

Author: Peter Siemsen
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Department of
Natural Resources and Mines

20 March 2015

Jeff Benjamin
North Australian Water Strategies
PO Box 1491
MAREEBA QLD 4880

Dear Jeff,

Watercourse determination at McLeod Creek, Lot 170 on HG664

I refer to the site inspection conducted at Lot 170 on Plan HG664 on 13 March 2015 by departmental officers Peter Siemsen and Timothy Gale to determine the status of a water course or drainage feature under the *Water Act 2000*.

Two sites were inspected, one upstream and one downstream from the location you provided:

- Your location - Easting 307325; Northing 8110230; Zone 55 (SITE A).
- Downstream - Easting 306950; Northing 8110614; Zone 55 (SITE B).
- Upstream - Easting 307353; Northing 8109868; Zone 55 (SITE C).

After assessment against the criteria for a watercourse I have determined that the feature at both SITE A and C is a drainage feature and is not a watercourse as described under section 5 of the *Water Act 2000*. Accordingly, authorisation is not required under the *Water Act 2000* to construct a dam at or above this location or utilise captured water for any purpose/s.

An assessment was also completed at the location of the vehicle crossing (SITE B), downstream from SITE A. At this location, McLeod Creek is a watercourse as described under section 5 of the *Water Act 2000*. Accordingly, authorisation is required under the *Water Act 2000* to construct a dam at this location. Authorisation is required for any proposed use of water from the watercourse at this location for any purpose other than stock and domestic.

Please find attached a statement of reasons regarding these decisions.

28 Peters Street Mareeba Qld 4880
PO Box 156 Mareeba
Queensland 4880 Australia
Telephone + 61 7 4048 4850
Facsimile + 61 7 4092 2366

ABN 59 020 847 551

Please note that there may also be other legislative requirements under other legislation (for example: *Water Supply (Safety and Reliability) Act 2008*, the *Fisheries Act 1994* or the *Vegetation Management Act 1999*).

To obtain co-ordinated advice on the above legislative requirements, you will need to contact the State Assessment and Referral Agency (SARA). The Cairns SARA office can be contacted on (07) 4037 3209.

For initial vegetation advice, you can contact Kattina Ernst of this department on phone number (07) 4048 4730.

If you have any further queries, please do not hesitate to contact Peter Siemsen on phone number (07) 4048 4864.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Peter Siemsen', with a long horizontal flourish extending to the right.

Peter Siemsen

Leader (Water Resource Management)

28 Peters Street Mareeba Qld 4880
PO Box 156 Mareeba
Queensland 4880 Australia
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Statement of Reasons

Under the *Water Act 2000* (Water Act) all rights to the use, flow and control of all water in Queensland are vested in the State. An important part of administering the Water Act is determining the State's jurisdiction over water.

Request for watercourse determination at McLeod Creek, Lot 170/HG664

This Statement of Reasons is given in accordance with the Water Act in respect of the decision made in response to the above request.

Decision

In accordance with the Water Act definitions of watercourse and drainage feature, I have determined that McLeod Creek at the proposed dam site (SITE A) is not a watercourse as shown on the attached plan.

In making this decision, I considered it appropriate to complete a determination on the same feature at the vehicle crossing downstream of SITE A. I have determined that McLeod Creek at the vehicle crossing is a watercourse as shown on the attached plan (SITE B).

This Statement of Reasons is advice of my decision and the reasons for the decision.

Evidence on which those findings were based (material considered)

In making my decision, I had regard to the following material:

- The request for a watercourse determination made by Jeff Benjamin of North Australian Water Strategies on 11 March 2015.
- The Water Act, sections 5, 5A, and Schedule 4 – Dictionary.
- The Water Regulation 2002, Part 1, Division 2.
- Site inspection by departmental officers Peter Siemsen, and Timothy Gale carried out on 13 March 2015 at the following locations along McLeod Creek:
 - SITE B – at a vehicle crossing, UTM coordinates: Easting: 306950 m and Northing: 8110614 m, Zone 55.
 - SITE C – upstream of the proposed dam SITE A, UTM coordinates: Easting 307353; Northing 8109868; Zone 55.
- Aerial imagery obtained from departmental GIS databases and accessed via the Queensland Globe on the 13 March 2015 for SITE A (UTM coordinates: Easting 307325; Northing 8110230; Zone 55) and other sites visited 13 March 2015.
- The map "Australia 1:100,000 Topographic Survey", Series R631, Sheet 7963, Edition 2-AAS.
- Smart Map for Lot 170 on Plan HG664 generated on the 18 March 2015.

Findings on material questions of fact

In making my decision, I made the following findings of fact:

- Access to the SITE A was limited by wet weather and boggy ground. McLeod Creek was inspected upstream of the proposed dam site (SITE C) as indicated on the attached plan.
- There were only limited geomorphological indicators of flow at SITE C. The feature was observed as a narrow eroded gully with no benching, terraces or other features that would normally define a watercourse.
- Ecological indicators of flow observed at SITE C were limited to a couple of widely spaced and stunted river gums and one pandanus. Other vegetation present was similar to the surrounding vegetation but may have been denser given some protection from fire afforded by the gully.

- At SITE B geomorphological features typical of a watercourse were observed including: a low flow channel and high flow channels where water would normally flow; in stream islands, benches and bars; continuous well defined banks either side of the low flow channel; terraces either side of the low flow channel and above the confluence of the two tributaries flowing to McLeod Creek at this location.
- A well-established riverine environment was observed at SITE B which consisted predominantly of river gums, pandanus, small to medium sized tea trees, and sedges.
- Additional information in support of the determination at SITE B included satellite imagery with evidence that flows, or a water hole may persist for a period of time after some rainfall events.
- The features which define the watercourse at SITE B begin to diminish travelling upstream towards SITE C. Given the gradual change, it was considered appropriate to use a well-defined feature as the location above which McLeod creek becomes a drainage feature. The adopted feature was where the well-defined outer bank above the terrace between two tributaries was contiguous with the outer bank on the southern side of McLeod Creek, approximately located at UTM coordinates 307201 E; 8110420 N; Zone 55 (SITE D on the attached plan).

