

APPENDIX 5 DESKTOP STORMWATER STUDY

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THE FOUNDATIONS PORTLAND

WILLIWA ST, PORTLAND NSW 2847



THE
F O U N D A T I O N S
P O R T L A N D, N S W

Monday, 14 January 2019

INTRODUCTION

This report aims to provide information on the behaviour of stormwater running through Saville Park into the former Portland Cement Works site. The subject site is a large irregular shaped parcel of land located north of Portland Town Centre. The site has a total area of approx. 86ha and a frontage of 1.15km to Williwa St.

This report has been prepared in response to Lithgow City Council's concerns of stormwater overflow from Saville park and the potential to cause flooding within the site, between the admin building and boiler house as well as to the east of the workshop building known as the Heritage Precinct.

Although there may have evidence of flooding of the Heritage Precinct in the past, this report aims to outline the measures implemented to manage the overland flow such as a stormwater bund and retaining walls have been provided to deal with the potential overflow issue.



Figure 1 – Site location

LOCAL TOPOGRAPHY

As outlined in Figure 2 below, the site is situated at the natural low point of the town. During heavy rain events, stormwater has the potential to exceed the capacity of the council's pipework under Williwa St creating an overland flow across Williwa St adjacent to Saville Park.

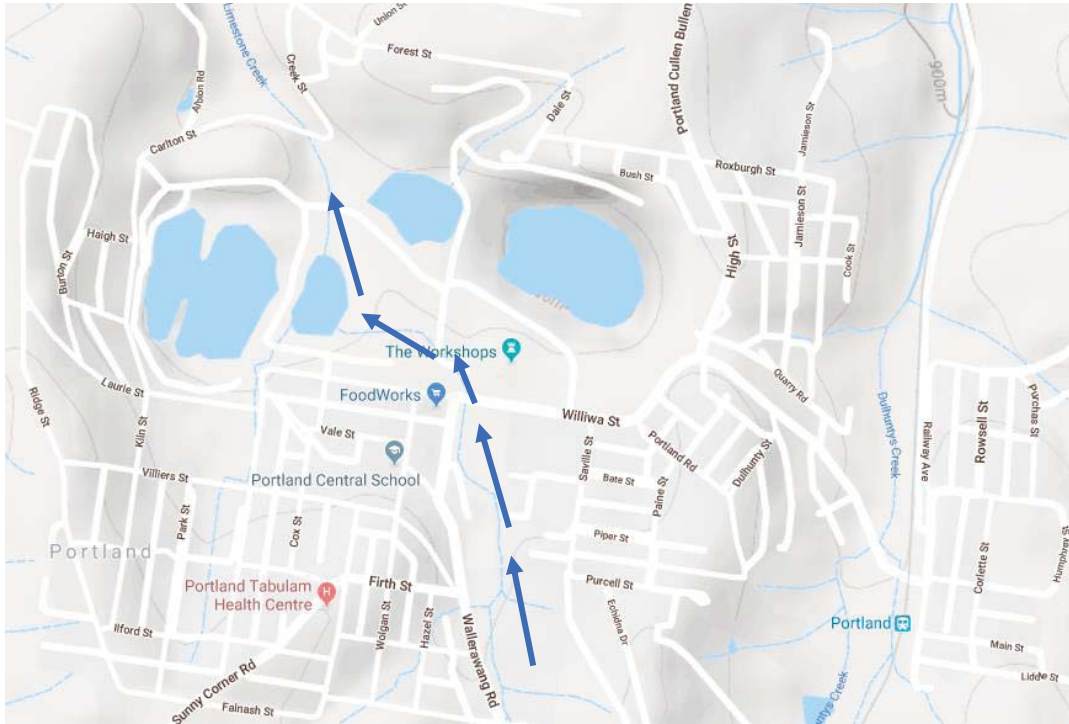


Figure 2 - Topography

STORMWATER CONTROL MEASURES

To manage the impact of the overland flow from Saville park into the Heritage Precinct, Portland Cement company constructed a stone planter box and installed a bund to direct overland flow downhill towards the drainage channel through the site to eventually flow into limestone creek.

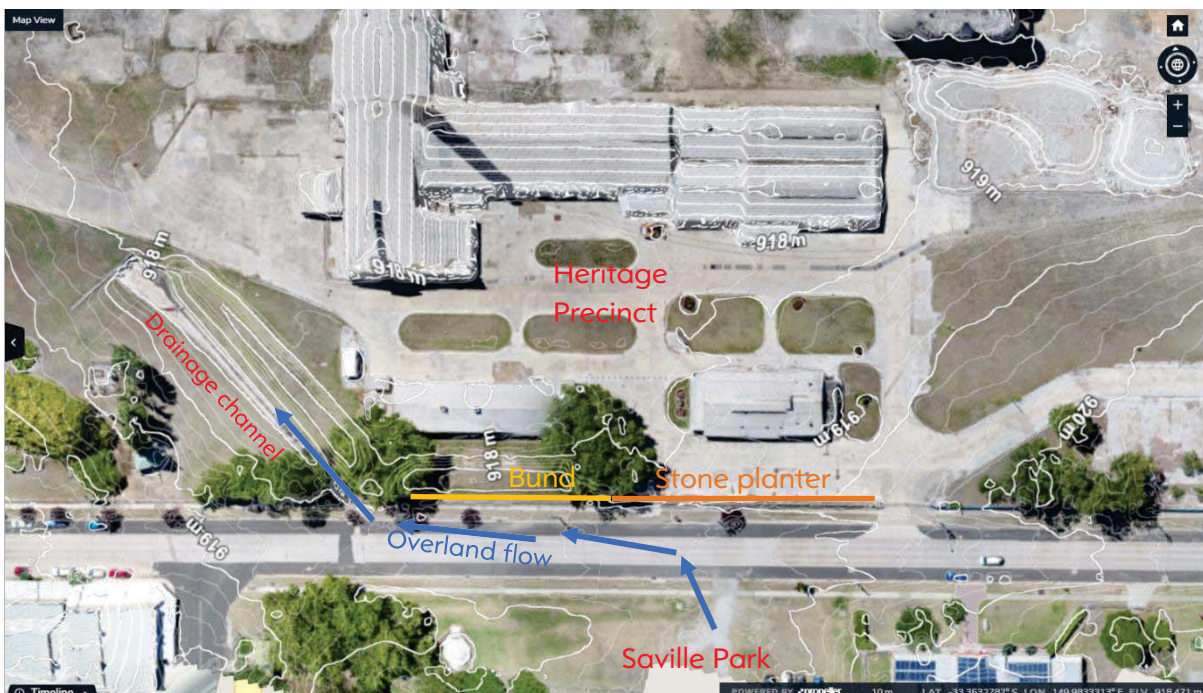


Figure 3 – Aerial Contours



Figure 4 – Stone Planter Wall



Figure 5 – Earth Bund



Figure 6 – Drainage Channel Looking North Limestone Creek

CONCLUSION

Anecdotal evidence points to some historical overland flow and potential flooding in the heritage precinct area.

Works were carried out by the operators of The Portland Cement Works Site to control overland flow and mitigate the risk of flooding

It is evident that the construction of the planter box and installation of the earth bund has successfully managed the overland flow into the site and the heritage precinct.

The Foundations

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