

Appendix 1

Riparian Corridor Assessment



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25 February 2016

Goodman
Level 17, 60 Castlereagh Street
Sydney NSW 2000

Attention: William Tait

Dear William,

Showground Business Park - Riparian Corridor Assessment

Goodman is undertaking a feasibility assessment for re-development of Showground Business Park, and has requested that AECOM prepare an assessment of likely riparian corridor setbacks for the site as required by the NSW office of Water (NOW) '*Guidelines for riparian corridors on waterfront land, July 2013*.' A site inspection was undertaken by Mark Blanche (AECOM) on 08 February 2016, and Graham Swain (Australian Bushfire Protection Planners [ABPP]) on 12 February 2016. We provide a summary of our findings below.

The Showground Business Park site comprises of two lots (Lot 2 and Lot 10), both of which are proposed for mixed use redevelopment including residential and employment land uses.

The site adjoins Cattai Creek along its eastern boundary. Development within 40m of top of the highest bank (and in this case that also impacts on the existing retaining wall or the bed or banks of Cattai Creek) constitutes a Controlled Activity, as regulated by the *Water Management Act 2000*, for which riparian restoration is required as part of any re-development of the site. The guidelines recommend the width of the riparian corridor reinstatement be determined according to the Strahler System of ordering watercourses and using current 1:25,000 topographic maps. At this location, Cattai Creek is designated as a 2nd order watercourse, for which an average 20m wide vegetated riparian zone is required measured from the top of the highest bank (THB) on both sides of the watercourse.

The guidelines allow for the riparian corridor to be amended by 'the averaging rule', which allows for non-riparian corridor works and activities within the outer 50% of the corridor, so long as an equivalent area of riparian restoration that is connected to the corridor is put in place. Non-riparian uses include asset protection zones, recreational areas, roads, development lots and infrastructure.

Drawing No. SK01 (attached) illustrates the proposed riparian corridor restoration layout, and in conjunction with this report, provides the rationale for how the riparian corridor layout has been determined, as follows (Note: The numbering below correlates with the numbering in the legend of SK01):

1. The Watercourse: locates Cattai Creek. The width of the watercourse is assumed to be on average 2m between the low banks
2. Top of Highest Bank: provides assumed THB lines which are offset 8m from the low banks of the watercourse to both sides of the watercourse (Note: This assumption will need to be verified with on-site survey and may be subject to change)
3. 20m Riparian Corridor: A 20m riparian corridor width:
 - a. is assumed to be undertaken by others to the eastern (opposite) side of the watercourse, and immediately upstream and downstream of the site on the western (site) side of the watercourse, as provided for by NOW guidelines
 - b. is provided within the northern part of the site within Lot 10
4. 10m Riparian Corridor: A 10m wide riparian corridor width is provided within the site, predominantly within Lot 2

5. 10m 'Averaging Rule' Area: The outer 10m area (50% of riparian corridor width) which is not proposed to be provided for riparian restoration along the Lot 2 residential edge, has an area of 2,904 sq.m
6. Riparian Corridor Equivalent Area: An equivalent area of 2,904 sq.m of riparian restoration is located within the northern part of the site, adjoining the riparian corridor
7. Asset Protection Zone / Defendable Space: Once the riparian corridor boundary has been determined, an Asset Protection Zone (APZ) needs to be put in place between the riparian corridor and proposed residential development, and a Defendable Space (DS) put in place between the riparian corridor and proposed commercial development. These widths have been determined in consultation with ABPP, as follows:
 - a. Lot 2 – a 15m APZ width between the riparian corridor and residential building line is required, based on the overall riparian corridor width along this frontage being less than 50m (the proposed corridor width is 48m), and therefore classed as 'Rainforest'
 - b. Lot 10 –
 - i. a 25m DS width between the riparian corridor and a commercial building line is required based on the overall riparian corridor width along this frontage being in excess of 50m (the proposed corridor width is 105m at its widest point), and therefore classed as 'Forest'
 - ii. a 32m APZ width between the riparian corridor and a commercial building line is required based on the overall riparian corridor width along this frontage being in excess of 50m (as above), and therefore classed as 'Forest'.

Please feel free to call if you require any clarification re. the above.

