

WIDE BAY BURNETT CONSERVATION COUNCIL INC.

Applicant

BURNETT WATER PTY LTD (ACN 097 206 614)

Respondent

AFFIDAVIT OF DAVID CARL KREUTZ

(Form 20)
(Order 14 rule 2)

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Filed by the Applicant

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On the 2nd of December 2008, I, David Carl Kreutz, fisheries consultant, of 65 Belli Oak Tree Road, Belli Park, in the State of Queensland say on oath –

Survey of Paradise Dam Fishway

1. I was asked by the Wide Bay Burnett Conservation Council Inc (“WBBCC”) to coordinate a survey of the operation of the fishways on the Paradise Dam (“the survey”). The survey occurred over 6 days from 25 November to 1 December 2008 from publicly accessible land close to the dam wall from which the operation of the fishways can be observed. This affidavit has been prepared on completion of the survey to allow it to be filed on 2 December 2008 for use in a directions hearing on 5 December 2008.
2. The survey is to be conducted by myself and the following people:
 - (a) Carolyn May Robins, fisheries scientist, of 65 Belli Oak Tree Road, Belli Park, in the State of Queensland;
 - (b) William Booth of 12 Robinson Street, Boonooroo Point, in the State of Queensland;
 - (c) Gwen Booth of 12 Robinson Street, Boonooroo Point, in the State of Queensland;
 - (d) Victor Lewellyn Hill, retired, of ‘Benyule’ 192 Happy Jack Creek Rd Cooroy, in the State of Queensland;
 - (e) Helga Ruth Hill, retired, of ‘Benyule’ 192 Happy Jack Creek Rd Cooroy, 4563 in the State of Queensland;
 - (f) John Seymour Williams, semi retired, of 11 Freshwater Street, Scarness Hervey Bay, in the State of Queensland.

Location map

3. The Paradise Dam is located on the Burnett River approximately 80 km southwest of Bundaberg in Queensland. **Annexure DCK-1** to this affidavit is a map showing the location of the dam. The map is taken from the Environmental Impact Statement prepared for the dam in September 2001 by Burnett Water Pty Ltd. The dam was in fact constructed on the site marked as the “Proposed Burnett River Dam”. The location map was downloaded on Monday 1st December 2008 from the SunWater website at http://www.sunwater.com.au/pdf/BurnettWater-Archive/paradise_eis_fig03-01.pdf

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Photographs and diagrams of fishways

4. I obtained a series of photographs of the Paradise Dam showing its general structure, spillway and the upstream and downstream fishways taken by Arkin Mackay in August 2006 from her website at <http://www.stoppress.com.au/damtour/paradise-dam/>. These pictures are images 1, 2 and 4-9 of **Annexure DCK-2** and labeled based on my knowledge of the structure of the dam and the fishways. According to the notes on her website, the upstream fishway was not operating when the photographs were taken.
5. Image 3 of **Annexure DCK-2** is a picture showing a close-up of the entrance to the downstream fishway taken by Roger Currie on 11 May 2008. The entrance is the dark vertical slot in the middle of the rectangular concrete structure. The large grill and structure above it is part of the main water outlet tower. The downstream fishway was not operating when this picture was taken as the water level is approximately 1 m beneath its entrance.
6. On 23rd August 2008 I visited Paradise Dam to view a bloom of the exotic aquatic weed, *Salvina*. During that visit I saw no movement of the upstream fishway during that 2 hour visit and it appeared not to be operating. I took a picture of the upstream fishway hopper in the hopper hoist shown as image 10 of **Annexure DCK-2**.
7. On 27th and 28th of November 2008 I took a series of photographs of the Paradise Dam wall, its spillway, the upstream fishway and the downstream fishway. On those days we observed officers of the Queensland Department of Primary Industries and Fisheries (DPIF) conducting sampling and catch-and-carry operations while the upstream fishway was not operating. William Booth, Gwen Booth and Helga Hill, have also taken digital images of officers of the DPIF conducting sampling and also digital images of the entrance of the downstream fishway, these images are labeled to reflect their origin and the dates they were taken. Copies of these photographs are annexed to this affidavit as images 11-16 of **Annexure DCK-2**. I have labeled each of the pictures to explain their content.
8. **Annexure DCK-3** provides a diagram of the fish hopper and the track used in the upstream fishway, which I obtained from the website of SunWater at http://www.sunwater.com.au/burnettwater_environmental_fish_passage.htm. The upstream fishway operates by attracting fish into the caged “hopper” using flowing water then periodically lifting the hopper over the dam wall along the tracks and lowering it into the dam reservoir where the fish are released.
9. **Annexure DCK-3** also provides a series of four diagrams of the entrance and pipes comprising the downstream fishway, which I obtained from the website of SunWater at http://www.sunwater.com.au/burnettwater_environmental_fish_passage.htm.
 - (a) Diagram “A” shows whole downstream fishway as a cross-section of the dam wall.

