and Balonne Minor Rivers, a location which, subject to legal entitlement, gives the farm the strategic benefit of water licences from both rivers (river extractions) and water harvesting from the floodplain. The establishment of Cubbie Station in its location was in significant part due to the encouragement of then Government policy which sought to open up the Condamine Balonne for irrigated cotton farming.

## Design - Floodplain

Contrary to that claimed by some, Cubbie is **not** designed to capture and divert all flows from the floodplain. In fact quite the opposite is the case.

Sensible irrigators, including the irrigation community on the Lower Balonne, are wise enough to realise that in order to maintain an economically sustainable farming operation in the longer term, the practices of their operation and those of their neighbours must be environmentally sustainable in the short and long term.

The diagram below illustrates the angles and construct of Cubbie's water storage and plantation fields. Notable is that within the floodplain that it occupies between the two rivers, the successive owners of Cubbie have been careful to maintain two natural major channels that allow flood water to flow through Cubbie Station and downstream as it would under natural conditions.



Cubbie has conducted a large amount of research into the integration of its operation within the floodplain over a number of years to ensure sustainable farming practice, particularly in relation to floodplain harvesting.

In 1997 Cubbie was a member of the Lower Balonne Advisory Committee that commissioned the Snowy Mountains Engineering Corporation to advise it in regard to floodplain extractions. All construction and associated extractions in respect of floodplain harvesting by Cubbie is based on this science.

This science shows conclusively that under natural conditions, as floodwater inundates the floodplain, three natural types of consumption of that water occur. These are firstly, infiltration into the soil, which depending upon the level of dryness and the size of soil cracking and fissure on the floodplain may be small in consumption or after a prolonged drought, a very major consumption of floodwater.

Secondly, the natural process of evaporation occurs rapidly on a floodplain. Large, shallow volumes of water evaporate rapidly. Thirdly, floodwater will form into natural residual pools along a floodplain.

Cubbie can show by measurement and by physical inspection that the volume of water that it consumes (harvests) from its floodplain is equivalent to the volume that would be naturally consumed by the three naturally occurring forces. In other words the impact on downstream floodplain flow by Cubbie's floodplain water harvesting is zero.

For the record, Cubbie has for some time voluntarily reported all its floodplain extractions to Queensland Department of Natural Resources on a daily basis. Following a position promoted by Cubbie, all floodplain extractions will be metered under the Queensland Government Water Resource Plan which will

commence later this year. We suggest that all State Governments should be encouraged to so monitor floodwater harvesting.

## **Design – Depth of Water Shortages**

All river extractions are required to be metered in accordance with the requirements laid down by Queensland law. Cubbie conforms to all of these measures and further manages its intake by placing it in various manifestations in its multi-storage facilities, the sole aim of this intensive activity being to minimise evaporation losses.

Storage volume efficiency, and hence the most efficient use of water in an irrigation business, is directly related to the depth of water storages. Depth requires capital, but that capital of course in effect buys back, water that would otherwise be lost to evaporation and that can therefore be shared between productive farming and the environment by lesser than otherwise extractions.

Cubbie has spent tens of millions of dollars since 1984 in deepening water storages. Its storages are on average 170% deeper than the nearest publicly owned dam. More importantly, the following table illustrates the comparison between the Menindee Lakes storages in NSW (managed by the Australian, NSW, Victorian and South Australian Governments) and Cubbie. It shows conclusively that the depth of Cubbie's storages (provided exclusively by private capital) produce much more efficient water storage than the public sector facility.

Menindee Lakes

Capacity Volume	Volume (ML)	Avg. Depth (Metres)
100 %	1,794,000	4.0 m
50 %	897,000	2.5 – 3.0 m
10 %	179,400	2.0 – 2.5 m

Cubbie Station

Capacity	Volume	Avg. Depth	Efficiency Increase
Volume	(ML)	(Metres)	of Cubbie over
-			Menindee
100 %	460,000	5.0 m	25 %
50 %	230,000	6.0 m	100 – 140 %
10 %	46,000	7.0 m	170 – 230 %

The ramifications of this public sector inefficiency in water storage is a benchmark for people concerned about the health of our rural export industries and the health of our rivers. It is also a signpost for future government action that is best placed in perspective by one statistic; Menindee Lakes storage loses in evaporation the equivalent of 80% of <u>all</u> of Queensland's total average water extractions, each and every year.