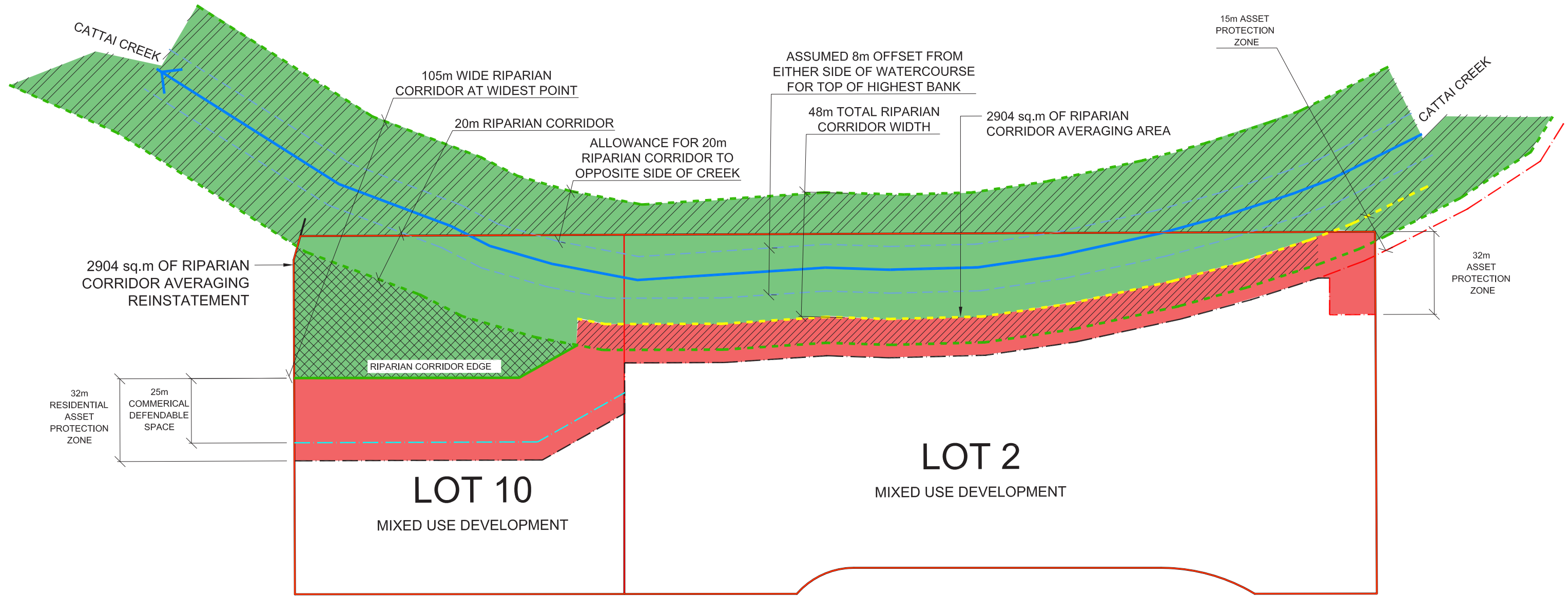
Yours faithfully










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encl: Drawing No. SK01 (Rev 1) - Showground Business Park - Riparian Corridor Assessment
cc: Anthony McLandsborough - AT&L



LEGEND		
—	1.	WATERCOURSE
- - -	2.	8m LINE FROM LOW BANK OF WATERCOURSE
- - -	3.	20m RIPARIAN CORRIDOR WIDTH FROM TOP OF HIGHEST BANK
- - -	4.	10m RIPARIAN CORRIDOR WIDTH FROM TOP OF HIGHEST BANK
	5.	2904m2 OF POTENTIAL CORRIDOR AREA (10m WIDE) TO BE RELOCATED IN ACCORDANCE WITH NSW OFFICE OF WATER AVERAGING RULE
	6.	2904sq.m OF RELOCATED RIPARIAN CORRIDOR IN ACCORDANCE WITH AVERAGING RULE
	7.	BUSHFIRE ASSET PROTECTION ZONE/DEFENDABLE SPACE
		RESIDENTIAL ALIGNMENT EDGE
		COMMERCIAL ALIGNMENT EDGE
		RIPARIAN CORRIDOR REINSTATEMENT BY GOODMAN
		RIPARIAN CORRIDOR AVERAGING REINSTATEMENT BY GOODMAN
		EXTENT OF ASSUMED RIPARIAN CORRIDOR REINSTATEMENT BY OTHERS

