Our Ref: Vineyard Contributions Plan

28 June 2019

Independent Pricing and Regulatory Tribunal

E-mail: ipart@ipart.nsw.gov.au

Dear Sir/Madam

Hawkesbury City Council Submission to IPART Draft Recommendations Report – Vineyard Contributions Plan

Please find attached Hawkesbury City Council's submission (including appendices) to the IPART Draft Recommendations Report issued on 31 May 2019.

In this submission, Council has raised its concerns with IPART's draft report on its assessment of the Vineyard Precinct Contributions Plan. This covers the process followed and information relied upon for many of its large cost reduction recommendations, and the inconsistencies between this assessment and other plan assessments by IPART, particularly related to its assessment of reasonable cost.

Through this submission, Council is proposing a number of changes to the original proposed plan originally prepared by the Department of Planning and Environment, to address IPART's recommendations and to update the plan for more accurate cost estimates and current market rates.

Given the long timeframe since preparation of the original plan commenced (since 2015), and the additional assessment time of the draft plan by IPART since the end of 2018, this is considered the most efficient process by which to update the plan at this time.

- Council proposes the following cost changes to the Vineyard Precinct Contributions Plan, all based on the opinions of professional consultants with considerable experience in costing/valuing the relevant land or infrastructure:
- An increase in the Boundary Road upgrade works cost (apportioned to Vineyard only) of $58,397
- An increase in the new collector road costs of $1,262,438
- An increase in the total creek crossing costs of $2,421,053
- Higher average R2/R3 land rate of $350/m2 and valuation for District Park 5 recommended by KD Wood Valuations, which results in a net increase in land acquisition costs of $4,194,748
- An increase for land acquisition contingencies not yet accounted for (10%) of $8,365,310. These adjustments aggregate to $16.3m or 10% of the original proposed plan costs.

Combined with IPART's other cost-related recommendations accepted by Council, the net impact on the proposed contributions plan for the Vineyard Precinct is an increase of $20.1m.

This level of funding in the plan provides the necessary certainty that the essential infrastructure required by the new Vineyard community will be delivered without burdening the rest of the Hawkesbury community with the costs.

Council requests that these changes be incorporated into IPART's final report to reduce the compliance costs for Council (and other stakeholders) associated with plan delays, thereby facilitating the progression of development and infrastructure in the Vineyard Precinct.

Council would welcome the opportunity to discuss the Vineyard Contributions Plan and this submission to IPART in further detail.

Should you require any further clarification on the matters outlined above, and in the attached submission, do not hesitate to contact me on the details below.

Yours faithfully

Andrew Kearns | Manager City Planning | Hawkesbury City Council
☎ [redacted] | (02) 4587 7740 | www.hawkesbury.nsw.gov.au

gln.
planning
consulting
strategy

DRAFT ASSESSMENT OF THE VINEYARD PRECINCT CONTRIBUTIONS PLAN

SUBMISSION TO IPART

Hawkesbury City Council

GLN Planning Pty Ltd Trading as GLN Planning
ABN 39 585 269 237

A Level 10, 70 Pitt Street Sydney NSW 2000
P GPO Box 5013, Sydney NSW 2001
E info@glnplanning.com.au
T [redacted] F (02) 9249 4111

glnplanning.com.au

Draft Assessment of the Vineyard Precinct Contributions Plan

Submission

28 June 2019

Prepared for

Hawkesbury City Council

By

ABN 39 585 262 237
A Level 10, 70 Pitt Street, Sydney 2000
P GPO Box 5013, Sydney NSW 2001
T (02) 9249 4100 F (02) 2949 4111
E info@glnplanning.com.au

Table of Contents

1 Introduction

IPART released its draft report *Assessment of Vineyard Contributions Plan* on 31 May 2019. It is accepting public submissions on the draft report until 28 June 2019. GLN Planning (GLN) has been engaged by Hawkesbury City Council (Council) to prepare a draft submission on its behalf.

IPART's draft report recommends significant amendments to the Vineyard Contributions Plan which would reduce the total cost of land, works and administration, from $165,272,444 to $129,796,778. This equates to a decrease in total costs of 21.5% relative to the plan submitted by the Council to IPART for review.

If the majority of IPART's significant cost reduction recommendations are maintained at the final report stage, there is a strong chance that Council will face significant underfunding of essential infrastructure identified by the Department of Planning and Environment through the precinct planning process, in order to meet the new demand from the Vineyard Precinct.

The submission comments focus on the main areas of concern with IPART's draft assessment: the Boundary Road upgrade, the cost of new collector roads and creek crossings, the nexus for channel stabilisation works, the costs of open space embellishment, the land values (particularly constrained land values and District Park 5 land value).

The submission draws on additional advice from relevant experts who were commissioned by Council to inform the submission:

- Kent Wood, the Registered Valuer who was originally engaged on behalf of the Department of Planning and the Environment (DPE) to value land rates in the plan,
- Matthew Kritzler, Quantity Surveyor with Mitchell Brandtman but formerly with WT Partnership (WTP) (where he originally costed items in the plan in 2015) to estimate new collector road, open space embellishment and Boundary Road upgrade costs in the plan, and
- David Johnson, Director of J Wyndham Prince (JWP) who is an experienced stormwater engineer with significant greenfield site experience in Sydney's Growth Centres, and who advised on whether there is a need for the channel stabilisation works along Killarney Chain of Ponds (KCP) and the cost of the creek crossings in the plan.

Inquiries regarding this submission should be directed to:

Mr Andrew Kearns
Manager Strategic Planning
Hawkesbury City Council
phone [redacted]
email a[redacted]

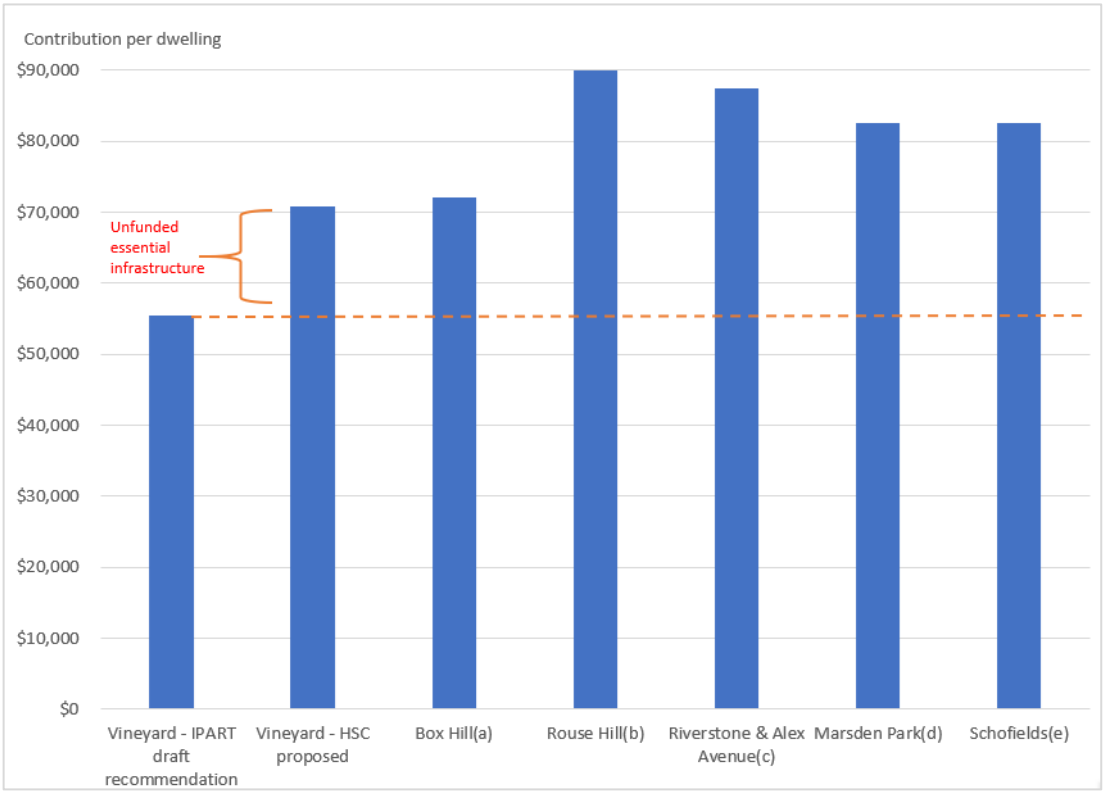
2 Overview of key concerns

Council wishes to raise a number of critical concerns with IPART's draft report on its assessment of the Vineyard Contributions Plan (published on 31 May 2019).

IPART's assessment suggests contributions in the Vineyard Precinct should be $55,436 per lot for low density dwellings, which is 22% lower than the proposed $70,789 per lot by Council in the plan. This compares with rates for low density dwellings in other North West Growth Area precincts which all exceed around $70,000 per lot, on average.

As **Figure 1** shows, the contribution rates for other urban release area precincts in the North West Growth Area, generally endorsed by IPART and the NSW Government, are between 30 to 62% higher than the IPART-assessed rate for Vineyard.

Figure 1 Comparison of IPART's proposed contribution rates for Vineyard Precinct compared with rates for low density dwellings (15 dw/ha) in other North West Growth Area precincts ($Mar18)



Notes:

(a) The Box Hill contribution rate is the average of the IPART-assessed rates for the three catchments in the plan, indexed. Source: IPART, *Assessment of Revised Contributions Plan 15 for Box Hill -The Hills Shire Council*, October 2018.

(b) The Rouse Hill contribution rate is the average of the IPART-assessed rates for the three catchments in the plan, indexed. Source: IPART, *Assessment of Contributions Plan 22 for Rouse Hill (Area 20 and Riverstone East),* December 2018.

(c) This is the rate presented in BCC's existing contributions plan for the Riverstone and Alex Avenue Precinct (CP20), indexed and last assessed by IPART in July 2016.

(d) This is the average of the three catchment Marsden Park rates in BCC's existing contributions plan for Marsden Park/Marsden Park Industrial (CP21), indexed and last assessed by IPART in August 2017.

(e) This is the average of the three catchment rates in BCC's existing contributions plan for Schofields (CP24W and CP24L), indexed and currently under assessment by IPART.

Council notes that IPART has also recently released its draft assessment of the Schofields Precinct Contributions Plan (June 2019) and that it has endorsed low density contribution rates of $102,525 per lot and $90,672 per lot for the Eastern Creek catchment in that assessment.[1] The Schofields precinct has a very similar final development yield to that of Vineyard (8,158 population/2,813 dwellings in Schofields compared with 7,489 population/2,459 dwellings in Vineyard) and Council questions why IPART considers that the difference in infrastructure provision requirements will be so significant between the precincts.

Council submits that that there is no legitimate reason that the local infrastructure in the Vineyard Precinct should cost any less (on an average per lot basis) than surrounding precincts in the North West Growth Area. That is because:

- as a new greenfield site, Vineyard needs the full suite of transport, stormwater management, open space and community facility infrastructure to facilitate new development, as other areas generally do
- the density of expected residential development is similar to other developing precincts in the area
- the geographical terrain is similar to surrounding precincts, noting Council must also address significant flood mitigation requirements and highly fragmented land ownership in facilitating development in the Vineyard precinct.

Further, Blacktown City Council (BCC) and The Hills Shire Council (THSC) (the other two councils in the North West Growth Area) both have very large levels of pooled contributions for growth infrastructure and significant implementation and delivery scale which is not available to Hawkesbury City Council.

Council's submission highlights the areas where IPART's draft recommendations are considered to be imbalanced, ignore important pieces of supporting evidence or information readily available in precinct planning documentation, are inconsistent with its other assessment positions, and have inadequate regard for the actual likely cost of essential infrastructure overall for the precinct.

Where it is clear that the costs may be insufficient under IPART's draft recommendations, IPART considers it plausible for the Hawkesbury community to subsidise these costs for some three years, as highlighted in its media release.[2] This is unacceptable to Council.

The implication for Council and the Hawkesbury community from IPART's recommendations is that there will be at least $35.5 million in unfunded essential infrastructure in this State Government designated growth area. The Hawkesbury community must already fund an estimated $5m-plus in capital works costs for community facilities to meet the demand from growth in the Vineyard Precinct because the State Government policy currently disallows these costs in development contributions.

The Hawkesbury LGA is one of the first to be excluded by the State Government from the Local Government Infrastructure Scheme (LIGS) which funded essential works in contribution plans above the Minister's cap. Development in 15 other greenfield precincts in NSW, six of which are in

---

[1] IPART, *Assessment of Contributions Plan No. 24 Blacktown City Council - Draft Report,* June 2019, p 8.
[2] IPART, *Media Release - IPART's Draft Report on Vineyard CP released for comment*, May 2019.

the North West Growth Area, were all potentially able to be subsidised under this program. Council had made representations to the State Government to allow Vineyard and the associated development to be included in the scheme but without success.

The State Government policy does, however, allow Council to fully fund the reasonable cost of essential infrastructure in the community – an outcome which IPART's draft assessment does not provide for.

The draft Vineyard Contributions Plan was prepared by the State Government (the Department of Planning and Environment, or DPE) over four or more years as part of the precinct planning process. After such a long time period and the high level of inquiries from landowners intending early lodgement of development applications, Council publicly exhibited the plan and then progressed it expediently to IPART (13 November 2018) in good faith based on the reasonableness of the overall proposed costs and contribution rates to help facilitate development progress in the precinct.

Council had also provided IPART with a preliminary version of the plan in February 2018, before public exhibition, on its request to help determine the readiness of the plan and none of the issues identified in its draft assessment report were identified by IPART then.

Council considers that IPART has failed to fully acknowledge the process of information exchange in its report. While IPART has acknowledged that high-level costings are only available at this stage of planning, where it has identified issues related to certain information sources or the complexities of the precinct planning process (as well as the time periods that have now passed in this process), the recommendations are not balanced and do not reflect what it will likely cost Council to deliver the infrastructure to the community.

Council contends that in reducing certain costs in the plan, IPART may have gone beyond the Premier's term of reference dated 18 December 2018, i.e. IPART must:

> (b) consider, in its review of the Reviewable Contributions Plan, whether the estimate of the costs of providing those public amenities and services, as set out in the Plan, are reasonable;

DPE guidelines describes 'reasonableness' comprising the concepts of fairness, equity, sound judgement and moderation.[3]

In Council's opinion, IPART has not provided evidence to demonstrate that the costs are so manifestly unreasonable that they need to be reduced, and certainly not to the extent recommended by IPART in its draft report.

Council had already put forward supporting information that demonstrated that the costs are reasonable in the context of an area in the earliest stages of development. In response to IPART's recommendations, it now submits further, updated supporting material prepared by experienced professionals that support higher costs than IPART has provided for in its draft report, and in some cases, higher costs than the original estimates.

The focus of these estimates is on a reasonable cost provision for the essential infrastructure identified under current Government policy, not an excessive cost provision. The additional information is based on contemporary market evidence and assessments of the specific precinct

[3] Department of Infrastructure Planning and Natural Resources (2005), Development Contributions Practice Notes.

infrastructure needs and is superior to the previous high level costings prepared by DP&E, which are now up to four years old.

Therefore, Council is appealing to IPART to review many of its cost reduction recommendations and the necessary plan costs in light of the additional evidence. It would be most efficient to account for the new estimates in this current assessment process – rather than entering into a new assessment process with IPART or the NSW Government for a further 6-12 months or more after this process is finished.

Should the changes in this submission be endorsed in IPART's final report, the contributions plan can be progressed and adopted so that infrastructure provision and development is not delayed unnecessarily in the Vineyard Precinct, and the community of Hawkesbury LGA is not unfairly left with more than 20% of the essential infrastructure bill.

3 Summary of responses to draft recommendations

Table 1 lists each of IPART's draft recommendations and Council's summary response to each recommendation.

Table 1 Summary of Council's responses to IPART draft recommendations

Recommendation		Summary of Council response
1	For its next comprehensive review of the plan, obtain a detailed, site-specific cost estimate for the upgrade of Boundary Road to a collector road standard. In the interim, the council should revise the cost of the Boundary Road upgrade by: • Using the unit rate per linear metre for collector roads from WTP's advice • Removing costs associated with the bridge upgrade • Retaining the cost of one roundabout and the upgrade to the intersection at Windsor Road • Retaining a 5% allowance for project on-costs and a 20% contingency allowance. We estimate this would reduce the cost of transport works by $10,565,316.	Council does not accept this recommendation; the cost reduction is excessive, and the removal of the bridge cost is not based on any professional advice. It is not acceptable for the Hawkesbury community to subsidise essential infrastructure costs associated with the upgrade "in the interim". Council has submitted information which more accurately depicts the precinct planning process concerning the Boundary Rd upgrade works and the uncertainty that still exists about the classification of this road. Council can confirm that the bridge works are needed for a collector upgrade. Council has obtained updated cost estimates for the Boundary Road upgrade as a collector only (noting that the required road width is still 90% of the width in the estimate in the plan) which better addresses IPART's concern that the original cost estimates were based on a higher order road. With other changes to the cost estimates required based on a site-specific assessment of project staging needs (including for the bridge works), Council submits that instead of reducing the apportioned cost by $10.6m, this cost should be increased by less than 0.5%.
2	Reduce the contingency allowance for new roads in the plan from 20% to 10%, in line with the advice from WTP, which we estimate would reduce the cost of transport works by $417,808.	Council does not accept this recommendation and notes that IPART is reducing a cost allowance for new collector roads in the plan which was already lower than what it has assessed as reasonable in many other plans it has reviewed. Council has submitted new cost estimates for the roads which are based on current market rates and incorporate a 10% contingency. This would increase new road costs in the proposed plan by around $1.2m.
3	Increase the cost of transport works by an estimated $910,032 to correctly account for the three roundabouts in the collector road network, comprising: • A reduction of $636,975 for removing the cost of two roundabouts from the per linear metre rate of Commercial Road	Council accepts this recommendation.

