Fact Sheet

Gin Gin Local Drainage Upgrades – Campbell Street Conceptual Design

Description of existing issue

Campbell Street north of Bundaberg-Gin Gin Road is a drainage area of interest that was highlighted and confirmed through the Kolan River and Gin Gin Creek Flood Study (GHD, 2014).

Several properties on Campbell Street have historically experienced overland flow flooding following intense rainfall. A local catchment to the south of Bundaberg-Gin Gin Road, generates a significant amount of overland flow following very intense rainfall. This flow is conveyed by the grassed table drains on the southern side of Bundaberg-Gin Gin Road towards the low point opposite the Campbell Street intersection. Minor flows are conveyed from south to north under Bundaberg-Gin Gin Road via a small 375 mm diameter stormwater pipe which discharges to the Campbell Street verge. Flows in excess of the capacity of this pipe overtop the road and travel northwards along Campbell Street and through several private properties (which are at approximately the same level as Campbell Street). There is currently no stormwater drainage in Campbell Street.

Flood depths within private properties during the existing 1% AEP overland flow flood event range between 0 m and 0.15m, with peak velocities of approximately 0.8 m/s (most velocities are in the range of 0.3 – 0.5 m/s). The flooding within these private properties is classified as “low hazard” with respect to the QRA flood hazard categories outlined in the Kolan River and Gin Gin Creek Flood Study (GHD 2014).

Proposed drainage improvements

At the request of BRC, GHD have identified one potential solution to the Campbell Street drainage issue. BRC requested that the upgrade have the capacity to cater for the 1% AEP flood event.

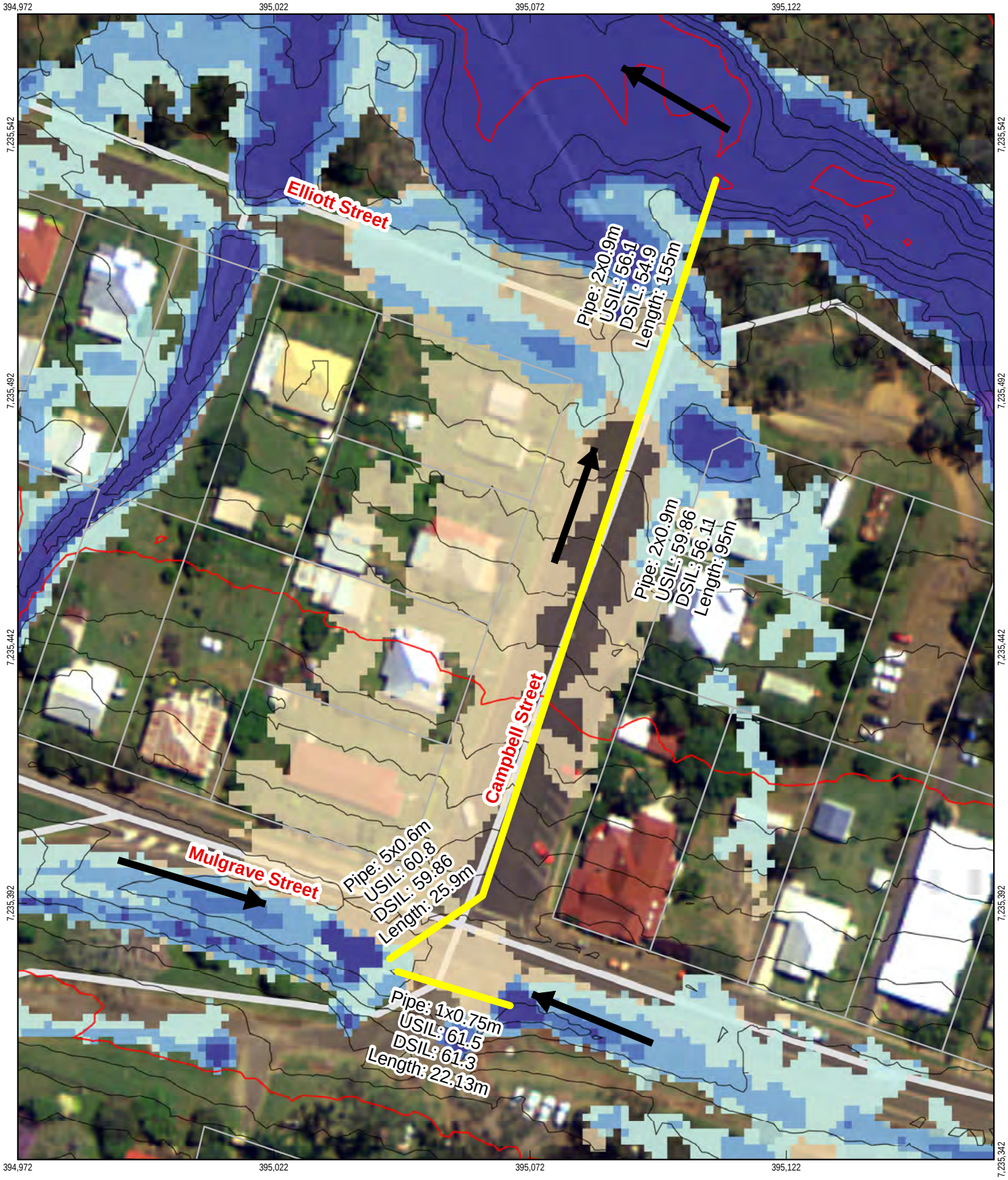
The conceptual upgrade shown on the following page includes the installation of 2 x 900 mm diameter stormwater pipes (total length of approximately 155 m) along the centreline of Campbell Street, discharging to the waterway to the north of Elliott Street. Smaller diameter pipes (5 x 600 mm diameter) are proposed under Bundaberg-Gin Gin Road to minimise the potential for any clashes with utilities in the area. The proposed upgrade also includes an ungraded 750 mm diameter pipe under the driveway / service road on the southern side of Bundaberg-Gin Gin Road opposite Campbell Street. The existing table drains on the southern side of Bundaberg-Gin Gin Road would be deepened and widened to better direct flow to the new stormwater pipe inlets.

Preliminary hydraulic modelling of the upgrade shows that the works would be successful in eliminating the overland flow issue along Campbell Street and adjacent private properties in the 1% AEP overland flow flooding event.

Where to from here?

A component of the Floodplain Risk Management Study is to highlight drainage investigation areas for Council consideration. This local drainage area will be reviewed as part of Councils future capital works program for major drainage upgrades. Part of this review includes a merit based assessment and prioritisation against other drainage projects in the region for Council to consider in future budgets. Further detailed design work would then be required to refine and optimise any upgrade.



LEGEND

- Contour
- Index Contour
- Proposed Drainage Upgrade
- Road
- Flow Direction
- Property Boundary
- Pre-Upgrade 1% AEP Overland Flow Extent (60-Minute Duration)

Post-Upgrade 1% AEP Overland Flow Depth (60-Minute Duration)

- 0 - 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- > 0.3

1:1,000 @A4

0 12.5 25

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

Bundaberg Regional Council
Kolan River and Gin Gin Creek
Floodplain Risk Management Study

Proposed Campbell Street Drainage Works

Job Number	41-27710
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Date	15 Jul 2014

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