



PROJECTS

HYDROLOGY

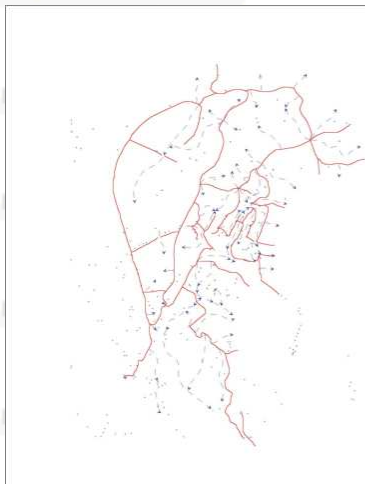
Development of a surface water run-off model, iron ore processing and shipping facility, Major iron Ore miner

Sw8

A surface water run-off prediction model was required of a long established iron ore processing, beneficiation and shipping facility. The purpose of the model was to establish the volumetric run-off contributions from a series of sub-catchments into an adjacent harbour area. Certain subcatchments had legacy issues from mineral processing/ beneficiation operations, industrial processes (including equipment maintenance and fuel storage), tailings storage etc, and the Client wished to be able to identify specific contaminant loadings at individual outfalls to the harbour.

A digital elevation model was prepared by Dli to produce 2m AHD contours across the site. This data was reprocessed to provide 1m AHD contours to enable sub-catchment areas and divides to be identified. However, modification of site internal drainage has occurred, with concentration at a storage pond for treatment at a scoop clarifier and thickener before discharge. In addition, post the available data, extensive earthworks had also substantially modified the landform such that the DEM was no longer valid. It was therefore necessary to commission a new fly-over to obtain a current orthophoto and DEM from local contractors.

The run-off model was constructed and run-off coefficients for each catchment were estimated based on monitored flow-rates at specific discharge points.



Hydrosolutions Pty Ltd
U14/14 Whyalla Street
Willetton
Western Australia 6155
Tel: (+61 8) 9457 5448
Fax: (+61 8) 9457 4293
Mob: 0403 021 533

E-mail: stuart.jeffries@hydrosolutions.com.au
Website: www.hydrosolutions.com.au