Recommendation		Summary of Council response
	[items CR4 & CR5] • An increase of $1,547,006 for the addition of three separately-costed roundabouts ($515,669 per roundabout).	
4	Use a unit rate derived from WTP's cost estimates for the Vineyard CP to estimate the cost of full-width collector road upgrades [items CR2 & CR6], which we estimate would increase the cost of transport works by an estimated $1,906,254 (including a 20% contingency allowance)	Council accepts this recommendation which is based on Council's suggestion during the assessment process to draw on other collector road upgrade rates in the plan, rather than the generic Camden-based rate proposed in the DPE-prepared plan (which IPART had questioned).
5	Use a unit rate equal to 50% of the full-width rate derived from WTP's cost estimates for the Vineyard CP to estimate the cost of the half-width collector road upgrade [item CR8], which we estimate would increase the cost of transport works by $193,359 (including a 20% contingency allowance)	Council accepts this recommendation in principle but notes the convention for half-width cost estimates is generally around 60% of full-width cost estimates.
6	Remove the double-counting of the contingency allowance for bus shelters, which we estimate would reduce the cost of transport works by $67,692 ($5,641 per bus shelter).	Council accepts this recommendation.
7	Reduce the cost of channel stabilisation works by an estimated $7,072,502 by: • Removing item DC2. Which would reduce the cost of stormwater management works by an estimated $7,639,814 (including the removal of the contingency allowance of 20%), and • Adding Item DC1, which would increase the cost of stormwater management works by an estimated $567,312 (including a contingency allowance of 10%).	Council accepts the recommendation insofar as it relates to item DC1. Council does not accept that part of the recommendation relating to the removal of DC2. Council provided advice to IPART during the assessment process as to why it needed the works despite them not being specifically recommended in the Mott MacDonald technical study prepared for DP&E. Reinforcing that advice, Council has commissioned JWP to assess the need for the works. JWP has confirmed that there is a need to stabilise the channel to manage flood events for the urbanisation of the precinct, as proposed in the plan. Council therefore submits that the item DC2 should remain in the plan.
8	Increase the cost of land acquisition by $1,632,861 for Item DC1	Council accepts this recommendation.
9	Reduce contingency allowance for all stormwater management works items to 10% of base costs, consistent with WT Partnership's recommendation, which we estimate would reduce the cost of stormwater management works by $851,741.	Council does not accept this recommendation as it is inconsistent with, and bears little relationship to, recommendations made in the most recent IPART contributions plan assessments in the North West Growth Area. For example, the Schofields Precinct is comparable to the Vineyard Precinct in terms of its drainage characteristics and anticipated population. Yet IPART has issued a draft assessment of that plan that has stormwater management infrastructure costs that are (on a per ha of NDA basis) almost two and a half times more than the costs in the Vineyard

Recommendation		Summary of Council response
		Precinct. Council has submitted a range of reasons why the 20% contingency is reasonable in the context of the quantum of the base cost estimates and the risks in stormwater infrastructure delivery in the Vineyard Precinct. Council submits that the 20% contingency allowance be retained in the plan.
10	Revise the cost of open space embellishment by excluding the areas of ENV land from the total area of embellishment, which we estimate would reduce the cost of open space embellishment by $5,728,848, comprising: • A reduction of $3,447,326 for District Park 4 • A reduction of $2,281,522 for District Park 5	Council does not accept this recommendation because embellishment of ENV areas will be required, and also that the overall open space costs in the plan are reasonable to begin with. This recommendation is inconsistent with IPART's recent recommendations regarding appropriate embellishment rates for similar open space areas in other North West Growth Area precincts (e.g. Rouse Hill). Council has prepared revised, up-to-date open space embellishment cost estimates by Mitchell Brandtman (QS) which address IPART's concerns and increase costs in the plan by $3.8m.
11	Reduce the contingency allowance applying to the base costs of open space embellishment from 15% to 10%, which we estimate would reduce the cost of open space embellishment by $1,945,608.	Council does not accept this recommendation and has submitted revised embellishment costs.
12	Calculate the cost of plan administration for the Vineyard CP based on 1.5% of the adjusted cost of works, would reduce the cost of plan administration by an estimated $367,544.	Council accepts the recommendation, in principle, but does not accept most of IPART's other cost reduction recommendations. The final adjustments required should be an addition to the cost allowance.
13	Use a value of $85 per square metre for flood liable land and $120 per square metre for transmission easement land in the Vineyard Precinct.	Council does not accept this recommendation which is not based on the most relevant market evidence specific to the Vineyard Precinct. It is instead based on Blacktown City Council valuation reports, which heavily rely on sales examples many kilometres from Vineyard and also actually include higher rates for Vineyard precinct constrained land. Council contends that the $100/m^2 which is now based on three separate valuer opinions - all independent of Council (including a Valuer General (VG) advisor) - with relevant sales evidence should satisfy the 'reasonable cost' criterion. VG has determined a $100/m^2 rate for an actual fully constrained land acquisition in Vineyard to date. Council submits that the plan's assumptions of the value of these lands be retained, i.e. • $100 per square metre for flood liable land • $150 per square metre for transmission easement land

Recommendation		Summary of Council response
14	Reduce the cost acquiring land for District Park 5 by $7,527,714 to account for the constraint on development arising from the presence of protected vegetation.	Council does not accept the recommendation. It is based on highly questionable assumptions about: • the interpretation of the Just Terms legislation and a theory that Section 56 can be disregarded, and • the necessary discounting of the land for the presence of vegetation. Council's site- specific valuation for the same land is $10m, not $4.2m as recommended by IPART. Council also wishes to raise concerns about the process IPART has followed in making this recommendation including the fact that it did not raise any concerns with Council about the valuation of this park prior to the draft report and has also deviated from its own valuer's advice to devalue the site even further.
15	Index the estimate cost of open space and community services land to the base period of the plan.	Council accepts the recommendation.
16	Revise the interest costs in the plan taking into account IPART's recommended adjustments for transport and stormwater management costs, and the value of the subsidy under the NSW Government's Low Cost Loan Initiative.	Council accepts the recommendation, in principle, but does not agree with how the proposed interest costs in the plan (before the granting of the subsidy) have been explained in the assessment report.
17	In response to this Draft Report, the council should clarify its intended approach to indexation of contribution rates, particularly in regard to indexation of contribution rates, particularly in regard to the indexation of contribution rates for land.	Council accepts the recommendation.
18	Review the plan within the next three years to update and refine estimates of the scope, cost and apportionment of works.	Council accepts the recommendation.

4 Comments on specific recommendations

4.1 Transport costs

4.1.1 Boundary Road upgrade works (Recommendation 1)

The proposed Vineyard Contributions Plan includes $15,473,035 (i.e. 43% of $35,983,802) as the apportioned estimated cost of upgrading Boundary Road (which forms the boundary separating both Vineyard and Box Hill precincts, and the Hawkesbury and The Hills LGAs). The 43% share is based on a recommended apportionment of costs by DPE representing the assumed demand generated by the Vineyard Precinct development only. The high-level specifications for the upgrade and cost estimates were also prepared on behalf of DPE to inform the draft plan through the precinct planning process.

IPART has endorsed the 43% apportionment as reasonable but does not support the total cost of the Boundary Road works in the CP.

There were three different cost estimates prepared during this process for this upgrade work - by AECOM, ARUP and then WTP (who reviewed the costing). The final cost estimate adopted in the draft plan was for a 23m width road at a unit rate of $14,240/m, including a replacement bridge over Killarney Chain of Ponds (estimated cost of $7,734,614).

IPART identified that the unit upgrade rate used in the plan was for a sub arterial rather than the collector road specification which was noted in ARUP's final traffic needs study (October 2017) and the Vineyard Development Control Plan (DCP) (released by DP&E in 2018).

IPART therefore recommended (Rec 1) that Council should:

> For its next comprehensive review of the plan, obtain a detailed, site-specific cost estimate for the upgrade of Boundary Road to a collector road standard. In the interim, the council should revise the cost of the Boundary Road upgrade by:
>
> – Using the unit rate per linear metre for collector roads from WTP's advice
> – Removing costs associated with the bridge upgrade
> – Retaining the cost of one roundabout and the upgrade to the intersection at Windsor Road
> – Retaining a 5% allowance for project on-costs and a 20% contingency allowance…. [4]

It estimated that this would reduce the cost of transport works in the plan by $10,565,316.

Lack of clarity in state-led planning regarding the Boundary Rd upgrade needs

Council contends that the statement in IPART's draft report that the change in the classification of the road occurred "early in the precinct planning process" is not correct. Uncertainty remains about the final classification of Boundary Road as evidenced by the proposed Special Infrastructure Contribution (SIC)[5] and further advice to Council by the RMS.

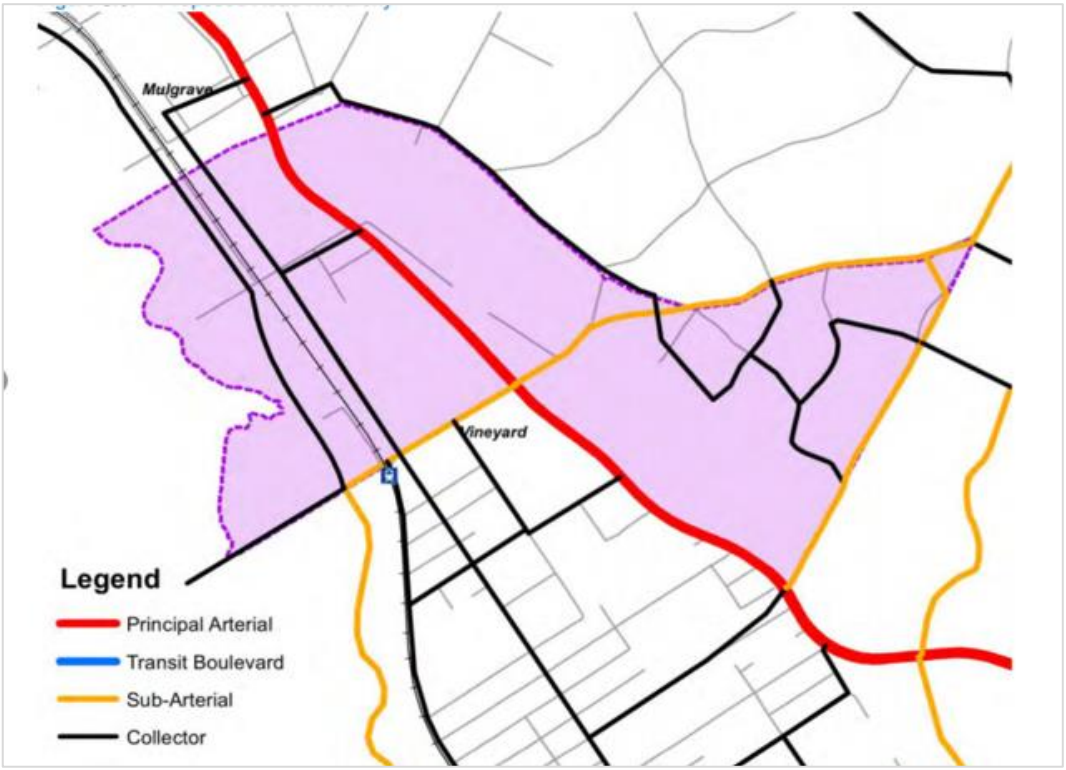
---

[4] IPART draft report for VPCP, p 9.
[5] DPE, *Proposed Special Infrastructure Contribution (SIC) for North West Growth Area*, September 2018.

In a precinct planning process that spanned around 3-4 years, the reclassification of Boundary Road to a collector road status occurred in the final weeks of that process, and no subsequent updates to the cost estimate for the works were notified to Council by DPE (which had coordinated the original cost estimates).

Below is the road network map in Mott Macdonald's Final Infrastructure Planning Report for Vineyard dated October 2017 – one month before the finalisation report from DPE was published (November 2017). This report was released by DPE with the final precinct planning package. This figure shows Boundary Road as a sub arterial road (Figure 2).

Figure 2 Proposed Road Hierarchy in Final Infrastructure Planning Report for Vineyard



Source: Mott MacDonald, *Infrastructure Precinct Planning Report - Vineyard Precinct, Post-Exhibition*, October 2017, p 21.

In the DPE Finalisation Report for the Vineyard Precinct (November 2017), the change in the classification of Boundary Road is not listed as a major planning change but rather is identified in the appendix of updates to the DCP, which is attached to the main report.[6]

As recently as October 2018, IPART, in its 3rd review of the Box Hill Contributions Plan CP 15 (as amended), again endorsed the inclusion of the full cost of the replacement bridge works on Boundary Rd in that plan.

Conversely, for this Vineyard plan IPART has recommended the apportioned share of the cost of these works be removed entirely based on the premise that a different classification of the road was known through much of the precinct planning process, and an assertion that the bridge and other requirements (such as vertical realignment of the road) might not be needed now.

[6] DPE, *Vineyard Precinct Stage 1 Finalisation Report*, November 2017.

As mentioned previously, the role of Boundary Road in the road hierarchy remains in doubt, based on the views expressed by THSC and comments made by the RMS about what was assumed to be the Menin / Chapman Roads sub-arterial route that would in time replace Boundary Road.[7]

The draft SIC released for the North West Growth Area shows current and proposed new SIC roads as in Figure 3. The proposed road upgrade NXR 31 (Loftus Street – Windsor Road to Hamilton Street) would appear to suggest the need for a higher order road on Boundary Road; certainly, it raises this question at the very least.

Figure 3 Proposed Infrastructure Map in Proposed SIC for North West Growth Area

Note:
1. Location of Education, Public Transport, Emergency Services and Health Infrastructure is indicative only. Subject to further investigation and confirmation by respective agencies.
2. Bus Head Start Program and biodiversity conservation measures not shown

Source: Draft SIC, November 2018, p 10.

This concern was raised by THSC in its submission to the draft SIC in November last year:

i. *Boundary Road (Windsor Road to Old Pitt Town Road):* It is anticipated Boundary Road will function as a sub-arterial route, requiring four lane carriageway and a bridge construction at the Killarney Chain of Ponds floodway. In the short term, the route will likely carry traffic from Box Hill, Vineyard, Box Hill North and new employment areas within the North West Growth Area (Box Hill and Riverstone). It will also serve as a primary bus link to Riverstone Station in the short-to-medium term.

The proposed SIC erroneously assumes that a substantial portion of Boundary Road will remain unformed and serve only to provide secondary access to Windsor Road (noting that Menin Road (NXR23.5) is identified as a main sub-arterial SIC item linking Box Hill to Vineyard and Riverstone). Notwithstanding this, concern is raised that NXR23.5 will not be completed for at least 10 years, by

[7] Council staff can discuss this issue more with IPART as required.

which time the entire length of Boundary Road will already be serving a sub-arterial function (and would need upgrading accordingly).

The continued exclusion of the upgrade of Boundary Road from the SIC is likely to result in a major burden to the local traffic network for the short-to-medium term, potentially hindering the delivery of new housing and degrading the amenity and quality of life for new residents in the North West Growth Area.[8]

In recent workshops with RMS associated with the North West Growth Area (attended by Hawkesbury CityCouncil staff), RMS has indicated that it is not planning for Chapman / Menin Roads to be sub arterial and that the RMS planning for the Bandon Road extension essentially finishes at Windsor Road. Council continues to seek a clearer understanding in terms of the intended future role of Chapman / Menin and Boundary Road from RMS.

Updated cost estimate for the Boundary Rd upgrade works

If the State Government (DPE and RMS) can confirm the final road network and classification needs for Boundary Road and the road is a collector road, then it would be prudent to include an updated collector road upgrade cost estimate in the contributions plan for the Vineyard Precinct.

However, Council wishes to raise the following concerns with IPART's recommendation concerning the cost allowance for Boundary Road and the assumed re-costing process:

- The interim allowance for the upgrade recommended by IPART (based on a unit rate of $5,650/m) is clearly well below any upgrade cost of Boundary Rd (even as a collector), leading to a significant shortfall of contributions revenue to fund the essential infrastructure in the plan. This is shown in an updated cost of Boundary Rd upgrade commissioned by Council (see below).
- The costing by WTP was for a 23m width road. The other sub arterial roads in the Vineyard Precinct, which are noted to be provided by RMS by IPART, are for 35m width roads. The standard collector road width in the Vineyard DCP is 20.8m and this is much closer to the original 23m width assumption for the Boundary Road update costing than a standard sub arterial road – in fact it's still 90% of the assumed width. This means that the $5,650/m unit rate recommended by IPART is just 40% of the road upgrade rate based on the WTP costing when the likely width is 90% of the original specification.
- IPART's approach does not properly represent the complexity of the precinct planning process concerning the Boundary Road upgrade, the fact that costs must be apportioned between two different LGA precincts, and how Council had quite reasonably relied on the estimates which were provided by DPE in the draft plan it had prepared as a product of this process. Instead, IPART expects the Hawkesbury community to now bear a significant share of the cost of the roadwork because of what it considers to be the inadequacy of the final plan estimates presented to Council in precinct planning by DPE.
- IPART requires that Council undertake detailed design and specification work *before* it can include reasonable cost estimates for the infrastructure in the plan, which is not required for any other infrastructure in the plan. Under the current Practice Note, this requirement would potentially stifle the contributions plan finalisation process by a further 6-12 months because the plan would then need to return to IPART for another review. As previously

[8] THSC Submission to the Proposed SIC, 2 November 2018, p 4.

> stated, it is not acceptable to Council for the Hawkesbury community to subsidise the cost of essential infrastructure "in the interim" because of unnecessary red tape concerning the current contributions plan review and adoption process. If an updated estimate needs to be provided for Boundary Road, IPART should allow the original cost estimate in the interim in the plan, which is certainly reasonable in the circumstances of this plan preparation, and much closer to the actual likely cost than IPART's alternative recommendation. Or it should consider the new, updated cost as a "pass through" which Council has commissioned to address IPART's concerns about the classification of the road.

Council engaged Mitchell Brandtman to prepare an updated cost estimate for Boundary Road to try to address IPART's concerns concerning certain specifications involved in the full scope of the upgrade works (Appendix A). The cost revision was prepared by Matthew Kritzler who originally reviewed the ARUP cost estimates and prepared other cost estimates for the plan (when he was a consultant with WTP). Mitchell Brandtman also has recent experience with costing upgrades of other segments of Boundary Road.

As part of its assessment of the cost for the Boundary Road upgrade, Mitchell Brandtman conducted a site visit to the precinct, considered the original AECOM designs and likely requirements of a collector road upgrade for that stretch of road. In consultation with Council, it confirmed that, based on the current state of the bridge over the Killarney Chain of Ponds, there is a need for the bridge upgrade works even if the road will continue to be collector-classified only. It also confirmed accompanying design treatments, as previously proposed, are still required on safety grounds, including vertical realignment.

Mitchell Brandtman's report details the assumptions it has made regarding the upgrade works. All works, including the bridge and the main intersection with Windsor Road have been scoped and costed in more detail than the previous costing, which accounts for some of the cost variations from previous costings. The costing for the road corridor is less than 90% of the previous unit rate.

In summary, the recommended updated cost estimates for the Boundary Road upgrade, assuming it will be retained as a collector road, are as follows:

- $21,462,978 for the total Boundary Rd 20.8m wide corridor (collector road) upgrade
- $10,429,073 for the total Boundary Rd Bridge upgrade
- $1,169,625 for the total Windsor Road and Boundary Road intersection upgrade.

The original proposed full cost of the Boundary Road upgrade for apportionment purposes between the Vineyard Precinct and THSC Box Hill and Box Hill North precincts also included the following costs, which have not been re-estimated (and were not the subject of IPART's recommendation):

- $891,966 for 2 roundabouts funded by Box Hill Contributions Plan ($429,536 each), indexed.
- $1,038,290 for Menin Road and Pitt Town Road crest improvements under Box Hill North VPA, indexed.
- $1,127,677 for road resurfacing funded by Box Hill Contributions Plan, indexed.

Summing the relevant costs results in a total proposed cost for the upgrade works of $36,119,609, of which 43% (to represent the apportionment to the Vineyard Precinct) is $15,531,432. This is an increase of $58,397 on the proposed cost included in the contributions plan ($15,473,035).

Therefore, if there must be revisions to the cost estimates for the Boundary Road upgrade in the plan, based on the more up-to-date assessment of the necessary scope of works and cost estimates for a collector road upgrade only, Council submits that it should be for an increase of approximately $58,397 – or less than 0.5% (and not the $10.6m reduction recommended by IPART).

