

Appendix 4

Stormwater Strategy

24th February 2016

Goodman Property Services (Aust) Pty Ltd

Level 17
60 Castlereagh Street
Sydney NSW 2000

Attention: William Tait

VIA EMAIL: William.Tait@goodman.com

Dear William

Anella Avenue, Castle Hill: Stormwater Diversion Strategy

Further to recent discussions and correspondence on the proposed development of 12–20 Anella Avenue, Castle Hill please find below a summary of the proposed stormwater diversion works required to develop the site.

Our investigations of the site were carried out based on information received from The Hills Shire Council and survey provided by Cardno Hard & Forester survey.

Existing Stormwater Drainage

Currently there are two stormwater easements draining through the site.

One is located within the entrance driveway between 16 and 18 Anella Avenue. This easement is 4m wide and drains through the existing carpark into Cattai Creek to the east.

The second easement is located immediately to the north of 20 Anella Avenue. This easement is 7.82m wide and drains from Anella Avenue to the east into Cattai Creek.

At the time of writing this letter the dimensions of the stormwater infrastructure within these easements is unknown. This will need to be confirmed through additional detailed survey.

Proposed Stormwater Drainage

As part of the development of 12-20 Anella Avenue it is proposed to divert the two existing stormwater drainage easements. Refer to the attached SKC001 for a plan indicating the Proposed Stormwater Diversion. Note proposed pipe diameters have been assumed for this stage and will need to be confirmed with detailed hydraulic analysis and more detailed survey.

For the northern easement which drains through the driveway of 16-18 Anella Avenue it is proposed to construct a sag kerb inlet pit within Anella Avenue at the location of the easement within Anella Avenue. This pit will then drain via a new 1650mm diameter stormwater pipe which will drain around the proposed buildings and discharge into Cattai Creek via a headwall outlet.

For the easement within 20 Anella Avenue it is proposed to install two 3000mm wide by 1200mm high box culverts immediately to the west of the proposed Building H within 20 Anella Avenue. These dual box culverts are proposed to drain along the southern boundary of 20 Anella Avenue and discharge into Cattai Creek via a headwall outlet.

Indicative Construction Costs

Based on experience installing similar sized stormwater infrastructure around Sydney an indicative construction cost associated with the diversion works would be:

Northern Easement (1650mm diameter pipes)

Includes approx. 180m of 1650mm diameter pipes, 3 pits, 1 kerb inlet pit and 1 headwall and removal of existing pipework within easement

Indicative Cost - **\$750,000**

Southern Easement (2 x 3000mm by 1200mm Box Culverts)

Includes approx. 150m of 2x 3000mm by 1200mm box culverts, 2 headwalls and removal of existing pipework/culvert within easement

Indicative Cost - **\$1,400,000**

As mentioned previously these costs are based on replacing the existing infrastructure with like for like size and capacity. This will need to be confirmed with more detailed survey.

Should you have any questions, please don't hesitate to contact the undersigned.

Yours sincerely,

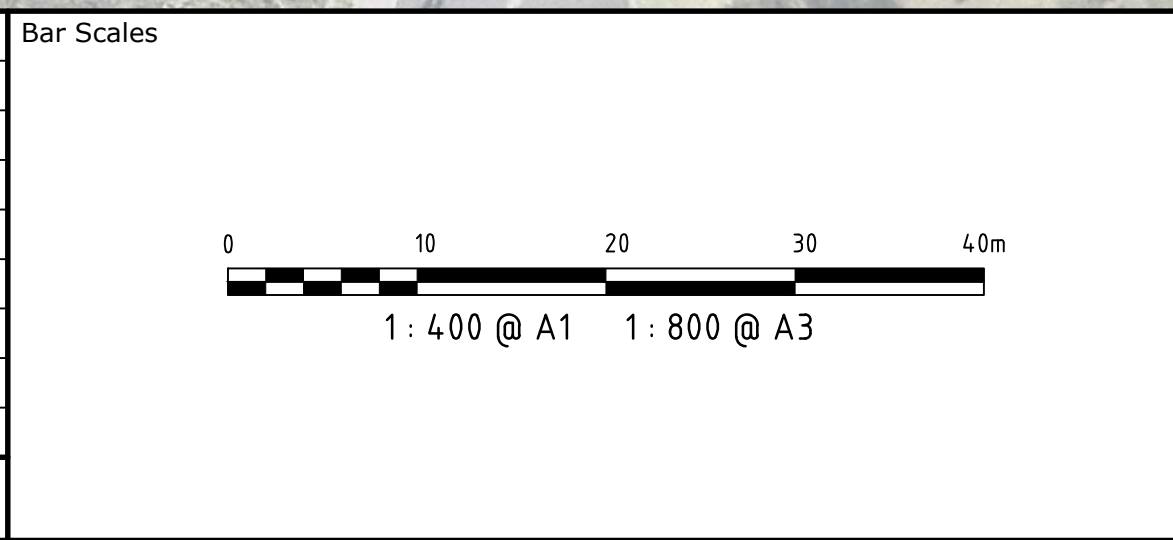


Andrew Tweedie
Senior Civil Engineer
94319 1777

Attachment SCK001 – STORMWATER DRAINAGE PLAN



P2	REISSUED FOR CLIENT REVIEW	24-02-16
P1	ISSUED FOR CLIENT REVIEW	18-02-16
Issue	Description	Date



THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L



Scales	1 : 400	Drawn	AMcL
		Designed	AMcL
Grid	MGA	Checked	
Height Datum	AHD	Approved	

Project	ANELLA AVENUE CASTLE HILL SHOWGROUND BUSINESS PARK
Title	STORMWATER DRAINAGE PLAN

Civil Engineers and Project Managers		
at&L		
Suite 702, 154 Pacific Hwy St Leonards NSW 2065 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9460 8413 www.atl.net.au info@atl.net.au		
Status	INFORMATION	A1
NOT TO BE USED FOR CONSTRUCTION		
Drawing No.	SKC001	Issue
Project No.	15-329	P2