Fact Sheet

Gin Gin Local Drainage Upgrades – Proposed King St Drainage Upgrade

Description of existing issue

As indicated by the results of the local flooding assessment contained in the Kolan River and Gin Gin Creek Flood Study (GHD, 2014), properties on King Street and Aplin Terrace have the potential to experience overland flow flooding following very intense rainfall.

An external catchment of approximately 8 ha conveys surface runoff to the eastern end of King Street and the sag in Aplin Terrace. Most of this flow is intercepted by the shallow table drain on the southern side of King Street and is directed to the west, where it overtops Aplin Terrace near the intersection of Trulson Street and enters the nearby waterway. The small amount of flow that is not intercepted overtops King Street and joins with surface runoff from the part of the catchment north of King Street. Flows that aren't conveyed by the existing 375 mm diameter stormwater pipe in that area overtop Aplin Terrace and flow through private properties on the western side of the road before entering the waterway at the rear of those properties.

This overland flow has a maximum depth of 0.5 m (average depth of approximately 0.25 m), and a maximum velocity of 0.8 m/s (average velocity of approximately 0.4 m/s) in the 1% AEP flood event. 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).

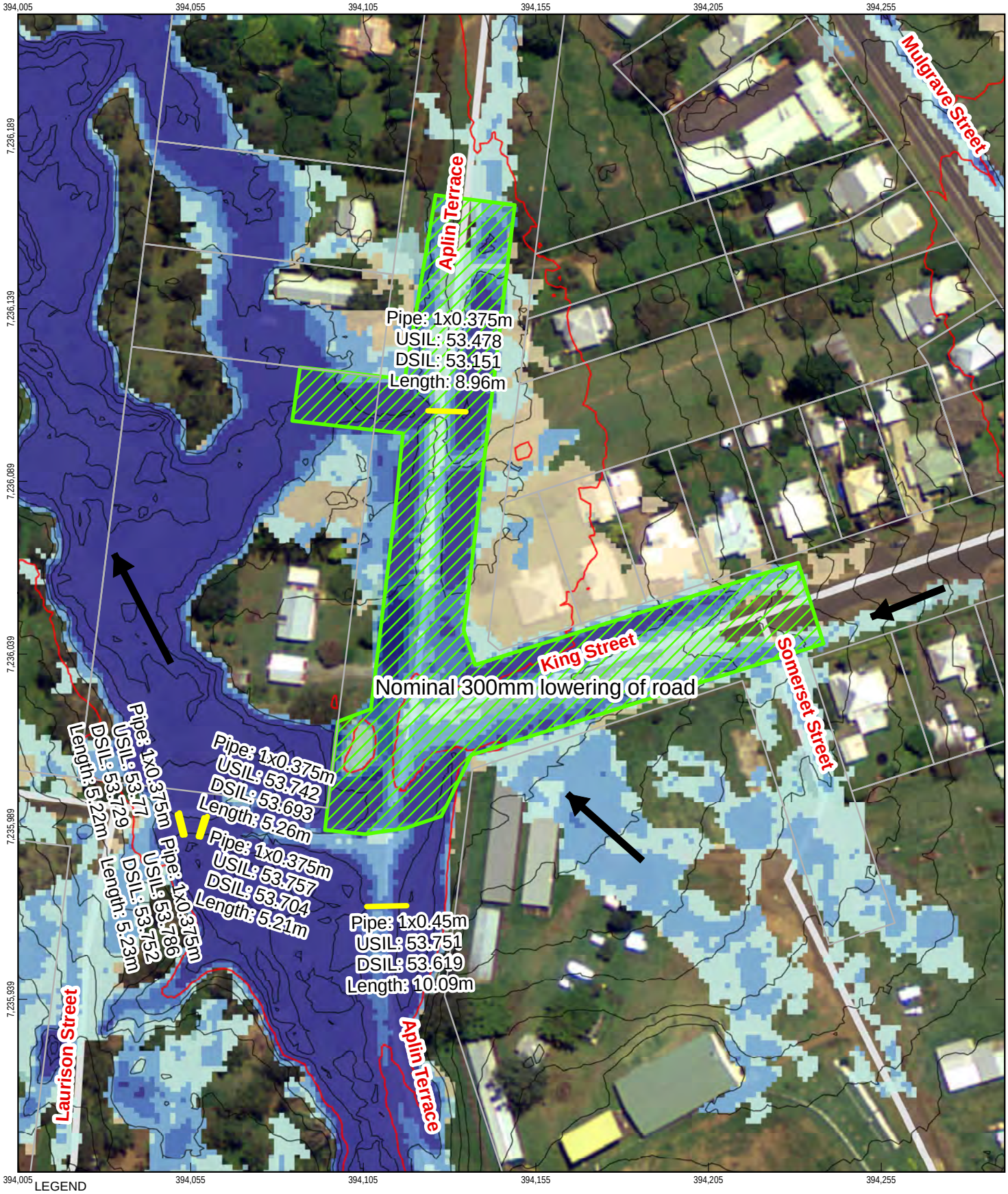
Proposed drainage improvements

The conceptual upgrade shown on the following page indicates the approximate extent of regrading of King Street and Aplin Terrace. Within this area, the existing road and 375 mm stormwater pipe would be lowered by a nominal 0.3 m to improve the flow carrying capacity of the roadway and adjacent table drains, and reduce ponding on the upstream (eastern) side of Aplin Terrace. In association with these works, the existing drainage path downstream of the sag in Aplin Terrace would also be deepened by 0.3 m to accommodate the altered flow from the roadway. An easement would be required over this area (dimensions of approximately 15 x 25 m),

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

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

Post-Upgrade 1% AEP Overland Flow Extent

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

1:1,500 @A4

0 12.5 25

Metres

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

N

GHD

BUNDABERG REGIONAL COUNCIL

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

Proposed King Street Drainage Upgrade

Job Number	41-27710
Revision	A
Date	15 Jul 2014

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