4.1.2 New collector road rate estimates (Recommendation 2)

IPART recommended (Rec. 2) that Council reduce the cost allowance from 20% to 10% for new collector roads by $417,808 in the plan to account for a lower contingency recommended by WTP in the estimates it prepared on behalf of DPE.

The unit rate for collector roads in the proposed plan was $3,097/m ($Mar18) and with 20% contingency the total cost rate was $3,717/m. Council contends this cost was conservative to begin with and updated cost estimates it has now received from Mitchell Brandtman suggest a higher base cost rate is more appropriate.

Council submitted to IPART originally with the plan the reasoning for the adoption of the 20% contingency to new (and upgrade) roadwork:

> WTP (in its final report) advised that (p 4):
>
> *"WTP have not included contingency within the estimates but would assume a rate of 10% would be reasonable for new roads and a range between 20%-30% would be reasonable for upgrading all existing roads. The IPART contingency benchmark of 20% is generally considered high for new works but reasonable for upgrading existing roads due to a higher amount of contingent risks such as staging, erosion and sediment control, property adjustments, traffic and pedestrian management, and relocating and upgrading existing authority mains."*
>
> For consistency across the plan, and to ensure enough funding is available for Council to meet the cost of the work, a contingency of 20% has been applied to the base cost estimates. This is considered reasonable in the context of WTP's advice above (given the ranges identified) and the aggregate cost rates for the roadwork in the plan. Further reasoning for the adopted contingency amounts in the plan is contained in the open space cost section below.[9]

The fact that there was a range to 30% for road upgrades in WTP's advice, even though 20% had been adopted for both new roads and upgrades in the proposed plan, has not been accounted for in IPART's draft recommendations.

IPART's draft report included a statement that suggests that it has recently endorsed higher new collector road rates in other plans it has assessed (e.g. in Rouse Hill precinct the base cost (we understand) was $3,679/m compared with $3,097/m in the Vineyard plan).[10]

When questioned by Council on the relevance of a higher overall cost allowance for roads in Rouse Hill (and why this wasn't taken into account by IPART in its assessment of this plan), the response from IPART was that "specifications are different."

But it is more likely that the costs would be lower in Blacktown's plan, not higher when a comparison of the specifications between the DCPs is drawn. The width of typical collector roads are 20m in Blacktown but 20.8m in Vineyard (see Figures 4 and 5 below).

---

[99] Council, SUBMISSION to IPART (for the Vineyard Precinct CP).
[10] IPART draft report for VPCP, p 32.

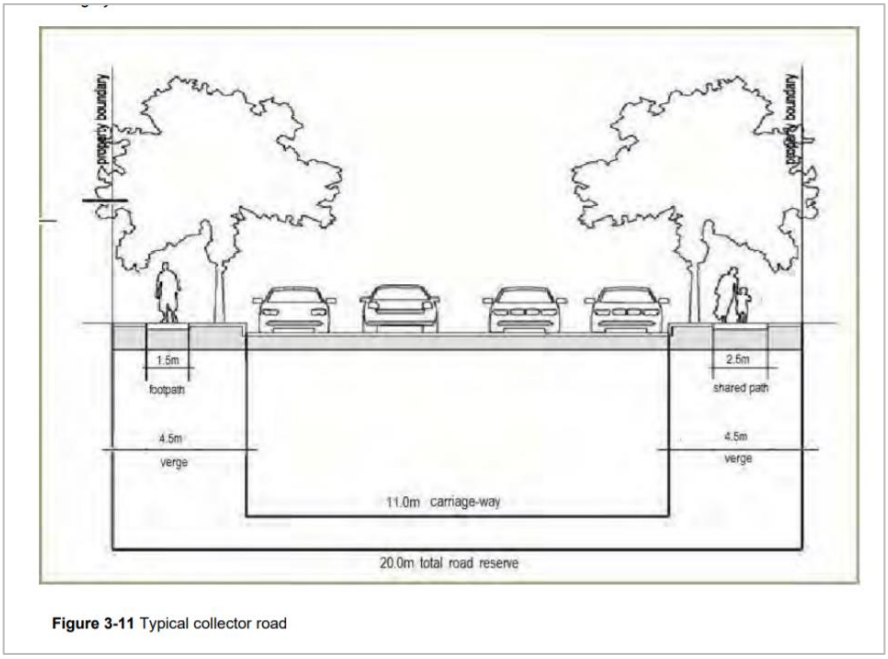
There are also questions about delivery scale between Blacktown City Council and Hawkesbury City Council in delivering new collector roads in greenfield sites, which if anything, would suggest Hawkesbury rates might be higher, particularly in a highly fragmented area like Vineyard.

Council also commissioned a review of the new collector road rates, based on current market rates, by Mitchell Brandtman (QS). These are considered superior to the WTP rates which are now around four years old.

The latest rates applicable to new collector roads in the Vineyard Precinct are $3,404 plus fees (design/PM/allowances) & contingency (10%), as recommended by Mitchell Brandtman (Appendix A).

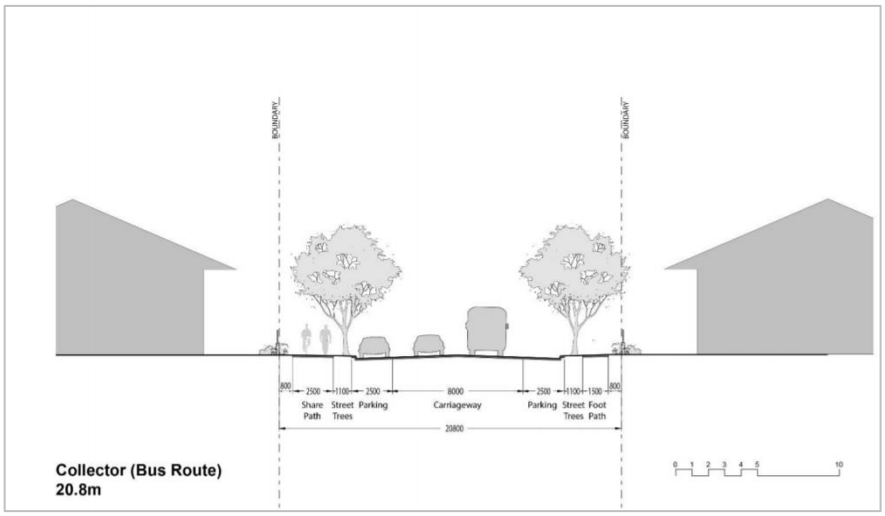
This amounts to $5,440,517 in collector road costs (for three new collector roads) - an increase of around $1.3m on the proposed costs in the plan. Council requests that these latest, more accurate cost estimates be approved for the Vineyard plan to ensure that Council has adequate funding to deliver the road network.

Figure 4 Typical Collector Roads in BCC Growth Centre Precincts Development Control Plan, July 2018



Source: DPE, *Blacktown City Council Growth Centre Precincts Development Control Plan July 2018*, p 50.

Figure 5 Typical Collector Roads in Vineyard Growth Centre Precincts Development Control Plan 2017



Source: DPE, *Hawkesbury City Council Growth Centre Precincts Development Control Plan 2017*, p 64.

4.1.3 Additional evidence for updated creek crossing costs

During the assessment process, IPART questioned Council as to why the plan adopted a rate for creek crossings based on the Camden contributions plan assessed by IPART in 2017/18. The DPE-prepared plan did not include any consultant cost estimates for the creek crossings and in the absence of any other estimates, consultants commissioned by DPE (GLN Planning) adopted the Camden-based rate as a substitute.

Council considered the specifications for the bridges and submitted to IPART a revised cost estimate of $250,000 per crossing broadly based on its own experience in delivering other bridge infrastructure within the Local Government Area.

In its draft report, IPART found that the total cost of the four cycleway creek crossings included in the plan if $404,706 needed to be retained (based on the Camden costing) on the basis that:

> The council advised the cost of cycleway creek crossings is likely to be too low given the bridges spanning Killarney Chain of Ponds creek system would need to be around 20-30 metres long. … The council provided no further information about the length or design of the bridges.
>
> It may well be the case that the span of the bridges will be in the range indicated by the council, but at this stage we do not have sufficient information about the specifications for the crossings, nor cost rates on which to base a finding and recommend a cost adjustment.[11]

Council considers that the length requirements that it advised IPART and its own bridge construction and cost experience forms a reasonable source of information in the plan and is superior to the Camden-based rate.

[11] IPART draft report for VPCP, p 36.

As part of preparing this submission, Council engaged J Wyndham Prince - an engineering firm with considerable experience in the design and costing civil infrastructure works in Sydney's greenfield areas – to inspect the proposed crossing sites and assess the crossing costs as part of its assessment of the Killarney Chain of Ponds channel stabilisation needs.

JWP's recommended unit rate (all-inclusive) cost for each of the crossings is $8,548 per metre, which when applied to the estimated length of each crossing, results in the estimated costs in Table 2.

Table 2 JWP's Recommended Cycleway Crossing Cost Estimates

Crossing	Estimated Length (m)	Estimated Cost
SBC 1	50	$427,500
SBC 2	100	$854,900
SBC 3	100	$854,900
SBC 4	90	$769,400
Total	340	$2,906,700

Note: costs may not equate based on the quoted unit rate due to rounding.

Council requests that IPART's final assessment report incorporate these new cost estimates by JWP which consider the likely specifications of each of the bridges. This would result in an increase of $2,421,053 on the Camden-based costs in the plan.

4.2 Stormwater works

4.2.1 Need for channel stabilisation works (Recommendation 7)

The Vineyard contributions plan prepared by DPE for Council had included $7,072,502 in channel stabilisation works along drainage channel 2 (DC2) of the Killarney Chain of Ponds. Council had always considered that it would need to undertake these works as a result of the development and linear open space along the riparian corridor where significant flooding risk occurs, and the plan was progressed to IPART with these works included.

The contributions plan explains that a key component of the stormwater drainage network included use of the capacity of the existing creek system to manage flood events. However, IPART concluded that a reasonable nexus does not exist for the works and so recommended (Rec. 7) that the full cost of the works be removed from the plan.

IPART's conclusion was based on a statement made in the water management study commissioned by DPE to help inform stormwater infrastructure requirements of the precinct prepared by Mott MacDonald. This report recommended creek embellishment works be carried out on first order streams only, and because DC2 was not a first order stream, there would be no need for the works as a result of new development.[12]

During the assessment process, IPART questioned Council about the need for the works. Responses from Council (which do not appear to have been acknowledged in IPART's draft report) included the following:

[12] IPART draft report for VPCP, p 43.

> …the bank stabilisation works for DC1 and DC2 were included in the draft plan prepared by the Department of Planning and Environment as necessary stormwater management infrastructure. Council supports the need for the works which are required to achieve the development outcome planned by the Department of Planning and Environment. This is particularly the case given the expected impact (potential for significant erosion) to the banks of these creeks once urban development occurs. Without the stabilisation works, it is expected that the banks will fail leading to considerable levels of complaint from adjoining urban development, and a higher level of maintenance costs to ensure ongoing stabilisation.[13]

And

> It should also be noted that the extent of this flooding that was experienced in February 2019 along the floodplain of Killarney Chain of Ponds further underlines the importance of Council undertaking the DC2 bank stabilisation works as included in the plan. … The DC2 works are required to mitigate the flooding impact on surrounding development. The extent of linear open space embellishment along the corridor that is required will have a significant impact of the stability of the corridor and it is critical that this work be undertaken to facilitate that development. Otherwise, increased flooding of the parks and other development is likely.[14]

In other recent assessments of contribution plans, IPART has applied a much different 'reasonableness test' with its assessment of nexus for channel stabilisation works and the weighting placed on Council's additional supporting information. For example,

- In its assessment of the Camden Growth Areas Contributions Plan (CGA-CP) (May 2018), it found that there was nexus for channel stabilisation works, without any justification in a technical study and with representation of Council advice throughout the assessment process, as follows:

  > CGA-CP includes the costs of stabilising existing watercourses (Channels C1, C2, C4 and C5) in Leppington North. These works were not included in Cardno's stormwater management strategy for Leppington North. Camden Council explained that the existing channels are required to efficiently convey stormwater in the precinct to ensure the development outcome planned by DPE. The costs include earth works stabilisation of exposed soil and are based on Council's experience with stabilisation works in other areas of Camden. We consider that Camden Council's explanation for including stabilisation works for existing watercourses in Leppington North in CGA-CP establishes nexus for these works.[15]

- In its assessment of the Menangle Park Contributions Plan (December 2018), it recommended that riparian regeneration works of $12.3m and $6m that were classified as open space embellishment be reclassified as stormwater management works, when not explicitly recommended in any supporting water management study. IPART stated that

  > … the stormwater management strategy which the council has adopted to meet water quantity objectives for the Menangle Park Urban Release Area is based on channel stabilisation, and a small number of detention basins. We therefore consider the revegetation and regeneration works are consistent with the essential works list but recommend that they are re-categorised as stormwater management works.[16]

[13] Council response to IPART information request, 17 February 2019.
[14] Council (email) response to IPART information request, 12 April 2019.
[15] IPART, *Assessment of Camden Growth Areas Contributions Plan - Camden Council - Final Report,* May 2018, p 44.
[16] IPART, *Assessment of Menangle Park Contributions Plan Campbelltown City Council – Final report*, December 2018, p 32.

Council considers that there is still an important need for the DC2 works, despite IPART's findings. Mott Macdonald's water management technical study has informed the infrastructure needs of the precinct, but it is not the only information that should be considered.

As a result of IPART's draft assessment report, Council commissioned J. Wyndham Price (JWP) to further assist in assessing the need for the works.

One of JWP's most experienced engineers who is familiar with infrastructure design and costing throughout the Western Sydney urban release areas - David Johnson - advised (Appendix B) that:

> A high level review of the need for channel stabilisation works within DC2/KCOP Creek was undertaken utilising the information presented in the Vineyard Precinct Post Exhibition Water Cycle Management Report prepared by Mott MacDonald (WCMS, MM Oct. 2017).
>
> It is important to note that the WCMS did not include an SEI (Stream Erosion Index) assessment. The SEI assessment measures the ratio of developed stream forming flow volumes against existing conditions stream forming flow volumes. Attenuation through stormwater quality management measures can be used to ensure that this ratio is no more than 3.5 – 5.0:1, with a stretch target of 1:1.
>
> The WCMS appears to provide stormwater quality and quantity management facilities that compensate for bypassing catchments. While un-attenuated catchments may not necessarily result in an increase in peak flow rates, the frequency of stream forming flows from unmanaged catchments is much greater and can lead to de-stabilisation of existing watercourses. Given that the existing rural/semi-rural catchment and watercourse is already under pressure due to development in the broader upstream catchment, DC2 channel stabilisation works would be justified in order to not only rectify existing channel degradation (which Council considers necessary to facilitate new development), but also to protect the watercourse from degradation due to the further urbanisation of the catchment.[17]

The relevant controls for stormwater management in the Hawkesbury City Council Growth Centres Development Control Plan (DCP 2017) were also reviewed by JWP. JWP found that the implementation of channel stabilisation works (DC2) would be consistent with the requirements of DCP 2017.

For these reasons, Council recommends that IPART reinstate the full cost of $7,639,814 in channel stabilisation works (DC2) in the plan, which represents important essential infrastructure in the Vineyard Precinct to facilitate new development.

4.2.2 Stormwater works contingency (Recommendation 9)

Council does not accept IPART's draft recommendation (Rec. 9) to reduce the percentage contingency estimate applied to stormwater works from 20 to 10%, which results in the reduction of $851,741 from the plan.

The stormwater works cost estimates in the plan were already very conservative to begin with and well below other cost estimates for similar works in North West Growth Area contributions plans that have been endorsed by IPART (as the comparison example over page shows).

IPART's recommendation is based on the statement by WTP in its cost estimation report, as follows:

---

[17] JWP, Letter to Council re: Vineyard Precinct Contributions Plan and Advice to IPART Review Recommendations, 24 June 2019, p 12.

> WTP have not included contingency within the estimates but would assume a rate of 10% would be reasonable for new works. The IPART contingency benchmark of 20% is generally considered high for works of this nature.[18]

Council provided in its application to IPART the following rationale for higher contingency estimates than WTP suggested was necessary:

> Contingencies were excluded from WTP's estimates. These were included in the plan to align with IPART benchmarks for projects at the 'business case' stage. It is acknowledged that WTP stated that, "WTP have not included contingency within the estimates but would assume a rate of 10% would be reasonable for new works …"
>
> It is also important to note that Council might need to deliver these works directly and cannot rely on works in kind by developers. Council does not have the same economies of scale or established pool of greenfield contractors available to it as other North West Growth Centre councils, where significant greenfield development has already occurred. Therefore, it is particularly important that adequate funding is available to meet the cost of this work (and any unforeseen costs such as contaminants in the soil being encountered on disposal).[19]

Council submits the following concerns with IPART's draft recommendation:

- WTP acknowledges that it did not specifically consider an appropriate contingency allowance in its recommendations. Thus, Council has given further consideration to an appropriate contingency to meet its likely delivery challenges, which also gave due consideration to the (relatively low) base cost estimates, but this appears to have been given no weight in the assessment by IPART.
- The overall cost allowance for stormwater management works in the Vineyard Precinct, which should be of most importance in determining the reasonableness of the overall infrastructure cost estimates for greenfield precincts at early stages of development.
- IPART has allowed a 20% contingency in other plans it has recently assessed (e.g. the adjacent Box Hill and Box Hill North plans), and it would be reasonable to expect a level of consistency in cost estimates and contingency approaches between similar greenfield precincts for the same type of infrastructure in the same region and areas of similar topography.
- Apart from the Box Hill 20% contingency comparisons, IPART has also allowed stormwater management works costs equivalent of an average of $369,670 per hectare of NDA in its recent (June 2019) draft assessment of the Schofields Precinct. This compares with $151,490 per hectare of NDA in the Vineyard plan. The precincts have similar geomorphological characteristics i.e. traversed by a substantial floodplain corridor. But the stormwater works cost allowance in the Schofields plan it has endorsed is almost two and a half times the allowance in the proposed Vineyard plan. Any cost reduction recommendation for stormwater infrastructure in the Vineyard plan in this context makes little sense to Council.
- JWP recommended a contingency of 30% for the creek crossings costs and noted that "At this stage of a project, we would recommend rates as … and Contingency (30%)." Soft ground materials and risk of flooding were also identified by JWP as key risk issues for infrastructure project delivery in the Vineyard Precinct.[20]

---

[18] IPART draft report for VPCP, p 45.

[19] Council, SUBMISSION to IPART (for the Vineyard Precinct CP), p 27.

[20] JWP, Letter to Council re: Vineyard Precinct Contributions Plan and Advice to IPART Review Recommendations, 24 June 2019.

Council recommends that due consideration be given to the reasonableness of the overall cost estimates for stormwater management works proposed in the Vineyard Precinct including the 20% contingency with a view to removing draft recommendation (9) and reinstating $851,741 in the plan.