Reasons for the Decision

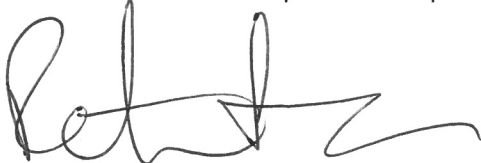
I made the decision to determine the feature at the proposed dam site (SITE A) not to be a watercourse as defined in the Water Act for the following reasons:

- The feature is formed by the concentration of overland flow water during and immediately after rainfall events; and
- The feature is likely to only flow for a short duration after a rainfall event; and
- There were only a very limited number of geomorphological features and ecological indicators typical of watercourses in the local area.

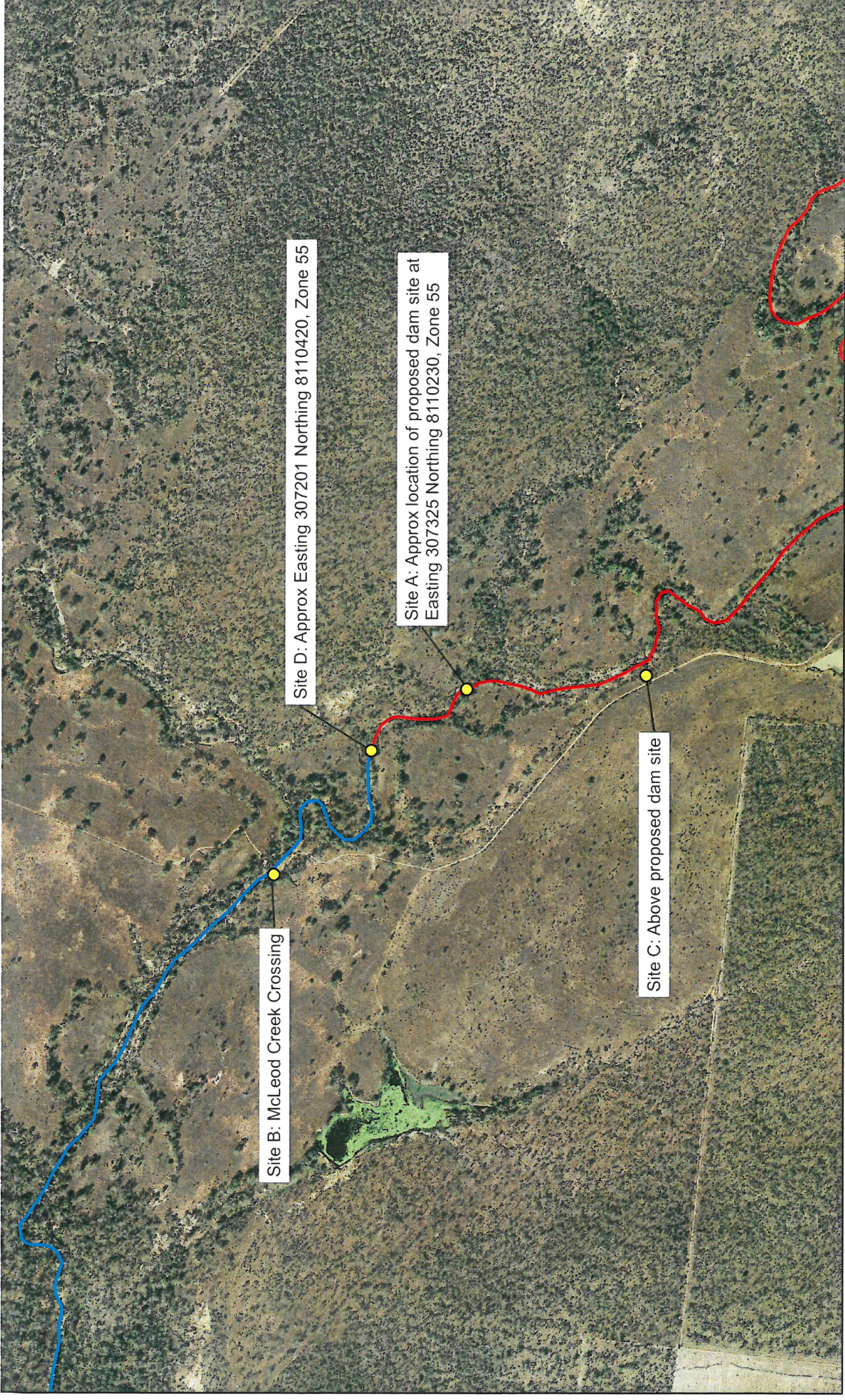
I made the decision to determine the feature at the vehicle crossing on McLeod Creek (SITE B) to be a watercourse as defined in the Water Act for the following reasons:

- Geomorphological features relating to prolonged or frequent flow events were observed; and
- Satellite imagery suggests that either flowing or ponded water is present for extended periods of time; and
- An established riverine environment was observed.

These decisions are in accordance with the definitions provided in the Water Act and are consistent with departmental procedures.



Peter Siemsen
Leader (Water Resource Management)



Legend

- Watercourse
- Drainage feature

Image base: 2011 orthophoto (50cm)

Watercourse determination undertaken at Lot 170 on HG664



Scale: 1:10,000

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