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- (b) Diagram “B” shows a more detailed view of the entrance to the downstream fishway and the trapping chamber.
- (c) Diagram “C” shows a more detailed view of the middle section of the downstream fishway and the pipes through which fish are intended to be flushed as the trapping chamber is emptied.
- (d) Diagram “D” shows a more detailed view of the final section of the downstream fishway where fish are intended to be released via an exit chute into the downstream river.

10. The downstream fishway operates as follows. Fish are intended to be attracted by flowing water to enter a vertical slot in a trapping chamber attached to the dam wall in the dam reservoir adjacent to the water tower for the main water outlet. The water in the chamber is intended to be periodically lowered to flush the fish out of the chamber and through a series of pipes to be released on the downstream side of the dam wall via an exit chute.

Results of survey of Paradise Dam

11. **Annexure DCK-4** to this affidavit are the logsheets and Excel spreadsheet summaries of observations made during the survey of the operation of the upstream fishway and the downstream fishway completed to this point. The total time for which observations were made of the operation of the dam was 169.55 hours. In summary, these observations indicate that during the period of the survey:

- (a) At the commencement of the survey on 25th November 2008 the upstream fishway was not operating for approximately 7 hours and DPIF officers were conducting catch-and-carry transfer of fish from beneath the dam wall to the dam reservoir. During this operation the officers netted fish in the trapping chamber of the upstream fishway and transported them in a large red tub in the back of a white ute. The tub was then lowered into the dam reservoir.
- (b) At the conclusion of the survey on 1st December 2008 the upstream fishway did not operate for 5 hours but DPIF officers did not conduct catch-and-carry operations.
- (c) For the remainder of the survey (approximately 158 hours of the total survey time of 170 hours) the upstream fishway was operating on cycles of approximately 3 hrs in the hopper chamber (during which the hopper sat in the trapping chamber with the water attractant flowing) and 20 – 30 minutes to transfer. We observed 32 automated cycles and the upstream fishway operated night and day.
- (d) The downstream fishway did not operate at all during the survey and the water level was observed to be approximately 1 m beneath the entrance to it.

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(e) No water was released from the main dam water outlet works during the period of the survey. Some water was released through the upstream fishway as attractant flow.

History of operation of downstream fishway

12. **Annexure DCK-5** is a table and graph of water levels in the reservoir of the Paradise Dam since that dam commenced operation in November 2005 until 27 November 2008 compared to the operating range of the downstream fishway. The graph shows that the water levels in the reservoir have not reached the operating range of the downstream fishway at any time since the dam commenced operation. This annexure was prepared by Mr Stephen Burgess based on water level data obtained from the SunWater website at www.sunwateronline.com.au and creating a simple spreadsheet. As a fisheries consultant I am myself familiar with creation of such graphs. I have checked the data and the graph and agree they are correct.

Declaration

13. All the facts affirmed to in this affidavit are true and correct to my knowledge and belief except as stated otherwise. In preparing this affidavit I have relied on my own knowledge but also on information provided by the other members of the survey listed above.

Affirmed by)
David Carl Kreutz)
at this)
2nd day of December 2008)
before me:

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AFFIDAVIT – CERTIFICATE OF COMPLIANCE
(Form 20A)
(Order 14, rule 5A)

I, Jo-Anne Bragg, Principal Solicitor, certify to the Court that the affidavit of David Carl Kreutz sworn on 2nd of December 2008 on behalf of the applicant complies with Order 14, rule 2 of the Federal Court Rules.

Dated: 2 December 2008

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Jo-Anne Bragg (Principal Solicitor)