4.3 Open space embellishment costs (Recommendations 10 and 11)

IPART made two recommendations to reduce the cost of open space embellishment in the proposed Vineyard Precinct Contributions Plan, as follows:

10. Revise the cost of open space embellishment by excluding the areas of ENV land from the total area of embellishment, which we estimate would reduce the cost of open space embellishment by $5,728,848, comprising:

    a. a reduction of $3,447,326 for District park 4
    b. a reduction of $2,281,522 for District park 5.

11. Reduce the contingency allowance applying to the base costs of open space embellishment from 15% to 10%, which we estimate would reduce the cost of open space embellishment by $1,945,608.

These recommendations together would reduce the original proposal cost of open space embellishment works of $28,416,706 by $7,674,456 or 27%.

Council does not accept the recommendation and maintains that the proposed original cost for open space provision as prepared by the DPE was more reasonable to begin with. In fact the cost allowance in the plan appears to be too low based on current market rates and more detailed 'inclusions' advice, which are shown in new embellishment cost rates commissioned by Council to inform this submission.

IPART's recommendations appear to have not considered the actual likely cost of provision of open space embellishment in native vegetation protection areas and along riparian corridors. This information is available in its recent (December 2018) assessment report of another North West Growth Area precinct contributions plan, that of Blacktown City Council's Rouse Hill. This comparison is discussed in more detail below but the important matters to note are that:

- the Vineyard plan had proposed an average rate of just $\$86/m^2$ in total for all passive park embellishment (with playgrounds and other inclusions), on average, whereas
- IPART recommended a rate of embellishment of $\$92/m^2$ for the Rouse Hill plan for riparian embellishment (with no playgrounds or amenities) incorporating ENV areas (noting it also endorsed much higher rates for other forms of park embellishment in that plan).

In response to IPART's questions about open space embellishment during the assessment process, Council identified that WTP's costings (commissioned on behalf of DPE in preparing the plan) for open space were very high level and had omitted amenities buildings at each of the parks.

Council commissioned new cost estimates of all open space embellishment by Mitchell Brandtman with detailed, site-specific inclusions to inform this submission and its proposed revised cost estimates for all areas of open space embellishment. These estimates, if allowed to be included in the plan, will ensure that that there is adequate funding collected in contributions to fund open space facilities with base level embellishment, as intended by the State Government's Indicative Layout Plan for Vineyard.

4.3.1 Cost of embellishing ENV land

IPART's entire justification included in its draft assessment report for recommending a nil allowance for embellishment of ENV land in the RE1 zoned areas of District parks 4 and 5 is as follows:

> Given there are restrictions on how ENV land can be treated, it is reasonable to assume that the area of ENV land within a park would not be embellished to the standard on which the square metre cost has been estimated.
>
> We therefore recommend the council remove the cost of embellishing the areas of open space land with ENV from the plan.[21]

IPART has not allowed a reduced embellishment rate for ENV areas or a review of costs applicable to the open space zoned land (40,127m^2 in DP4 and 26,557m^2 in DP5). The assumption seems to be that the areas do not need to be integrated into the existing facilities, are already densely vegetated or could simply be left in their current state to form part of the open space facilities.

None of these are reasonable assumptions in Council's view.

First, there is a requirement specifically for integration of the ENV lands into the open space facilities under the Growth Centres SEPP.

Second, the lands are not densely vegetated and are in need of regeneration to facilitate the objectives of the Final Indicative Layout Plan for the Vineyard Precinct. The landscape analysis by Place Design Group (2016) which informed precinct planning noted how "Possible impacts (of development) could be minimised with the retention of Alluvial woodland vegetation along the creek line and rehabilitation and revegetation."[22] The analysis had identified a clearance rate of 80-100% in these areas, broadly, at pre-development.

For passive open space land, the plan had proposed an effective average rate of embellishment for the passive areas of RE1 land of \$86/m^2 (excluding contingency, \$Mar18).

IPART's recommendations for a nil cost for embellishing ENV lands result in an effective average rate of passive open space embellishment throughout the precinct of \$57/m^2 (excluding contingency, \$Mar18). This includes local parks.

Council notes that IPART has formed a different position on ENV land embellishment and a reasonable cost allowance for open space embellishment in its recent (December 2018) assessment of the Rouse Hill Contributions Plan.[23] These findings are considered highly relevant because the area covered by the Rouse Hill Contributions Plan is in close proximity to the Vineyard precinct and exhibits similar characteristics of ENV land aligning with creeklines.

The cost rates approved in the Rouse Hill assessment, based on the advice of QS Morrison Low commissioned by IPART, are as below:

- Landscape type 1 (understood to be riparian embellishment, including on ENV land, excluding amenities, play space and other inclusions) - \$92/m^2

[21] IPART draft report for VPCP, p 52.
[22] Place Design Group for DPE, *Vineyard Precinct Landscape & Visual Analysis Report*, November 2016.
[23] IPART, *Assessment of Contributions Plan 22 for Rouse Hill (Area 20 and Riverstone East),* December 2018.

- Landscape type 2 (understood to be district park embellishment excluding amenities, play space and other inclusions) - $114/m^2$

- Landscape type 3 (understood to be local park embellishment excluding amenities, play space and other inclusions) - $196/m^2$.[24]

Figures 6 and 7 include the areas of open space in the Rouse Hill Contributions Plan where the average of the recommended rate by IPART for riparian embellishment ($92/m^2$) would apply, together with the overlay native vegetation retention (NVR)/ENV map. Much of these areas are "non-certified" ENV land (within the red dashed line circles) as applies in the Vineyard precinct district parks.

By comparison, IPART has recommended an effective rate of embellishment of $57/m^2$ for the Vineyard plan, and this is to include the main (non-flood affected) district park for the precinct.

Figure 6 NVR/ENV layer map in Growth Centres SEPP (relevant to Rouse Hill)

Source: NSW Legislation website

[24] IPART, *Assessment of Contributions Plan 22 for Rouse Hill (Area 20 and Riverstone East),* December 2018, p 67.

Figure 7 Blacktown CP 22W (Rouse Hill) showing park items

Source: Blacktown Section 7.11 Contributions Plans 22L and 22W

Hawkesbury City Council must ensure that it can provide the new Vineyard community with adequate open space facilities, which is of paramount importance in an area of dense urban development.

Elton's social infrastructure needs study noted the following about existing open space provision for the community:

> The Hawkesbury Regional Open Space Strategy concludes the following in relation to open space provision in the Oakville/Vineyard/Mulgrave area:
>
> - Distribution is highly scattered and diversity is very limited
> - The majority of open space has a sports-based use
> - Local open space provision (especially for passive recreation) is very low
> - Sports reserves lack amenity
> - With the exception of the nearby Scheyville National Park, open space in these townships is very limited.[25]

Elton recommended a total provision of 21.2 hectares to meet the 2.83 hectare per 1,000 people standard benchmark. If you exclude the embellishment needs of the ENV areas entirely, Council is left with only 19.5 hectares of open space for the community, an under provision of 1.7 hectares. Therefore, it is critical for the ENV areas to be accessible to the community with appropriate walking tracks and/or buffers for protection of rehabilitation activities introduced where necessary.

It is quite reasonable to assume that some peripheral clearing of vegetation might even need to be investigated (especially if there was weed inundation, for example). These considerations will need to be addressed at the master planning and (more detailed) environmental assessment stage of

[25] Elton Consulting, *Social Infrastructure Assessment for Vineyard Precinct Stage 1*, November 2016, p 31.

each of the facilities. What is clear to Council is that there are legitimate costs involved in embellishing the ENV areas and also risks in delivering these facilities as intended by the Indicative Layout Plan, and both the likely cost and risk needs to be properly accounted for in the base level and contingency estimates for embellishment provision in the Contributions Plan.

During the assessment process, IPART had asked Council about the ENV lands in the RE1 facilities. Council acknowledged the fact that the costings were high level and that it would be reasonable for a lower standard of embellishment to occur on these particular land areas (where there is ENV land) than other park areas (although detailed designs for facilities were not available) but that there would still be embellishment costs incurred for the ENV lands.

Council also advised IPART that it had since identified that the WTP costings prepared for DPE in 2015, which were high level, omitted amenities buildings at each of the parks. Amenities buildings would be a necessary inclusion in more detailed designs, and so Council proposed the following:

> Based on recent cost estimates by Mott MacDonald (QS report for Wilton, dated December 2018) local park amenities cost $250,000 per facility and district park amenities cost $550,000 per facility. Including these amenities costs in the open space cost estimates (for 6 local parks and 3 district parks) would add approximately $3.15 million to the plan, and likely offset reduced embellishment costs for native vegetation (ENV) areas.[26]

This advice about the amenities buildings was not acknowledged in IPART's draft assessment.

Therefore, to address IPART's concerns about the ENV lands and contingencies in its draft report, and to ensure the cost estimates are as accurate as possible, Council commissioned Mitchell Brandtman (QS) to prepare updated open space embellishment cost rates, including a separate rate for bushland regeneration works, as set out below.

4.3.2 Updated open space embellishment cost estimates

Mitchell Brandtman's estimates (Appendix A) address some of the shortcomings of the original high level, generic cost estimates (including the omission of the amenities buildings) and are based upon current market rates.

The following cost rates are proposed:

- $165/m^2 for local parks plus fees (design/PM/other) and contingency
- $112/m^2 for district parks plus fees and contingency (applied to DP5 non-ENV area)
- $95/m^2 for riparian parks with play space plus fees and contingency (it is considered that at least one set of equipment would be needed in each of these larger 'district' park areas – P4 and P7)
- $30/m^2 for bushland regeneration works plus fees and contingency (applied to the ENV areas only in DP4 and DP5)
- $154/m^2 for sporting fields plus fees and contingency
- Contingencies of 10% (except 5% for bushland regeneration works).

[26] Council response to IPART information request, 17 February 2019.

The application of these cost rates in the plan results in an estimated $3.8m[27] more in costs for open space embellishment overall but the updated costs are required to deliver the open space facilities as intended in the Indicative Layout Plan to the Vineyard community.

4.4 Land values

4.4.1 Constrained land value (Recommendation 13)

IPART's draft report recommends (Rec. 13) that the value of constrained land be reduced from $100/m^2 to $85/m^2, which results in a total cost reduction in the plan of $4,129,950. We note this accounts for 39% of IPART's net cost reduction recommendations for land acqusition in the plan.

IPART stated its reason was because it had considered that:

> … cost estimates for constrained land identified in the plan, are not reasonable, and not supported by sufficient market evidence.[28]

Council rejects this statement because the constrained land rate proposed by Council is based on solid market evidence.

The $100/m^2 average rate for constrained land in the plan is recommended by the valuer, K.D Wood Valuations, who was originally commissioned on behalf of the Department (DPE) to provide the estimate for the likely land acquistion costs to be incurred by Council in administering the plan.[29]

IPART's assessment of the constrained land rate is based on the premise that there is insufficient sales evidence to support K.D Wood Valuation's original valuation opinion.

The lack of relevant sales evidence within the boundaries of the Vineyard Precinct is a reality of the early stage of development in Vineyard and lack of actual relevant sales that have occurred to date. Professional valuation judgment, based on a broader market perspective, is certainly required. However, specific to constrained land within the Vineyard Precinct, IPART already has knowledge of three separate valuer opinions that $100/m^2 is a reasonable estimate, and all advice was made independent of Council.

In particular, during the assessment process, IPART was provided with evidence from a compensation case by the NSW Valuer General (informed by International Valuation & Property Services (IVPS) preliminary advice) for an actual acquisition by Council for fully constrained (100% flood liable) land within the Vineyard Precinct. The land was described in the IVPS advice as follows:

> Based on the accurate flood extent maps, the entire area of the Acquired Land (1.309ha) is inundated during the 100 year ARI event.[30]

---

[27] $3,841,871.

[28] IPART, *Assessment of Vineyard's Contributions Plan – Hawkesbury Shire Council -Draft Report*, May 2019 (IPART draft report for VPCP), p 3.

[29] KD Wood Valuations (Aust.) Pty. Ltd, Letter re: Vineyard Sec. 94 Contributions Plan - North West Growth Area, 27 October 2017.

[30] IVPS, *Determination of Compensation For Compulsory Acquisition of Land by Hawkesbury City Council Part 5 O'Dell Street Vineyard, NSW, 2765 Identified as Lot 32 in Deposited Plan 1244602, Date of Gazettal: 22 February 2019 – Preliminary Report,* p 34.

Based on the IVPS advice, the Valuer General subsequently decided that the market value for the land should be $100/m^2 plus compensation costs. If this was accepted by the landowner, the actual costs in the Contributions Plan would therefore be $100/m^2 plus compensation costs and Council's other expenses (conveyancing, legal etc).

There is already evidence to suggest that this decision is being appealed by the landowner on the basis that the land still has some development potential, despite it being 100% flood liable, and that Property NSW is now reviewing advice obtained to this effect from the owner to reconsider the value.[31] Therefore, a higher, potentially substantially higher, rate than $100/m^2 could be payable by Council. This is the reality of the challenges and costs faced by Council in acquiring land for infrastructure needs in the Vineyard Precinct.

IVPS explained in detail in their report which land would be most similar to the flood liable land in the Vineyard Precinct to inform its decision of the $100/m^2 rate. It considered that the most appropriate sales evidence for the land was as presented in Table 3 below.

Table 3 Most Comparable Sales for 100% Flood Liable Land in Vineyard Precinct identified by Valuer General (advising valuer) in April 2019

Address	Suburb	Sales date	Sales price	Land area	Zone	Shows
5 Putland Place	Vineyard	19/05/2017	$2,100,000	2.024 ha	E4, RE1, E2	$87/sqm
149 Foxall Road	North Kellyville	23/10/2018	$3,125,000	2.459 ha	E4	$111/sqm
6 St James Road	Vineyard	24/03/2018	$4,000,000	2.027 ha	RU1	$143/sqm
36 Level Crossings Road	Vineyard	03/11/2017	$3,100,000	2.203 ha	RU4	$145/sqm
20 Bruce Place	North Kellyville	02/02/2018	$3,420,000	2.026 ha	E4	$164/sqm
					Average	$130/sqm

None of these sales incorporate a land value of $85/m^2 or lower, which is recommended by IPART. The lowest is $87/m^2, and IVPS reported that this was inferior land with greater flood affectation to the O'Dell property; the other sales were higher land values than $100/m^2, but with less flood affectation generally.

Despite the IVPS report and the Valuer General's consideration of its recommendations being made available to IPART by Council during the assessment (17 April 2019), IPART did not acknowledge this information in its draft assessment report.

IPART also commissioned its own land valuation advice in mid-May 2019, two weeks before it released its draft assessment report, to inform another significant cost reduction recommendation it sought to make to land values in the plan (see Section 4.1.3 below).

In its advice to IPART, the valuer (Lunney Watt & Associates Pty Ltd) states that the $100/m^2 for constrained land (as an average rate applied to relevant land acquisitions in the plan) is "within

[31] This information can be provided to IPART by Council on request.

acceptable market parameters".[32] Further, Lunney Watt & Associates recommended that $100/m^2 be applied to the constrained land in their assessment. Once again, this advice was not acknowledged by IPART in its draft report in discussing its reasons for the $85/m^2 recommendation on constrained land.

Council is very concerned that such material evidence described above was not acknowledged in the draft IPART assessment.

Instead, IPART's recommendation is based on valuation reports (by MJDavis) that were commissioned by Blacktown City Council (BCC) (in 2017 and 2018) to inform its land valuation estimates for its own contribution plans.[33] The reports are not publicly available, but Council has since been provided with copies after the release of IPART's draft report.

IPART had stated that the reports had identifed than an average of lands considered by that value for the relevant Blacktown City lands was $85/m^2. Therefore, IPART had considered that this average should automatically apply to the Vineyard Precinct.

However, this position by IPART ignores the following facts:

- The advice IPART has relied upon is for Blacktown City constrained land, not for Vineyard Precinct land. The sales evidence for constrained land used in the valuation advices provided for CP20 (Riverstone) and CP22 (Rouse Hill) are based mainly on land sales within precincts outside of the Riverstone Precinct.
- In the most recent valuation advice (2018) to BCC, MJDavis referred to seven sales evidence examples – one in West Schofields, five in Shanes Park, one outside a release area altogether and one in the Vineyard Precinct. The one sale example in the Vineyard Precinct (June 2017) shows a constrained rate of $104/m^2, much higher than all the other example rates in the report. It is 100% flood affected land but noted as superior to the other sale example sites in Blacktown.
- IPVS, in providing advice to inform the Valuer General's compensation decision, considered that The Hills Shire land provided the best sales comparisons for Vineyard Precinct land, and that Blacktown Precincts such as Riverstone Precinct land were also comparable, but to a lesser extent.

It is also of note that these other MJDavis valuation reports value residential (R2) land (undeveloped) for the North West Growth Area consistently higher than the $300/m^2 that is proposed in the Vineyard contributions plan. Instead, the range reported for R2 land is consistently between $350-450/m^2. IPART has not recommended a higher R2 unconstrained land rate in Vineyard which would be consistent with the MJDavis reports – or at least a review of the $300/m^2 rate. It has just accepted that rate as reasonable but has used the MJDavis valuation advice to justify its lower $85/m^2 constrained land rate recommendation. This approach appears to be selective and inconsistent.

In response to IPART's draft assessment, Council commissioned KD Wood Valuations, the registered valuer originally commissioned by DPE, to obtain an updated opinion on land values in

---

[32] Lunney Watt & Associates Pty Ltd, Letter to IPART re: *Consultancy Advice – Vineyard Release Precinct Hawkesbury Local Government Area*, 15 May 2019 (Lunney Watt advice), p 13.

[33] MJDavis Realty Appraisals, Valuation Reports (*Periodic Review of Proposed Contributions Plan No.22 – Rouse Hill – Average Estimates Land Values as at 1 November 2017* and *Periodic Review of Contributions Plan No. 20 – Riverstone & Alex Avenue Precincts – Average Estimated Land Values as at 26 May 2017* (both for Blacktown City Council).

Vineyard and IPART's recommendations (Appendix C). KD Wood maintained the opinion that constrained land should be valued at $100/m^2$ as an average in the plan, and advised that:

> While it is acknowledged that significant increases in the value of R2 land do not (because of the constrained nature of SP2 Drainage land) result in similar increases in the value of these lands (constrained lands), [however] it is noted that the value of R2 land has increased by 60% from January 2016 to January 2019, (so) one would contemplate that a 20% increase would be warranted. Such increase is illustrated by recent sales of constrained en globo lands.[34]

and that:

> These sales with February 2016 are all dated and reflect rates from $85/m^2$ to $164/m^2$. It would not in my opinion be unreasonable to apply an 18% increase to constrained land in light of more recent sales evidence, considering the market for residential englobo land has increased 60% since January 2016 i.e. from $250/m^2$ to $400/m^2$.
>
> I note that in the Submission forwarded by Mr Lunney of Lunney & Watt valuers, he proposes a rate of $100/m^2$ for constrained land .. [35]

Under IPART's draft recommendation on flood-liable land rates, Council estimates that it would already experience underfunding by 16% of the actual costs to be incurred for the current land acquisition of 1.309 hectares of fully flood-liable land (and this also excludes Council's additional legal /conveyancing costs).[36]

For all the reasons above, Council considers that a $100/m^2$ estimate for constrained land in the plan is based on solid market evidence and more than adequate supporting information. Thus, it clearly complies both with the Environmental Planning & Assessment legislation for section 7.11 plans and DPE's Practice Note requirements for reasonable cost estimates with approriate supporting information.