## Design - Quicker Use of Extracted Water

Cubbie Group announced earlier this year that it planned to increase the irrigated proportion of our total land area from 20,000 to 30,000 hectares. In planning this fifty per cent expansion of irrigation area, Cubbie will not be increasing its water extractions from either river or floodplain.

Whilst the Cubbie Group's total water storage capacity totals 537,000 mega litres, of which 462,000 mega litres are at the actual Cubbie Station at Dirranbandi, the storage fills to full capacity on average only once every ten (10) years. Such is the nature of wet, dry and drought years and what our critics downstream often do not realise is that when they have little water, so too do we.

Our rationale then is simple. Given the cost and relative scarcity of water, it is far more efficient to have land able to be used for irrigated crop in those years when there is sufficient water able to be extracted and used in that season, before a significant proportion of it evaporates prior to the next season's usage on what might well be a smaller plantation.

In other words Cubbie has subordinated the value of land to the value it places on water. It is yet another measure of Cubbie's investment in sustainable farming. We believe that the Committee should consider what Government may be able to do to encourage such an approach in broad acre irrigation more generally.

#### SCIENCE AND MONITORING

As mentioned earlier, all of Cubbie's river extractions are strictly metered according to law. We voluntarily report all extractions from the floodplain on a daily basis to the Queensland Government authorities.

The river health of the Lower Balonne is also closely monitored. As part of the local irrigation community's "Smartrivers", Cubbie Station has been involved in monitoring the river system health indices for six years. The Lower Balonne is arguably one of the most stringently monitored river systems in Australia in respect of river health.

Those indices are fish stocks, water quality, macro invertebrates and riparian zones and sampling occurs twice yearly. The measures and procedures used are agreed with the State Government's Department of Natural Resources and is based on accepted river science.

We recommend that if State and Federal Governments are sincere in their concern for river health, then they should provide resources to allow local communities across the continent to follow suit.

# SIZE AND ECONOMIES OF SCALE

The Cubbie Group has two farms, one at Dirranbandi and the other at St George. The following distinguishes between 'Cubbie Station' at Dirranbandi and Cubbie Group which is both farms.

The Cubbie Station property size is 80,000ha of which 37.5% is remnant vegetation. The Group's total area currently developed for irrigation is 20,000ha developing to 30,000ha.

The value of the Group's two properties is in excess of \$400m. We employ 150 equivalent full time staff.

Our primary production is cotton and as such by land mass we account for about 5% of the Australian cotton industry (as a Group) in an average year. We generate an average production value of \$100m per annum, all of which is exported, equating to approximately 6.7% of the total value of Australia's cotton exports.

We account for 15% of extractions in the Condamine-Balonne system which is 0.2% of the natural Murray flow, and 0.33% of the total of all extractions in the Murray Darling Basin. To put Cubbie's extractions in context, there is the equivalent of 300 other "Cubbie's" (in consumption terms) in the Murray Darling Basin system.

Cubbie's ability to generate best practice results and increasing water efficiency is directly related to the capital input by Cubbie's investors. In this respect we note that manufacturing or service industry mergers and takeovers aimed at achieving economies of scale are generally welcomed by governments, if not protected against consumer and competitor objection.

By contrast, the last lament of Cubbie's critics when their various accusations are disproven by reference to scientific, technical or engineering material, is simply to utter "Oh yes ..., but Cubbie's just too big". In other words despite the demonstrable scientific proof of Cubbie's water efficiency and sustainable farming practices its critics resort to the emotive rather than rational argument.

We submit that the Committee should not be swayed by emotive arguments untested or disproven by rational research based findings.

#### SUMMARY

It is clear that at least one member of your Committee has a great misunderstanding of the nature of the Cubbie operation and its environmental sustainability.

We seek the Committee's agreement to receive this submission and as well allow a presentation by our managers and advisors to the Committee. We take this opportunity to repeat our invitation to the Committee to inspect Cubbie Station. Cubbie has invested tens of millions of dollars in capital works and many hundreds of thousands of dollars in scientific research and monitoring to ensure that its irrigation practices are world's best practice. We believe that our experience can assist the committees work in the national effort in respect of water and we would appreciate the opportunity to share this with the committee by way of a formal presentation.

We look forward to your response.