Of particular concern to Council is that IPART has not demonstrated that the constrained land cost rate, as presented in the plan to IPART, is manifestly unreasonable. Section 7.11(2) of the Environmental Planning and Assessment Act 1979 requires that contributions imposed on consents are 'reasonable'. Council has demonstrated that the constrained land rate is so.

Council's view is that IPART's terms of reference in assessing contributions plans do not extend to mounting an opposing case for a different, lower cost rate with a selective use of certain market evidence only. Land values can be somewhat unpredictable to begin with and Council and Hawkesbury community are already exposed to considerable risk when landowners in compulsory or forced acquisition cases will usually seek the highest price possible. Should actual land acquisition costs prove materially different to the estimates (higher or lower), then the onus would already be on the Council to review the plan within a reasonable timeframe.

Given all of the circumstances described above, Council requests that IPART remove this recommendation (Rec 13) for a lower constrained rate from its final findings altogether.

---

[34] KD Wood Valuations (Aust.) Pty. Ltd, Advice to Hawkesbury Shire Council re: IPART draft report on the Vineyard CP, 24 June 2019, p 15.

[35] KD Wood Valuations (Aust.) Pty. Ltd, Advice to Hawkesbury Shire Council re: IPART draft report on the Vineyard CP, 24 June 2019, p 20.

[36] Council has provided IPART with these details and which acquisition this applies to, and can provide more information if requested.

4.4.2 Value of transmission easement land (Recommendation 13)

IPART's draft recommendation 13 also stated that Council should use a $120/m^2$ rate for the transmission easement land in the Vineyard Contributions Plan rather than the proposed $150/m^2$. This would result in a small cost reduction in the plan of $61,132, as estimated by IPART.

Although the amount is relatively small, Council submits that IPART's position is not justified.

KD Wood Valuations recommended a market range of $120-$150/m^2$ for the 0.2 hectares of transmission easement land to be acquired in the plan.[37]

On being questioned by IPART during the assessment process on the applied rate of $150/m^2$, Council submitted that it considered that it was prudent to adopt the higher rate (referring to when the plan commenced), especially since it was conservative in other respects (e.g. no contingency costs for land values were proposed originally in the plan).

IPART's reasoning (in its draft report) for its recommendation of $120/m^2$ is as follows:

> For transmission easement land, recent valuation advice from another valuer (engaged by other councils in the NWGA) consistently refers to a Land and Environment Court decision that land encumbered by a transmission easement shows a 60% discount to an underlying R2 land value. In the Vineyard CP context, a 60% discount to the R2 land value results in a value for transmission easement land of $120 per square metre. This is within the $120-$150 per square metre range recommended by the council's valuer but is below the $150 per square metre applied by the council.[38]

and that:

> The Hawkesbury City Council has not provided any justification for applying the highest value recommended by its valuer.[39]

Council's main concerns with IPART's position are as follows:

- The independent valuer commissioned on behalf of DPE to value the land originally (K.D Wood Valuations) would appear to form a reasonable justification for the land value adopted by Council – why wouldn't Council, acting with appropriate caution, ensure it had a land value within the higher of the recommended parameters in the plan, especially for such a small area of transmission easement land?
- The justification by IPART for the lower rate refers to "recent valuation advice from another valuer" which relates to IPART's other Blacktown City Council advice to inform its $85/m^2$ recommendation.
- The 60% discount rule is only a broad guide; KD Wood Valuations submits it is 50-60%.
- MJDavis, in the same valuation advice to BCC referred to by IPART in its report, also stated that transmission land should be *at least* $135/m^2$ when circa one third of the land to be acquired is subjected to this constraint. For the relevant lots with easement land, the easement areas make up around one third of the lot areas.

---

[37] KD Wood Valuations (Aust.) Pty. Ltd, Letter re: Vineyard Sec. 94 Contributions Plan - North West Growth Area, 27 October 2017.

[38] IPART draft report for VPCP, p 61.

[39] Ibid.

K.D Wood Valuation's response to IPART's draft recommendation for a lower transmission easement land value is as follows:

> The percentage discount is normally within the range of 50% to 60% of the unconstrained rate depending on the "imposition" of the easement on the land i.e. land affected by an easement if the adopted unconstrained rate be \$300/m^2 would be within the range of \$120/m^2 to \$150/m^2 and \$350/m^2 would be \$140/m^2 to \$175/m^2.[40]
>
> I note IPART has recommended a rate of \$120/m^2 which is at the lower end of the range notwithstanding the developers will be contending Council pay the dispossessed owner rates commensurate with the high end on the basis that compensation be weighted in favour of the dispossessed owner.[41]

Once again, Council submits that the estimate of \$150/m^2 for transmission easement land was reasonable to begin with and appeals to IPART to remove this recommendation (Rec. 13) from its final findings altogether.

4.4.3 Valuation of District Park 5 (Recommendation 14)

IPART recommended (Rec 14) that Council remove a further \$7,527,714 in costs for land with an underlying zoning of R2 for District Park 5 to reflect the restricted development potential of the presence of native vegetation of land on the site. The land costs were originally estimated to be \$11.8m; IPART has recommended a value of \$4.2m.

Council had applied an average underlying zoning rate of \$300/m^2 (R2) to the site zoned RE1 (for open space/recreational purposes). IPART's draft recommendation is instead based upon:

- Applying the same average rate for other constrained land (\$85 per m^2) to the 26,557 m^2 designated as ENV (native vegetation land).
- Applying the unconstrained rate (\$300 per m^2), discounted by 50% ecology risk/cost, to the remaining portion of the land that is non-certified (12,388 m^2).

This cost reduction is significant, amounting to 9% of the original land costs in the plan submitted to IPART.

Council does not support this recommendation. It is based on a highly questionable assumption about the interpretation of the Land Acquisition/Just Terms legislation and the classification of the land in the context of the rezoning process, as well as IPART's constrained rate preference of \$85/m^2. Accordingly, it exposes Council and the Hawkesbury community to considerable financial risk in the plan.

Council also has concerns about the process IPART has followed in making such a significant cost-reduction recommendation:

- IPART has formed its view based solely on the advice of a valuer, Lunney Watt and Associates Pty Ltd provided to it on 15 May 2019 following IPART's request for advice on 13 May 2019.

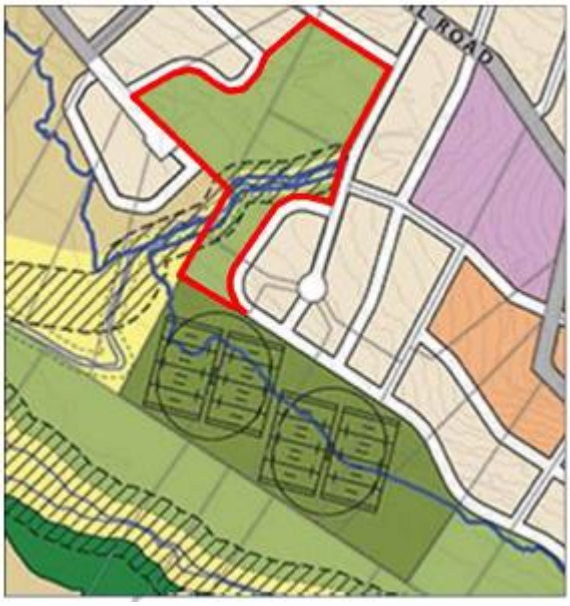
---

[40] Note that an updated average value for R2/R3 land (\$350/m^2), as recommended by K.D Wood Valuations, is discussed by Council further below in Section 4.1.4.

[41] KD Wood Valuations, Advice to Hawkesbury Shire Council re: IPART draft report on the Vineyard CP, 24 June 2019, p 21.

- IPART still selectively deviated from the Lunney Watt advice, devaluing the site further from $4.5m to $4.2m to apply a constrained land rate of $85/m^2 when the advice recommended $100/m^2.
- Council was not asked any questions from IPART about the valuation of this particular site throughout the (six month) assessment process and did not know it was an issue until the public release of the draft report (31 May 2019). This is particularly concerning given the complexity and sensitivity of the issues that this particular recommendation encompasses, and how questionable the main assumption is in the valuation advice it has relied upon.

District Park 5 is shown below in the segment of the Vineyard Precinct Indicative Layout Plan with the red border and predominantly, a surrounding low density development zoning - R2 (light brown area):



Source: Lunney Watt advice (p 5) based on segment of ILP related to DP5.

As IPART's valuer (Lunney Watt) stated:

> The concept of an Underlying Zoning is well established in valuation principle and relevant case law and is generally understood to be the zoning which would have applied to the Acquisition Land <u>if the proposal to carry out the particular public purpose for which the land is to be acquired did not exist and had never existed</u>.[42]

It is worth highlighting that the plan had applied the $300/m^2 rate to all relevant land with an underlying zoning of R2 land, *as an average*. This does not mean that all specific land sites in the plan will be exactly valued at this rate – as Council acquires individual sites, some will likely be lower (potentially DP5) and some will likely be higher.

IPART, in its review of CP21 for BCC, has previously dismissed arguments to deviate from the average rate in the plan based on specific site estimates:

[42] Lunney Watt advice, p 10.

> We consider that in the absence of any information about the extent of work required to make the land developable, any alternative rate, including a midpoint, is arbitrary. The averaging methodology has been used across all land to be acquired by the council and it would be inconsistent to adjust the approach for certain properties only. For some properties where there is a mix of constrained and unconstrained land, the rates paid by the council might be closer to the underlying zoning rate (and therefore the higher land value rate), while in others, the rate might be closer to the lower, constrained rate. The averaging approach helps to smooth these differences over the total land acquisition costs in the plan.[43]

In recommending a lower value for DP5 in the Vineyard Precinct plan, IPART explained its position as follows:

> In its application of average land values the council has not accounted for the presence of protected vegetation in District Park 5, which is located towards the middle of the precinct. The plan includes $11.8 million for the acquisition of this park.
>
> Post-exhibition of the Indicative Layout Plan, the land forming District Park was re-classified as "Non-Certified" land pursuant to the relevant biodiversity measures of the Biodiversity Certification Order (See Figure 9.1). This means that vegetation cannot be removed without environmental assessment, and onerous conditions of any development approval may be imposed by the relevant consent authorities, including the requirement to purchases expensive Biobanking Ecosystem Credits.[44]

In forming the view that the underlying zoning was not to be adhered to in this particular site valuation but instead that the valuation was to be based on the environmental constraints of the land, IPART followed the advice of Lunney Watt & Associates (15 May 2019). Lunney Watt argued that Section 56 of the Just Terms Act was to be disregarded, as follows:

> If the fact were to be that the designation of the District Park 5 as "ENV" pursuant to the Native Vegetation Protection Map and/or the re-classification of District Park 5 to "Non-Certified" land pursuant to the BCO was caused by the Council's proposal to acquire District Park 5 in the future for public recreation purposes, it would be necessary to ignore any restrictions or development constraints which are suffered as a result of these matters. This would be necessary to give effect to the Section 56 statutory disregard.
>
> From my review of the foregoing chronology, there does not appear to me to be a sufficient causal connection between the Council's (future) proposal to acquire District Park 5 and the ENV designation or the Non-Certified land classification. In fact, there does not appear to be any nexus or causal connection at all.[45]

Council does not accept these statements about the relationship between the zoning of the land as RE1 – thus, Council's need to acquire it - and the non-certification of the ENV land. The 'chronology' of relevant events in the planning process suggests quite the opposite.

DPE's Finalisation Report for Vineyard, dated November 2017, states:

> The main changes to the ILP post-exhibition include:
>
> Increasing the retention of ENV. This has involved increasing the amount of open space and relocating the playing fields.[46]

---

[43] IPART, *Assessment of revised Section 94 Contributions Plan No 21 – Marsden Park*, August 2017, p 53.
[44] IPART draft report for VPCP, p 61.
[45] Lunney Watt advice, p 12.
[46] DPE, *Vineyard Precinct Stage 1 Finalisation Report*, November 2017, p 5.

In DPE's post-exhibition consistency assessment report on biodiversity, dated October 2017, one month before it released the final rezoning of the Vineyard Precinct, it states

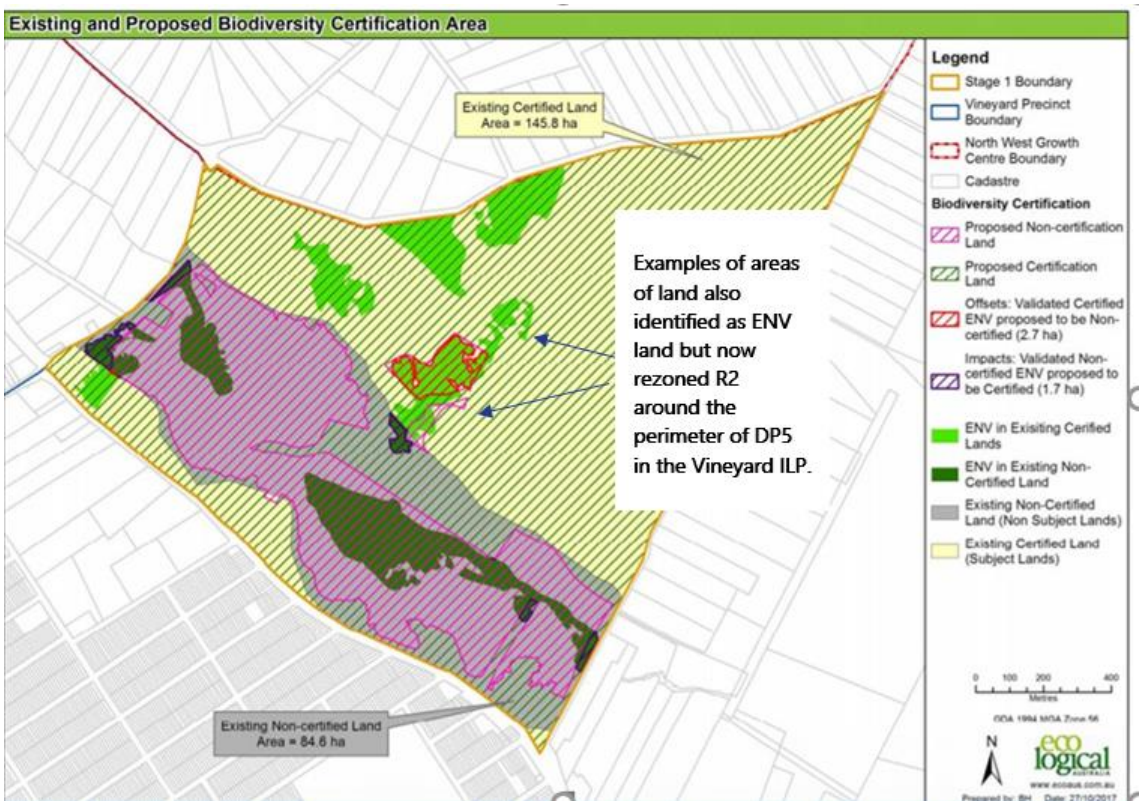
> There will be a 1.5 ha loss of CPW in non-certified lands however this will be offset by the retention of 1.8 ha of EPBC CPW in currently certified land. [47]

And

> The SEPP amendment will provide a clause that prevents the clearing of ENV in certain areas (principally in the non-certified land) as shown on the Native Vegetation Protection Map.[48]

Figure 8 shows the map of the Vineyard Precinct and the proposed new non-certification areas of the land previously certified which was proposed to occur through the rezoning process (where it was in turn also rezoned RE1).

Figure 8 Existing and Proposed Biodiversity Certification Area in DPE Post-Exhibition Consistency Assessment Report, October 2017



Source: DPE, *Growth Centres Strategic Assessment Program Assessment of Consistency between the Commitments of the Strategic Assessment Program And Vineyard Precinct Stage 1 October 2017 Update post-exhibition,* p 8.

Land just northeast of DP5 where there is still ENV land is now zoned R2 and has retained its certified status accordingly. This demonstrates how Lunney Watt's assumption that earlier identification of the land as ENV (but still certified) should result in the 'section 56 statutory disregard' and that instead, the ENV land in DP5 could still have been zoned differently in the precinct planning process if the native vegetation outcomes elsewhere were different (e.g. because

[47] DPE, *Growth Centres Strategic Assessment Program Assessment of Consistency between the Commitments of the Strategic Assessment Program And Vineyard Precinct Stage 1 October 2017 Update post-exhibition,* p 16.
[48] Ibid.

enough vegetation was being protected in the Vineyard Precinct or broader North West Growth Area – instead of making way for other development.)

For clarity, the relevant definition of market value in Section 56 of the *Land Acquisition (Just Terms Compensation Act) 1991* is as follows:

> (1)... market value of land at any time means the amount that would have been paid for the land if it had been sold at that time by a willing but not anxious seller to a willing but not anxious buyer, disregarding (for the purpose of determining the amount that would have been paid):
>
> (a) any increase or decrease in the value of the land caused by the carrying out of, or the proposal to carry out, the public purpose for which the land was acquired ...

The devaluation of the land caused by the proposal to zone the land RE1 should therefore be disregarded under the Act. There is no qualifying statement in the Act about ENV land in this circumstance. Also, at around the same time the DP5 land was rezoned RE1, it was also deemed that much of the area would become 'non-certified' to protect more vegetation, as the planning reports detail. This does not render the 'statutory disregard' obsolete; on the contrary, it demonstrates how the non-certification of the land was itself part of the rezoning process (relevant to RE1 land).

Lunney Watt, in its advice to IPART, also appears to link the presence of the vegetation to the disregard to Section 56, which Council would argue (with reference again to Figure 8) is incorrect:

> The native vegetation which exists on District Park 5 is a physical characteristic and constraint of the land. The existence of this vegetation, and consequential constraint was not caused by any proposal of the Council to acquire District Park 5 in the future, for public recreation purposes.[49]

Council acknowledges that there would be additional costs from clearing vegetation for development purposes but it is unlikely to result in the extent of discounting to the underlying zoning value that Lunney Watt and IPART have recommended.

KD Wood Valuations was asked by Council for its opinion on the value of District Park 5 including the application of the underlying zoning in the valuation and Lunney Watt's view of 'section 56 statutory disregard'. KD Wood's response is as follows:

> In my opinion, if land is reclassified to permit a usage as a public park for sporting and recreational uses, a Valuer in the determination of Market Value, Section 56, must attribute an "alternative" or "underlying" zoning to the land. If the adjoining land use be 'R2' residential, then the value must be assessed on this basis.
>
> In the determination of a rate per m^2 attributable to the land any physical constraints inherent in the composition of the land must be brought to account e.g. flooding. The vegetation on the land would only be an issue were the land "certified".[50] The fact that it was certified before rezoning but has since been reclassified would surely negate this issue or require a developer to offset the area of native vegetation by the purchase of Bio-Credits through the Office of Environment and Heritage as a Condition of Development Consent.[51]

---

[49] Lunney Watt advice, p 12.

[50] KD Wood Valuations has further explained that this statement means that if it's considered to be certified originally it must be brought to account in the applied (underlying rate) for any presence of vegetation.

[51] KD Wood Valuations, Advice to Hawkesbury Shire Council re: IPART draft report on the Vineyard CP, 24 June 2019, p 22.

KD Wood Valuations has valued DP5 to be $10m, which is $5.7m more than the IPART valuation as set out below:

> It is considered that an appropriate rate of District Park 5 be at the rate of $300/m^2 i.e. 350/m^2[52] less $50/m^2 for likely contingencies[53] and the riparian corridor.
>
> Adopting a total area as per item 9.2 of the IPART report of 38,945m^2 of which we estimate approx. 9.000m^2 is the subject of the riparian corridor (constrained) and 29,945m^2 is now 'Non-Certified' or otherwise potentially developable produces the following:
>
> Constrained Land (Riparian Corridor) estimated at 9,000m^2 @ $100/m^2 = $900,000 plus
>
> 29,945m^2 @$300/m^2 = $8,983,500
>
> Total = $9,883,500 say (rounded to be) $10,000,000.[54]

This valuation by KD Wood Valuations does not disregard section 56 of the Just Terms Compensation Act. It does also account for the riparian corridor land in DP5 and presence of the native vegetation with a discount factor applied to the underlying rate (now estimated to be $350/m^2) accordingly. Council contends that this 'discounting approach' is still against the averaging methodology applied in the plan (based on the underlying zoning) but would be more comfortable with this site-specific valuation than the one IPART has recommended.

Therefore, Council supports the KD Wood valuation, as opposed to the valuation recommended by IPART, and requests that IPART incorporate it into the final report, together with the other land cost adjustments requested based on new information, as outlined in the two sections below.

As a final point, Council wishes to again acknowledge the complexity and sensitivity of the land valuation of DP5 and that, at this stage, it is impossible to be certain about the final valuation that might be accepted by a landowner or ultimately, determined by the Valuer General or the Land and Environment Court.

Council should still be entitled to include a reasonable cost estimate for all land for essential infrastructure purposes in the Vineyard Precinct Contributions Plan based on a conventional interpretation of the land acquisition legislation.

4.4.4 Higher R2/R3 average rate

In its recent advice to Council, KD Wood Valuations has recommended that the average rate for R2/R3 land in the plan (for underlying zoning purposes) be revised from its 2017 estimate of $300/m^2 to $350/m^2:

> … in light of more recent sales evidence and the rates adopted in the neighbouring precincts of Marsden Park, Marsden Park North and Box Hill, we consider this rate should be revised to $350/m^2. This would bring the rate in line with that adopted by Blacktown Council and the Department of Planning in these release precincts for land of similar topography and in close proximity to the subject, in fact, land within the Elara Estate, Stockland and New Park Estate, Winten was increased to

---

[52] This is now the recommended underlying zoning rate for R2 land as explained in Section 4.1.4.

[53] This is for clearing vegetation or other activities required to make the land developable and not factors such as compensation, valuation or legal fees.

[54] KD Wood Valuations, Advice to Hawkesbury Shire Council re: IPART draft report on the Vineyard CP, 24 June 2019, p 22.

> $385/m^2$ for Voluntary Planning Agreement (VPA) purposes in line with market movements. The rate of $350/m^2$ is supported by the following market transactions (sales evidence then shown).[55]

Based on the land acquisition estimates in the proposed plan originally submitted to IPART, but assuming the KD Wood Valuation for DP5 ($10m), the total land acquisition estimates in the plan would increase from $79.5m to $83.7m with an average R2/R3 rate of $350/m^2, a net increase of approximately $4.2m.[56]

Council submits that the higher average rate of $350/m^2 for land with an underlying zoning of R2 or R3 should be incorporated into the final plan assessment by IPART, with the necessary cost increases accordingly.

As noted in Section 4.1.2, this rate of $350/m^2 is also more consistent with the other land value rates recommended by MJDavis (the valuer referred to by IPART for its constrained rate recommendation) for englobo land to be developed for residential purposes in other precincts of the North West Growth Area.

4.4.5 Contingency for additional land acquisition costs

The Vineyard Precinct draft contributions plan prepared by DPE did not include any allowance for contingencies to cover compensation in land acquisitions or associated legal, conveyancing and other costs.

Council did not include these costs when progressing the plan to IPART because it considered the overall cost allowances recommended were reasonable. However, its first acquisition of land in the Vineyard Precinct has already demonstrated the significant costs and risks it is exposed to without an appropriate allowance for these specific costs in the plan.

It's first land acquisition has not yet been settled, but Council estimates that it will incur a minimum of around 10% of the land cost estimate in the proposed plan in additional costs, and potentially more like 10-12% with the compensation decision currently under review by Property NSW. Much of this cost is associated with high Valuer General fees for valuation and compensation determination services.[57]

Council understands

that other councils, such as Camden Council, have included an allowance for contingencies in its land acquisition cost estimates for greenfield contributions plans at very early stages of development. For the Camden Growth Areas Contributions Plan, Camden Council proposed a 12% contingency be allowed in that plan based on a consultant's advice and this was endorsed by IPART in its final assessment report (May 2018), as follows:

> Camden Council's land cost estimates in CGA-CP include a contingency allowance of 12% of the estimated market value, based on advice from MJ Davis. This allowance is included to cover the cost of any just terms compensation that the council may be required to pay a landowner under the Land Acquisitions (Just Terms Compensation) Act 1991 (Just Terms Compensation Act). This includes compensation for matters such disturbance, relocation, legal costs, valuation fees and stamp duty

---

[55] KD Wood Valuations, Advice to Hawkesbury Shire Council re: IPART draft report on the Vineyard CP, 24 June 2019, p 22.

[56] $4,194,748.

[57] Council can provide additional supporting information about this matter, including the additional costs incurred in this acquisition and the Valuer General fees on request of IPART.

associated with a compulsory acquisition. We prefer that any just terms compensation costs in contributions plans are based on fixed costs rather than a percentage of the estimated market value.

This is because:

- the components of the likely compensation comprise mainly fixed costs, and
- market values can vary significantly, making a percentage approach less accurate.

However, we consider that the 12% contingency allowance included in CGA-CP is reasonable at this stage of development in Leppington and Leppington North, because:

- it is based on the professional opinion of an external valuer, and
- with minimal development in the precincts, Camden Council would likely have to pay the full suite of relevant compensation under the Just Terms Compensation Act.[58]

Council notes that 12% of its original total land acquisition costs in the Vineyard Contributions Plan would be an additional $9.5m, all else being equal.

Council proposes that a 10% allowance by included in the Vineyard Precinct Contributions Plan which is consistent with its experience with its first acquisition in the plan and the advice of KD Wood Valuations.

This amounts to an additional $8.4m[59] in costs in the plan (assuming an R2/R3 average rate of $350/m^2 and the DP5 valuation recommended by KD Wood Valuations ($10m).

It is submitted that IPART incorporate this allowance into its final recommendations to reduce compliance costs for Council and other stakeholders and delaying the plan adoption.

4.5 Loan interest costs in plan

4.5.1 Reason for loan interest costs submitted (Recommendation 16)

Council included the cost of a loan to fund collector road survey and design costs and certain stormwater facility costs, to bring forward the delivery of this critical enabling infrastructure. Just before Council submitted the application and plan to IPART for assessment (November 2018), it received a letter from DPE (October 2018) advising that it had been successful in applying for the 50% subsidy for the interest costs under the NSW Government's Low Cost Loan Initiative.

Council supports the principle of Rec. 16 to revise the interest costs in the plan if required to take into account IPART's recommended adjustments for other infrastructure costs (when endorsed by the Minister), and the value of the subsidy under the NSW Government's Low Cost Loan Initiative.

However, Council wishes to make one comment. IPART stated in its draft assessment that:

> The council has unintentionally included the total interest costs of $3,383,996 in the plan, rather than 50% of the interest costs.[60]

---

[58] IPART, *Assessment of Camden Growth Areas Contributions Plan - Camden Council - Final Report,* May 2018, pp 86-87.
[59] $8,365,310.
[60] IPART draft report for VPCP, p 64.

Council has advised IPART that at the time of preparing the plan and preparing/gaining Council approval for the submission to IPART, that it was not yet granted any subsidy, so it still had to include the full amount of interest at that time.

The application form submitted to IPART as part of its application for assessment explained that:

> Council has applied for a 50% interest subsidy for the loan costs via the NSW Government's Loan Cost Loan Initiative (with its applications due 1 July), and pending the outcome of this application, will amend the plan to reflect the actual interest costs to Council.[61]

Council considered that, should it be granted the loan subsidy, it was reasonable for the plan interest costs to be adjusted before final adoption, post-IPART's assessment. The draft plan had already been exhibited in May/June 2018 with the full interest costs when it was still not yet known whether Council would be granted any subsidy. Council did not know when it would be notified of the outcome of its loan application. Also, when it was notified of the successful loan application, it still did not yet have many of the details regarding the loan agreement.

Council requests that the main reason as to why the subsidized loan interest was not included in the plan submitted to IPART for assessment, which is due to the timing of the Low Cost Loan Initiative decision, is properly represented in IPART's final report.

[61] Council, SUBMISSION to IPART (for the Vineyard Precinct CP), p 8.

5 Conclusion

In this submission, Council has raised its concerns with IPART's draft report on its assessment of the Vineyard Precinct Contributions Plan. This covers the process followed and information relied upon for many of its large cost reduction recommendations, and the inconsistencies between this assessment and other plan assessments by IPART, particularly related to its assessment of reasonable cost.

In this submission, Council has proposed a number of changes to the original proposed plan originally prepared by DPE, to address IPART's recommendations and to update the plan for more accurate cost estimates and current market rates.

Given the long timeframe that the original plan was prepared over (since 2015), and the additional assessment time of the draft plan by IPART since the end of2018, this is considered the most efficient process by which to update the plan at this time.

Council proposes the following cost changes to the Vineyard Precinct Contributions Plan, all based on the opinions of professional consultants with considerable experience in costing/valuing the relevant land or infrastructure:

- An increase in the Boundary Road upgrade works cost (apportioned to Vineyard only) of $58,397
- An increase in the new collector road costs of $1,262,438
- An increase in the total creek crossing costs of $2,421,053
- Higher average R2/R3 land rate of $350/m^2 and valuation for District Park 5 recommended by KD Wood Valuations, which results in a net increase in land acquisition costs of $4,194,748
- An increase for land acquisition contingencies not yet accounted for (10%) of $8,365,310. These adjustments aggregate to $16.3m or 10% of the original proposed plan costs.

Combined with IPART's other cost-related recommendations accepted by Council, the net impact on the proposed contributions plan for the Vineyard Precinct is an increase of $20.1m.

This level of funding in the plan provides the necessary certainty that the essential infrastructure required by the new Vineyard community will be delivered without burdening the rest of the Hawkesbury community with the costs.

Council requests that these changes be incorporated into IPART's final report to reduce the compliance costs for Council (and other stakeholders) associated with plan delays, thereby facilitating the progression of development and infrastructure in the Vineyard Precinct.

Appendices

Appendix A – Mitchell Brandtman, Advice to Council re: updated cost estimates for Boundary Road upgrade works, new collector roads and open space embellishment, 27 June 2019

Appendix B – J Wyndham Prince, Advice to Council re: IPART's channel stabilisation works recommendation and creek crossing costs, 24 June 2019.

Appendix C – KD Wood Valuations (Aust.) Pty Ltd Advice to Council re: IPART's land value recommendations, 24 June 2019.

MitchellBrandtman

5D Quantity Surveyors & Construction Expert Opinion

Vineyard Precinct Local Infrastructure Section 7.11 Contributions Estimates

Vineyard Precinct – Updated Local Infrastructure Section 7.11 Contributions Estimates

Prepared for:

GLN Planning

C/- Hawkesbury City Council

Matthew Kritzler
Associate
mkritzler@mitbrand.com
02 9541 8000

27th June 2019

Issue 1.0

1 INTRODUCTION

As requested, we have prepared updated estimates of local council contribution costs to undertake the public infrastructure works in connection with the proposed masterplan of the Vineyard Precinct.

The estimate is based on available documentation including AECOM '*Boundary Road Strategic Concept Design Study'* dated 26 February 2013.

The local council contribution costs include the following:

- Transport Infrastructure including Boundary Road Upgrade including new bridge and Windsor Road Intersection upgrade and new collector roads;
- Open Space Infrastructure including local parks, district parks, sporting field, riparian open space and bush regeneration.

2 INFORMATION USED

The following documentation and information has been used in the preparation of the Section 7.11 Contributions Estimate:

- GLN Planning Vineyard Precinct Section 7.11 Draft Contributions Plan dated July 2018;
- IPART '*Assessment of Vineyard Contributions Plan'* dated May 2019;
- AECOM '*Boundary Road Strategic Concept Design Study'* dated 26 February 2013;
- Elton Consulting '*Social Infrastructure Assessment for Vineyard Precinct Stage 1*' dated 16 November 2016;
- Hawkesbury City Council Growth Centres Precinct *'Development Control Plan 2017*';
- Hawkesbury City Council *'Vineyards Precinct (Stage 1) Planning Report*' dated 2016;
- Hawkesbury City Council *'Vineyards Precinct (Stage 1) Finalisation Report*' dated November 2017;
- NSW Planning and Environment '*Vineyard Discussion Paper*' dated June 2014;
- Arup '*Vineyard Precinct Transport Study'* dated November 2017;
- IPART's Local Infrastructure Benchmark Costs Final Report, dated April 2014.

3 SCOPE OF WORKS

The following table details the scope of direct construction costs included in the Section 7.11 Contributions Estimate;

Table 1 – Direct Construction Costs

LAND ACQUISITION	
Land Acquisition	Land values have been provided by others.
ROADS AND TRANSPORT	
Boundary Collector Road Upgrade	Requirements have been estimated based on the Hawkesbury City Council Growth Centres Precinct *'Development Control Plan 2017*', page 64, '*Typical Collector Road*' and AECOM '*Boundary Road Strategic Concept Design Study'* dated 26 February 2013. The reserve width is as per the DCP for a typical corridor collector road at 20.8m wide in lieu of the 23m wide sub-arterial road included in the AECOM report dated 26 February 2013. As the proposed collector road is an upgrade of an existing rural asphalt road the following specific items have been included in the estimate. The majority of specific items have been included due to complexity of constructing the new road to revised vertical and horizontal alignments: • Temporary basin prior to the chain of ponds during construction; • Dewater, remove sediment and make good existing basin at chainage 1350 after construction; • Demolition of the existing road; • Traffic management in connection with construction of existing road and maintaining access to existing residents; • Construction staging requirements will be required due to road vertical and horizontal alignment changes at approximate chainages 120, 550, 1450 and 1900; • Adjustment of existing property entrances; • Adjustment of existing property fences to suit revised road alignment; • Upgrade of the intersection at Commercial Road with a roundabout;

ROADS AND TRANSPORT (Cont'd)	
Boundary Collector Road Upgrade (Cont'd)	• Allowance to connect stormwater running off existing subdivisions to proposed collector road drainage; • Culvert under road at chainage 1350 to connect creek to the existing basin; • Relocation of existing overhead high voltage and low voltage mains, potable water main and communication conduits due to revised horizontal and vertical road alignment changes; The road corridor includes soil and water management, clearing, stripping topsoil, bulk earthworks, road bases, asphaltic concrete, line marking, signage, kerb and gutter, stormwater, subsoil drainage, street lighting and landscaping. The road carriageway is to be 13m consisting of 2 x 4m travel lanes, 2 x 2.5m parking lanes including kerb and gutter. The composition is to be subgrade replacement where required, 200mm subbase, 150mm base, two coat hot bitumen flush seal and 50mm asphaltic concrete. Roads are to be line marked and street signage is to be installed. Stormwater has been allowed to reticulate down one side of the road with crossovers. Footpaths are a combination of 2.5m shared path and a 1.5m pedestrian path to each side of the road. 10m high street poles have been allowed. Street trees and turf to verges have been included with an allowance to seed disturbed areas such as embankments. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.
Boundary Road Bridge Upgrade	The bridge width is based on the DCP for a typical corridor collector road at 20.8m wide and adjusted to 18.2m as the landscape verge is not required. The bridge width of 18.2m has been determined with 8m carriage way 2 x 2.5m travel lanes, 2.5 shared path, 1.5m footpath and allowance for safety barriers, kerbs and balustrades. The vertical alignment has been determined based on the AECOM '*Boundary Road Strategic Concept Design Study'* dated 26 February 2013. Raising the bridge height is required due to existing flooding issues and "*Killarney Chain of Ponds 100 year flood level of 19.8m*".

ROADS AND TRANSPORT (Cont'd)	
Boundary Road Bridge Upgrade (Cont'd)	Due to the revised vertical alignment of the bridge the new bridge will need to be constructed on a revised horizontal alignment or a temporary bridge will need to be constructed on a revised alignment to enable the new bridge to be constructed. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.
Boundary Road and Windsor Road Intersection Upgrade	The intersection is based on the AECOM '*Boundary Road Strategic Concept Design Study'* dated 26 February 2013. Chainages 0 to 80 have been included in these costs. Scope includes excavation, subgrade improvements, bases, asphaltic concrete, reinforced concrete, pram ramps, kerbs and gutters, line marking and signals including supply of power, RMS design and WAD fees. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.
New Full Width Collector Road	Requirements have been estimated based on a 20.8m total road reserve. The reserve width is as per Hawkesbury City Council Growth Centres Precinct *'Development Control Plan 2017*' Typical Collector Road. The road corridor includes soil and water management, clearing, stripping topsoil, bulk earthworks, road bases, asphaltic concrete, line marking, signage, kerb and gutter, stormwater, subsoil drainage, street lighting and landscaping. The road carriageway is to be 13m consisting of 2 x 4m travel lanes, 2 x 2.5m parking lanes including kerb and gutter. The composition is to be subgrade replacement where required, 200mm subbase, 150mm base, two coat hot bitumen flush seal and 50mm asphaltic concrete. Roads are to be line marked and street signage is to be installed. Stormwater has been allowed to reticulate down one side of the road with crossovers. Footpaths are to be a 2.5m shared path on one side and a 1.5m pedestrian path on the other. 10m high street poles have been allowed. Street trees and turf to verges have been included with an allowance to seed disturbed areas such as embankments. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.

OPEN SPACE	
Local Park With Play Space	Local Parks is based on an area of 11,500m². Scope includes soil and water management, stripping and respreading topsoil, bulk earthworks, turfing, mass planting, mature tree planting, paved/hardstand areas, BBQ facilities, picnic tables, bench seats, bike racks, shelter area, lighting, signage, water bubblers and garbage bins. A male, female and accessible amenities building has been included. A play space consisting of 3 small size pieces of play equipment, soft fall, shade and fence has been included. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.
District Park With Play Space	District Parks is based on an area of 65,000m² Scope includes soil and water management, stripping and respreading topsoil, bulk earthworks, turfing, mass planting, mature tree planting, paved/hardstand areas, carpark, BBQ facilities, picnic tables, bench seats, bike racks, shelter area, lighting, signage, water bubblers and garbage bins. A male, female and accessible amenities building has been included. A play space consisting of 2 medium size pieces of play equipment, 6 small size pieces of play equipment, soft fall, shade and fence has been included. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.
Sporting Field	Sporting Fields is based on an area of 82,000m². Scope includes soil and water management, stripping and respreading topsoil, bulk earthworks, construction of playing fields including drainage, irrigation to sports grounds, residual turfing, mass planting, mature tree planting, practice nets, fitness equipment, paved/hardstand areas and carpark areas. Amenities building including clubhouse change rooms, meeting space, canteen, storage, spectator seating, bike racks, lighting, signage, water bubblers and garbage bins. Refer to Mitchell Brandtman detailed estimate for full details of inclusions. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.

OPEN SPACE (CONT.)	
Riparian Open Space With Play Space	Riparian Open Space is based on an area of 10,000m². Scope includes soil and water management, stripping and respreading topsoil, bulk earthworks, turfing, mass planting, mature tree planting, paved/hardstand areas, BBQ facilities, picnic tables, bench seats, bike racks, shelter area, fitness equipment, lighting, signage, water bubblers and garbage bins. A play space consisting of 2 small size pieces of play equipment, soft fall, shade and fence has been included. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.
Riparian Corridor – Medium Embellishment	Riparian Corridor with medium Embellishment is based on an area of 5,000m². Scope includes clearing and grubbing, ameliorating topsoil, silt fence, jute matting, forming corridor, scour protection and planting. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.
Bush Regeneration	Bush regeneration is based on an area of 40,000m². Scope includes weeding, clearing, propagating seeds, planting, maintenance and integration of paths and interpretative signage. Refer to Mitchell Brandtman detailed estimate for full details of inclusions.

The following table details the scope of indirect costs included in the Section 7.11 Contributions Estimate;

Table 2 – Indirect Costs

Preliminaries	6.5% - 18%	The following preliminaries costs has been included in the Section 7.11 Contributions Estimate: • Upgrade Boundary Collector Roads – 10%; • Upgrade Boundary Collector Roads Bridge – 18%; • Upgrade Boundary Road and Windsor Road Intersection – 15%; • New Collector Road- 6.5%; • Open space - 8%. These have been included for indirect construction costs associated with preparation of traffic and pedestrian management plans and control, site fencing and barriers, contractor establishment on site, supervision and management of construction works, floating large plant to and from site, notices and fees, insurances, surveying and setting out, dust control, safety fences, services searches, insurances, cranes, scaffolding, subcontractor management and demobilisation.
Margin	5% - 6%	The following margin has been included in the Section 7.11 Contributions Estimate: • Roads, intersections and open space – 5%; • Bridges - 6%. Margin has been included for all profit to procure works identified in the Section 7.11 plan.
Long Service Levey (LSL)	0.35%	0.35% has been included for all long service levy payable on all construction projects
Professional Fees	7% - 14%	The following professional fees has been included in the Section 7.11 Contributions Estimate: • Upgrade Boundary Collector Roads – 9.5%; • Upgrade Boundary Collector Roads Bridge – 14%; • Upgrade Boundary Road and Windsor Road Intersection – 12.5%; • New Collector Road- 6%; • Open space - 7%. Professional fees includes for the contracting of consultants including surveyors, planners, architects, civil engineers, structural engineers, landscape architects, services engineers, geotechnical engineers and other specialist

Environment Approvals	1%	Allowance for work required under the EPA Act, including planning assessments, to gain approvals through local council and NSW Government if required.
Project Management	2.5 – 3.5%	The following project management fees has been included in the Section 7.11 Contributions Estimate: • Upgrade Boundary Collector Roads – 3.5%; • Upgrade Boundary Collector Roads Bridge and Windsor Road Intersection – 3.5%; • New Collector Road- 3%; • Open space – 2.5%.
Contingency	7.5-20%	The following contingency has been included in the Section 7.11 contributions estimates to account for contingent risks that may have been omitted due to the strategic nature of design.: • Upgrade Boundary Collector Roads – 15%; • Upgrade Boundary Collector Roads Bridge and Windsor Road Intersection – 20%; • New Collector Road- 7.5%; • Open space - 10%.

4 SCHEDULE OF EXCLUSIONS

The following exclusions have been made in the preparation of the Section 7.11 Contributions Estimate:

- Removal of asbestos, restricted and hazardous waste including on-site stabilisation of contaminated material;
- Legal fees, taxes and duties;
- Land acquisition and holding costs;
- Authority services to new collector roads other than street lighting;
- Lot access kerb and driveways to lots on new collector roads;
- Potable water, sewer, telecommunications, gas and electrical reticulation in connection with new collector roads other than street lighting;
- Public art to local park;
- Escalation beyond June 2019;
- GST.

5 SCHEDULE OF ASSUMPTIONS

The following assumptions have been made in the preparation of the Section 7.11 Contributions Estimate:

- Work will be tendered on a competitive basis as the cost we have included have been benchmarked against similar large scale civil projects;
- Works can be undertaken under traffic and pedestrian control during business standard business hours;
- Bulk earthworks quantities to construct roads;
- Road pavement composition;
- Demolition of existing dwellings and other miscellaneous structures in connection with new collector roads;
- Amplification of existing authority mains including services required to be relocated due to roads being upgraded;
- Refer to Mitchell Brandtman estimates for full details of assumptions;
- Land acquisition rates have not been estimated by Mitchell Brandtman;
- Indirect costs have been based on similar projects undertaken by Mitchell Brandtman and benchmarked against percentages outlined in IPART's Local Infrastructure Benchmark Costs Final Report, dated April 2014.

Yours Sincerely

MITCHELL BRANDTMAN

Matthew Kritzler
Associate

Attachment 1 – Estimate of Costs

Attachment 1
Estimates

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Boundary Road 20.8m Wide Corridor Collector Road Upgrade

Description of Work	Quantity	Unit	Rate	Total
Road Parameters				
Road Length - Based on previously agreed length	1,769	m		
Bridge Length	125	m		
Windsor Road and Boundary Road Intersection	80	m		
Corridor width - based on Hawkesbury City Council DCP 2017	20.8	m		
Road area	36,796	m²		
Bridge Area - assume 18.2m width (8m carriage way, 2 x 2.5m parking, 2.5 shared path, 1.5m footpath and kerbs)	2,275	m²		
Road lanes - 2 x 4m	14,152	m²		
Parking lanes - 2 x 2.5m	8,845	m²		
Verge - 7.8m	13,798	m²		
1.5m footpath - 1.5m	2,654	m²		
2.5m footpath - 2.5m	4,423	m²		
Landscape - 7.8m - 1.5m - 2.5m = 3.8m	6,723	m²		
SOIL AND WATER MANAGEMENT				
Generally in accordance with Council, Dept Environment and Climate Change and Landcom's (Blue Book) Managing Urban Stormwater - Soils & Construction				
Stabilised site access - allow for 2 each side and each end for staged construction	4	No	$ 3,500.00	$ 14,000.00
Silt fence to lower side of the road	1,769	m	$ 15.00	$ 26,535.00
Temporary basin prior to creek to capture sediment	1	Item	$ 35,000.00	$ 35,000.00
Dewater, remove sediment and makegood existing basin at chainage 1350 after construction	1	Item	$ 25,000.00	$ 25,000.00
Straw bale bund	107	No	$ 75.00	$ 8,025.00
SUB-TOTAL SOIL AND WATER MANAGEMENT				**$ 108,560.00**
DEMOLITION & EARTHWORKS				
Clearing of existing vegetation	24,413	m²	$ 0.75	$ 18,309.75
Remove tress adjacent road (some large mature trees that will require removal under traffic management	114	No	$ 1,250.00	$ 142,500.00
Sawcut, mill existing road and remove base and subbase (assume 7m)	12,383	m²	$ 35.00	$ 433,405.00
Extra over to remove General Solid Waste (15% of demolished area at 200mm depth)	-	t	$ 225.00	Excluded
Traffic management in connection with road upgrade including allowance for crews, signage and barriers	36,796	m²	$ 12.50	$ 459,950.00
Strip topsoil to stockpile - assume 100mm stripping	2,441	m³	$ 4.50	$ 10,985.85
Cut to fill (assume 90% of the original cut/fill material allowed due to reduction of road corridor width from 23m to 20.8m)	78,750	m³	$ 12.00	$ 945,000.00
Remove excess cut fill from site	70,650	m³	$ 35.00	$ 2,472,750.00
Replace stripped topsoil on site	2,441	m³	$ 5.00	$ 12,206.50
SUB-TOTAL EARTHWORKS (LUMP SUM)				**$ 4,495,107.10**
ROAD AND PATH CONSTRUCTION				
13m Wide Road Corridor (2 x 4m wide centre lanes and 2 x 2.5m wide parking lanes)				
Prepare, trim and compact under roads	25,651	m²	$ 2.95	$ 75,671.00
200mm subgrade replacement/improvement - 30%	1,540	m³	$ 80.00	$ 123,200.00
200mm Sub-base	5,024	m³	$ 98.00	$ 492,348.08
150mm Base	3,450	m³	$ 115.00	$ 396,750.00
Two coat hot bitumen flush seal	22,997	m²	$ 9.00	$ 206,973.00
2 x 25mm asphaltic concrete	22,997	m²	$ 32.00	$ 735,904.00
2.5m Wide Shared Path				
Prepare, trim and compact under pathways	4,423	m²	$ 2.95	$ 13,048.00
2 Micron Black Plastic	4,423	m²	$ 4.00	$ 17,692.00
50mm Sand Bedding	4,423	m²	$ 8.00	$ 35,384.00
150mm Concrete 25MPa with SL82 Mesh, 50mm cover	4,423	m²	$ 85.00	$ 375,955.00
1.5m Wide Shared Path				
Prepare, trim and compact under pathways	2,654	m²	$ 2.95	$ 7,830.00
2 Micron Black Plastic	2,654	m²	$ 4.00	$ 10,616.00
50mm Sand Bedding	2,654	m²	$ 8.00	$ 21,232.00
125mm Concrete 25MPa with SL72 Mesh, 50mm cover	2,654	m²	$ 80.00	$ 212,320.00
Concrete Works *(rates include surface preparation, supply, formwork, lay, joint, finish and cure)*				
Kerb and Gutter	3,538	m	$ 75.00	$ 265,350.00
Kerb ramps (over and above kerb and pavement rate) - assume 1 per 50 on each side of road	6	each	$ 550.00	$ 3,300.00

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Boundary Road 20.8m Wide Corridor Collector Road Upgrade

Description of Work	Quantity	Unit	Rate	Total
Miscellaneous				
Allowance for staging requirements to switch roads from existing to new at approximate chainage 120, 550, 1450 and 1900 to allow work to progress - allowance for temporary and sacrificial pavement	4	No	$ 25,600.00	$ 102,400.00
Adjustment of property driveway entrances to suit vertical realignment of road upgrade	20	No	$ 3,500.00	$ 70,000.00
Extra over to extend driveways between chainages 1450 and 1850	4	No	$ 10,000.00	$ 40,000.00
Adjustment of property fences to suit road corridor (not all fences will be required to be adjusted - combination of rural wire and picket, rural timber and wire, timber and property fences)	1	Item	$ 233,508.00	$ 233,508.00
Roundabout intersection at Boundary and Commercial Roads	1	Item	$ 440,000.00	$ 440,000.00
W-Beam and trailing terminals from chainage 120 to 520 (bridge measured separately)	550	m	$ 175.00	$ 96,250.00
Signage *(rates include supply, setout, fixings, poles, placement, installation, footings and traffic controls)*				
Sign Post - assume 1 per 50 on each side of road	72	each	$ 275.00	$ 19,800.00
Linemarking *(rates include supply, setout, placement, curing and traffic controls)*				
L1 separation line	3,538	m	$ 3.50	$ 12,383.00
S6, BS or BB dividing line including raised pavement markers	1,769	m	$ 12.00	$ 21,228.00
Edge line	3,538	m	$ 3.50	$ 12,383.00
Testing				
CBR verification and pavement testing	1	Item	$ 40,245.00	$ 40,245.00
SUB-TOTAL ROADS AND ASSOCIATED PAVEMENTS				**$ 4,081,770.08**
STORMWATER DRAINAGE				
Pipework *(rates to include excavation and trenching in OTR, supply, bed, place, joint and backfill)*				
DN375 RCP Class 2 (assumed smallest size pipe for cross overs)	885	m	$ 165.00	$ 145,942.50
DN675 RCP Class 2 (assumed average size pipe for main lineal run)	1,769	m	$ 375.00	$ 663,375.00
Extra over for backfilling with granular fill under roads	382	m^3	$ 60.00	$ 22,926.00
Extra over for excavating in rock	696	m^3	$ 120.00	$ 83,520.00
Subsoil drainage to roads (one side of road and allowance for connections)	2,123	m	$ 50.00	$ 106,140.00
Flushing points to subsoils (1 per 80m)	27	each	$ 160.00	$ 4,320.00
Pits *(rates to include excavation in OTR, supply, bed, place, grates, step irons, benching and backfill)*				
Kerb inlet pit with Class "D" grate and 2.4m Lintel - 1 per 25m of pipework	107	each	$ 3,250.00	$ 347,750.00
Structural design certification of pits	107	each	$ 135.00	$ 14,445.00
Miscellaneous				
Allowance for headwalls, scour protection, GPTs and connection to existing systems near bridge and culvert crossing - large from north	2	No	$ 150,000.00	$ 300,000.00
Allowance for headwalls, scour protection, GPTs and connection to existing systems near bridge and culvert crossing - small from south	2	No	$ 55,000.00	$ 110,000.00
Culvert road crossings including headwalls and scour protection at chainage 1350	1	Item	$ 350,000.00	$ 350,000.00
Allowance to incorporate existing subdivision catch drains, channels and drainage into road drainage	1	Item	$ 150,000.00	$ 150,000.00
CCTV Inspection, testing and Report for Submission to Council	2,654	m	$ 6.00	$ 15,921.00
SUB-TOTAL STORMWATER DRAINAGE				**$ 2,314,339.50**
ELECTRICAL WORKS				
Establishment				
Site establishment incl. commencement procedures	1	Item	$ 950.00	$ 950.00
Excavation				
Excavate Trench - LV * (Includes rate for stepped / separation trenching for comms and gas up to 50mm)	1,769	m	$ 85.00	$ 150,365.00
Installation				
Install SL Cable - 16mm2 (in 50mm PVC Conduit)	2,123	m	$ 35.00	$ 74,298.00
Install Mechanical Protection & Tape	1,769	m	$ 7.00	$ 12,383.00
Install Column Ragbolt (allow 1 per 25m of road)	71	No	$ 650.00	$ 45,994.00
Install 10m street light poles and luminaires - 1 per 25m	71	No	$ 3,250.00	$ 229,970.00
Install Ducts - 50mm	1,769	m	$ 7.00	$ 12,383.00
Install Standard Service Conduit Bends	142	No	$ 5.00	$ 710.00
Jointing				
Column Termination	71	No	$ 150.00	$ 10,614.00
Ancillary Works				
Work As Executed drawings and procedures	1	Item	$ 1,750.00	$ 1,750.00
LV feed from street light supply or substation	1	Item	$ 15,000.00	$ 15,000.00
SUB-TOTAL ELECTRICAL				**$ 554,417.00**
UTILITIES RELOCATION ALLOWANCE				
Allowance to Relocate Utilities to New Road Alignment				
Underground existing OH electrical system and reconnect to existing lots (HV and LV need to be relocated)	1,769	m	$ 750.00	$ 1,326,750.00
Realign existing potable water main to new vertical and horizontal alignment including allowance for new connections to lots	1,769	m	$ 350.00	$ 619,150.00
Realign existing communications cables, pits and reconnect to existing lots	1,769	m	$ 150.00	$ 265,350.00
SUB-TOTAL UTILITIES RELOCATION ALLOWANCE				**$ 2,211,250.00**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Boundary Road 20.8m Wide Corridor Collector Road Upgrade

Description of Work	Quantity	Unit	Rate	Total
LANDSCAPE WORKS				
Softworks to Roads *(rates include supply, placement and establishment of vegetation, soil amelioration, planter preparation, reworking and subsoil drainage)*				
Street tree verges including allowance for edges, shrub planting surround, root barriers, topsoil and granular drainage backfill -100ltr - assume 2 per 12m	295	each	$ 650.00	$ 191,750.00
Turf to verge including allowance for amelioration of topsoil won from site stripping	6,723	m²	$ 14.00	$ 94,122.00
Hydroseeding to disturbed areas - allow 2.5m either side of road	8,845	m²	$ 0.45	$ 3,980.25
Maintenance Works				
12 Month Maintenance Works	1	Item		$ 24,299.00
SUB-TOTAL LANDSCAPING				**$ 314,151.25**
SUBTOTAL				**$ 14,079,594.93**
Preliminaries (10%)	1	Item	$ 1,407,959.49	$ 1,407,959.49
Margin (5%)	1	Item	$ 774,377.72	$ 774,377.72
LSL (0.35%)	1	Item	$ 56,916.76	$ 56,916.76
Total Boundary Road 20.8m Wide Corridor Collector Road Upgrade - Excluding Fees, Approvals, Management and Contingency	**36,795**	**m²**	**$ 443.50**	**$ 16,318,848.90**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1.5%)	1	Item	$ 244,782.73	$ 244,782.73
Delivery Agency and Professional Fees - Concept Design (3%)	1	Item	$ 489,565.47	$ 489,565.47
Delivery Agency and Professional Fees - Detailed Design (5%)	1	Item	$ 815,942.45	$ 815,942.45
Environmental Approvals (1%)	1	Item	$ 163,188.49	$ 163,188.49
Project Management (3.5%)	1	Item	$ 631,131.48	$ 631,131.48
Construction Contingency (15%)	1	Item	$ 2,799,518.93	$ 2,799,518.93
Contribution Plan Administration (1.5%)	1	Item		Excluded
Total Boundary Road 20.8m Wide Corridor Collector Road Upgrade	**36,795**	**m²**	**$ 583.31**	**$ 21,462,978.45**
Total per m				**$ 12,133.00**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Boundary Road Collector Road Bridge Upgrade

Description of Work	Quantity	Unit	Rate	Total
Road Parameters				
Height above Ground Level	6.5	m		
Total Length	137	m		
Approach slabs	12	m		
Bridge length	125	m		
Bridge width - assume 18.2m width (8m carriage way, 2 x 2.5m parking, 2.5 shared path, 1.5m footpath and kerbs)	18.2	m		
Footpath - 1 x 2.5 and 1 x 1.5m	500	m2		
Crash barriers	274	m		
Barriers	274	m		
Bridge deck	2,275	m2		
Abutment piles (2 x 8 piles)	8	No		
Abutment pile length (each)	18.5	m		
Abutment pile length (total)	148	m		
Piers	4	No		
Pier piles (8 piles per pier)	32	No		
Pier pile length (each)	12	m		
Pier pile length (total)	384	m		
EROSION AND SEDIMENT CONTROL				
Allowance for erosion and sediment control including management and maintenance	1	Item	$ 172,000.00	$ 172,000.00
DEMOLITION				
Demolition of existing bridge	640	m^2	$ 450.00	$ 288,000.00
Demolition of temporary bridge or culvert	640	m^2	$ 350.00	$ 224,000.00
ACCESS TRACKS				
Clearing and access tracks to pad footings	625	m^2	$ 55.00	$ 34,375.00
Restoration	625	m^2	$ 30.00	$ 18,750.00
Construction of temporary bridge or culvert crossing	640	m^2	$ 1,950.00	$ 1,248,000.00
Construction of temporary road to align with temporary bridge or culvert	960	m^2	$ 80.00	$ 76,800.00
PILING				
900 mm dia. permanently cased, bored cast-in-place reinforced concrete piles				
Attendance of professional geotechnical engineer during pile hole excavation inside casing - provisional	50	hour	$ 220.00	$ 11,000.00
Pile excavation	532	m	$ 775.00	$ 412,300.00
Liners	160	m	$ 550.00	$ 88,000.00
Extra over for rock	80	m	$ 500.00	$ 40,000.00
Provision of access for indirect examination of pile hole For indirect visual or other inspection method	40	each	$ 200.00	$ 8,000.00
Supply and placement of reinforcement (1 kg/m3)	52	t	$ 2,850.00	$ 149,568.00
Supply and placement of concrete - 50 Mpa	532	m	$ 285.00	$ 151,620.00
SUBSTRUCTURE				
Excavation at piers and abutments including backfill	310	m^3	$ 160.00	$ 49,600.00
Mass concrete under abutments - 40 MPa	7	m^3	$ 465.00	$ 3,255.00
Concrete in pile caps	240	m^3	$ 440.00	$ 105,600.00
Concrete in pier columns - 40 MPa	210	m^3	$ 1,850.00	$ 388,500.00
Concrete in abutments (including wingwalls) - 40 MPa	168	m^3	$ 1,200.00	$ 201,600.00
Concrete in pier headstocks - 40 MPa	146	m^3	$ 1,525.00	$ 222,650.00
Reinforcement in abutments, pier columns and headstocks	149	t	$ 2,650.00	$ 394,850.00
Supply and installation stainless steel dowel assemblies (under approach slabs)	36	m	$ 450.00	$ 16,200.00
Provision for electrical continuity in reinforcement of piles, pier columns and abutments	1	item	$ 5,000.00	$ 5,000.00
BEARINGS				
Supply and installation of bearings	48	each	$ 8,500.00	$ 408,000.00
GIRDERS				
1500 Super Tee Girders				
a) Manufacture	2,500	t	$ 1,125.00	$ 2,812,500.00
b) Delivery & stacking	40	each	$ 4,250.00	$ 170,000.00
c) Erection	40	each	$ 9,500.00	$ 380,000.00
Diaphragms	83	m^3	$ 2,450.00	$ 203,350.00
COMPLETION OF SUPERSTRUCTURE				
Concrete in deck - 40 Mpa including reinforcement and formwork	2,275	m^2	$ 325.00	$ 739,375.00
Supply and installation of strip seal expansion joints and accessories	110	m	$ 550.00	$ 60,500.00
PRECAST PARAPETS				
Supply Barrier	274	m	$ 1,025.00	$ 280,850.00
Install Barrier including connections	274	m	$ 750.00	$ 205,500.00
APPROACH SLABS				
Concrete in approach slabs - 40 MPa	219	m^2	$ 220.00	$ 48,180.00
WATERPROOFING AND ASPHALT				
Waterproofing	2,275	m^2	$ 40.00	$ 91,000.00
Asphalt	402	t	$ 260.00	$ 104,520.00
FOOTPATHS				
Concrete footpaths	500	m^2	$ 185.00	$ 92,500.00
SAFETY BARRIER				
Safety barrier / F type jersey kerb	274	m	$ 625.00	$ 171,250.00
5m transition from safety barrier to kerb and gutter (200kg/m3)	4	No	$ 1,450.00	$ 5,800.00
SAFETY BARRIER RAILING & BALUSTRADE				
Safety barrier railing to top of safety barrier	274	m	$ 1,225.00	$ 335,650.00

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Boundary Road Collector Road Bridge Upgrade

Description of Work	Quantity	Unit	Rate	Total
Balustrade to precast parapet	274	m	$ 550.00	$ 150,700.00
MISCELLANEOUS ITEMS				
Supply and installation of hot-dip galvanised cover plates at deck joints and accessories	6	each	$ 1,400.00	$ 8,400.00
Scour protection at abutments	219	m²	$ 180.00	$ 39,420.00
Retaining walls in connection with abutments	400	m²	$ 850.00	$ 340,000.00
Deck drainage	2,275	m²	$ 15.00	$ 34,125.00
Supply and installation of name plates	2	each	$ 1,000.00	$ 2,000.00
Conduits, pipe attachments etc	250	m	$ 500.00	$ 125,000.00
Anti graffiti	1	item	$ 11,300.00	$ 11,300.00
LIGHTING				
Lighting (each side per 20m)	14	each	$ 7,500.00	$ 105,000.00
LANDSCAPING				
Allowance to makegood planting to disturbed areas and base of bridge	5,000	m²	$ 80.00	$ 400,000.00
SUBTOTAL	**2,275**	**m²**	**$ 2,557.05**	**$ 5,817,294.00**
Preliminaries (18%)	1	Item	$ 1,047,112.92	$ 1,047,112.92
Margin (6%)	1	Item	$ 411,864.42	$ 411,864.42
LSL (0.35%)	1	Item	$ 25,466.95	$ 25,466.95
Total Boundary Road Collector Road Bridge Upgrade - Excluding Fees, Approvals, Management and Contingency	**2,275**	**m²**	**$ 3,209.56**	**$ 7,301,738.29**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (3%)	1	Item	$ 219,052.15	$ 219,052.15
Delivery Agency and Professional Fees - Concept Design (4.5%)	1	Item	$ 328,578.22	$ 328,578.22
Delivery Agency and Professional Fees - Detailed Design (6.5%)	1	Item	$ 474,612.99	$ 474,612.99
Environmental Approvals (1%)	1	Item	$ 73,017.38	$ 73,017.38
Project Management (3.5%)	1	Item	$ 293,894.97	$ 293,894.97
Construction Contingency (20%)	1	Item	$ 1,738,178.80	$ 1,738,178.80
Contribution Plan Administration (1.5%)	1	Item		Excluded
Total Boundary Road Collector Road Bridge Upgrade	**2,275**	**m²**	**$ 4,584.21**	**$ 10,429,072.80**
Total per m				**$ 83,433.00**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Windsor Road and Boundary Road Intersection Upgrade

Description of Work	Quantity	Unit	Rate	Total
Intersection Parameters				
Length	80	m		
Corridor width	20.8	m		
Road area	1,664	m²		
Road lanes - 2 x 4m	560	m²		
Parking lanes - 2 x 2.5m	480	m²		
Verge - 1 x 4m, 1 x 2.5m	520	m²		
1.5m footpath	120	m²		
2.5m footpath	200	m²		
SOIL AND WATER MANAGEMENT				
Generally in accordance with Council, Dept Environment and Climate Change and Landcom's (Blue Book) Managing Urban Stormwater - Soils & Construction				
Stabilised site access. Allow 1 per 250m	1	No	$ 3,500.00	$ 3,500.00
Silt fence to lower side of the road	80	m	$ 15.00	$ 1,200.00
Straw bale bund	5	No	$ 75.00	$ 375.00
SUB-TOTAL SOIL AND WATER MANAGEMENT				**$ 5,075.00**
DEMOLITION & EARTHWORKS				
Clearing of existing vegetation - sparse - allow verge widening of existing road - say 7.5m each side	624	m^2	$ 0.35	$ 218.40
Demolish and remove median	27	m^2	$ 30.00	$ 810.00
Removal of existing trees	10	No	$ 500.00	$ 5,000.00
Relocation of existing fences	32	m	$ 17.00	$ 544.00
Relocation of bistro entry statement	1	Item	$ 3,500.00	$ 3,500.00
Sawcut, mill existing road and remove base and subbase (assume 13m)	1,040	m^2	$ 35.00	$ 36,400.00
Extra over to remove General Solid Waste (15% of demolished area at 200mm depth)	57	t	$ 225.00	$ 12,825.00
Traffic management in connection with road upgrade	1,664	m^2	$ 12.50	$ 20,800.00
Strip topsoil to stockpile - assume 100mm stripping	62	m^3	$ 4.50	$ 280.80
Cut to fill (assume 250mm balanced across site including allowance for boxing road)	390	m^3	$ 5.80	$ 2,262.00
Allowance to excavate in rock (assume 10%)	39	m^3	$ 15.00	$ 585.00
Demolish existing stormwater (assume 50% of road upgrades)	40	m	$ 100.00	$ 4,000.00
Replace stripped topsoil on site	62	m^3	$ 5.00	$ 312.00
SUB-TOTAL EARTHWORKS (LUMP SUM)				**$ 87,537.20**
ROAD AND PATH CONSTRUCTION				
13m Wide Road Corridor				
Prepare, trim and compact under roads	1,160	m²	$ 2.95	$ 3,422.00
200mm subgrade replacement/improvement - 100%	232	m³	$ 80.00	$ 18,560.00
300mm Sub-base	341	m³	$ 98.00	$ 33,398.40
150mm Base	156	m³	$ 115.00	$ 17,940.00
Two coat hot bitumen flush seal	1,040	m^2	$ 9.00	$ 9,360.00
100mm modified asphaltic concrete	1,040	m^2	$ 74.00	$ 76,960.00
2.5m Wide Shared Path				
Prepare, trim and compact under pathways	200	m²	$ 2.95	$ 590.00
2 Micron Black Plastic	200	m^2	$ 4.00	$ 800.00
50mm Sand Bedding	200	m^2	$ 8.00	$ 1,600.00
150mm Concrete 25MPa with SL82 Mesh, 50mm cover	200	m^2	$ 85.00	$ 17,000.00
1.5m Wide Footpath				
Prepare, trim and compact under pathways	120	m²	$ 2.95	$ 354.00
2 Micron Black Plastic	120	m^2	$ 4.00	$ 480.00
50mm Sand Bedding	120	m^2	$ 8.00	$ 960.00
125mm Concrete 25MPa with SL72 Mesh, 50mm cover	120	m^2	$ 80.00	$ 9,600.00
Concrete Works *(rates include surface preparation, supply, formwork, lay, joint, finish and cure)*				
Kerb and Gutter	160	m	$ 75.00	$ 12,000.00
Kerb ramps (over and above kerb and pavement rate) - assume 1 per 50 on each side of road	-	each	$ 550.00	Excluded
Extra Over for Vehicular Crossing	-	m	$ 110.00	Excluded
Miscellaneous				
Adjustment of property driveway entrances to suit vertical realignment of road upgrade	3	No	$ 3,500.00	$ 10,500.00
Signage *(rates include supply, setout, fixings, poles, placement, installation, footings and traffic controls)*				
Sign Post - assume 1 per 25m on each side of road	8	each	$ 275.00	$ 2,200.00
Linemarking *(rates include supply, setout, placement, curing and traffic controls)*				
L1 separation line	160	m	$ 3.50	$ 560.00
S6, BS or BB dividing line including raised pavement markers	80	m	$ 12.00	$ 960.00
Edge line	160	m	$ 3.50	$ 560.00
Testing				
CBR verification and pavement testing	1	Item	$ 1,820.00	$ 1,820.00
SUB-TOTAL ROADS AND ASSOCIATED PAVEMENTS				**$ 219,624.40**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Windsor Road and Boundary Road Intersection Upgrade

Description of Work	Quantity	Unit	Rate	Total
STORMWATER DRAINAGE				
Pipework *(rates to include excavation and trenching in OTR, supply, bed, place, joint and backfill)*				
DN375 RCP Class 2 (assumed smallest size pipe for cross overs)	40	m	$ 165.00	$ 6,600.00
DN675 RCP Class 2 (assumed average size pipe for main lineal run)	80	m	$ 375.00	$ 30,000.00
Extra over for backfilling with granular fill under roads	17	m³	$ 60.00	$ 1,036.80
Extra over for excavating in rock	32	m³	$ 120.00	$ 3,840.00
Subsoil drainage to roads (one side of road and allowance for connections)	96	m	$ 50.00	$ 4,800.00
Flushing points to subsoils (1 per 80m)	1	each	$ 160.00	$ 160.00
Pits *(rates to include excavation in OTR, supply, bed, place, grates, step irons, benching and backfill)*				
Kerb inlet pit with Class "D" grate and 2.4m Lintel - 1 per 25m of pipework	5	each	$ 3,250.00	$ 16,250.00
Structural design certification of pits	5	each	$ 135.00	$ 675.00
Miscellaneous				
CCTV Inspection, testing and Report for Submission to Council	120	m	$ 6.00	$ 720.00
SUB-TOTAL STORMWATER DRAINAGE				**$ 64,081.80**
SERVICES ROAD CROSSINGS				
Average 4 x 125mm dia HD PVC road crossings		m	$ 125.00	Excluded
SUB-TOTAL SERVICES ROAD CROSSINGS				**Excluded**
WATER MAINS				
SUB-TOTAL WATER MAINS				**Excluded**
SEWER WORKS				
SUB-TOTAL SEWER WORKS				**Excluded**
ELECTRICAL WORKS				
Establishment				
Site establishment incl. commencement procedures	1	Item		Included
Excavation				
Excavate Trench - LV * (Includes rate for stepped / separation trenching for comms and gas up to 50mm)	80	m	$ 85.00	$ 6,800.00
Installation				
Install SL Cable - 16mm2 (in 50mm PVC Conduit)	96	m	$ 35.00	$ 3,360.00
Install Mechanical Protection & Tape	80	m	$ 7.00	$ 560.00
Install Column Ragbolt (allow 1 per 25m of road)	5.20	No	$ 950.00	$ 4,940.00
Install 10m street light poles and luminaires - 1 per 25m	5	No	$ 4,250.00	$ 22,100.00
Install Ducts - 50mm x 2	160	m	$ 12.00	$ 1,920.00
Install Standard Service Conduit Bends	11	No	$ 8.00	$ 88.00
Adjustment of traffic signal to suit realignment	1	Item	$ 150,000.00	$ 150,000.00
Jointing				
Column Termination	5	No	$ 150.00	$ 780.00
Ancillary Works				
Work As Executed drawings and procedures	1	Item	$ 550.00	$ 550.00
LV feed from street light supply or substation	1	Item	$ 75.00	$ 75.00
SUB-TOTAL ELECTRICAL				**$ 191,173.00**
TELECOMMUNICATIONS AND GAS				
SUB-TOTAL TELECOMMUNICATIONS PIT AND PIPE				**Excluded**
UTILITIES RELOCATION ALLOWANCE				
Allowance to Relocate Utilities to New Road Alignment				
Allowance to relocate overhead and underground electrical, gas, communications, potable water and adjust heights of pits and manholes	1	Item	$ 100,000.00	$ 100,000.00
SUB-TOTAL UTILITIES RELOCATION ALLOWANCE				**$ 100,000.00**
LANDSCAPE WORKS				
Softworks to Roads *(rates include supply, placement and establishment of vegetation, soil amelioration, planter preparation, reworking and subsoil drainage)*				
Street tree verges including allowance for edges, shrub planting surround, root barriers, topsoil and granular drainage backfill -100ltr - assume 2 per 12m	13	each	$ 650.00	$ 8,450.00
Turf to verge including allowance for amelioration of topsoil won from site stripping	520	m²	$ 14.00	$ 7,280.00
Hydroseeding to disturbed areas - allow 2.5m either side of road	400	m²	$ 0.45	$ 180.00
Maintenance Works				
12 Month Maintenance Works	1	Item		$ 1,337.00
SUB-TOTAL LANDSCAPING				**$ 17,247.00**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
Windsor Road and Boundary Road Intersection Upgrade

Description of Work	Quantity	Unit	Rate	Total
SUBTOTAL				**$ 684,738.40**
Preliminaries (15%)	1	Item	$ 102,710.76	$ 102,710.76
Margin (5%)	1	Item	$ 39,372.46	$ 39,372.46
LSL (0.35%)	1	Item	$ 2,893.88	$ 2,893.88
Total Windsor Road and Boundary Road Intersection Upgrade - Excluding Fees, Approvals, Management and Contingency	**1,664**	**m²**	**$ 498.63**	**$ 829,715.50**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (2%)	1	Item	$ 16,594.31	$ 16,594.31
Delivery Agency and Professional Fees - Concept Design (4%)	1	Item	$ 33,188.62	$ 33,188.62
Delivery Agency and Professional Fees - Detailed Design (6.5%)	1	Item	$ 53,931.51	$ 53,931.51
Environmental Approvals (1%)	1	Item	$ 8,297.16	$ 8,297.16
Project Management (3.5%)	1	Item	$ 32,960.45	$ 32,960.45
Construction Contingency (20%)	1	Item	$ 194,937.51	$ 194,937.51
Contribution Plan Administration (1.5%)	1	Item		Excluded
Total Windsor Road and Boundary Road Intersection Upgrade	**1,664**	**m²**	**$ 702.90**	**$ 1,169,625.06**
Total per m	**80**	**m**		**$ 14,620.00**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
New 20.8m Wide Corridor Collector Road

Description of Work	Quantity	Unit	Rate	Total
Road Parameters				
Road Length	500	m		
Corridor width - based on Hawkesbury City Council DCP 2017	20.8	m		
Road area	10,400	m²		
Road lanes - 2 x 4m	4,000	m²		
Parking lanes - 2 x 2.5m	2,500	m²		
Verge - 7.8m	3,900	m²		
1.5m footpath - 1.5m	750	m²		
2.5m footpath - 2.5m	1,250	m²		
Landscape - 7.8m - 1.5m - 2.5m = 3.8m	1,900	m²		
SOIL AND WATER MANAGEMENT				
Generally in accordance with Council, Dept Environment and Climate Change and Landcom's (Blue Book) Managing Urban Stormwater - Soils & Construction				
Stabilised site access	1	No	$ 3,500.00	$ 3,500.00
Silt fence to lower side of the road	500	m	$ 15.00	$ 7,500.00
Straw bale bund	30	No	$ 75.00	$ 2,250.00
SUB-TOTAL SOIL AND WATER MANAGEMENT				**$ 13,250.00**
DEMOLITION & EARTHWORKS				
Clearing of existing vegetation	10,400	m²	$ 0.35	$ 3,640.00
Strip topsoil to stockpile - assume 100mm stripping	1,040	m³	$ 4.50	$ 4,680.00
Cut to fill (assume 500mm cut to fill)	4,680	m³	$ 6.00	$ 28,080.00
Replace stripped topsoil on site	1,040	m³	$ 5.00	$ 5,200.00
SUB-TOTAL EARTHWORKS (LUMP SUM)				**$ 41,600.00**
ROAD AND PATH CONSTRUCTION				
13m Wide Road Corridor (2 x 4m wide centre lanes and 2 x 2.5m wide parking lanes)				
Prepare, trim and compact under roads	7,250	m²	$ 2.95	$ 21,388.00
200mm subgrade replacement/improvement - 30%	435	m³	$ 80.00	$ 34,800.00
200mm Sub-base	1,420	m³	$ 98.00	$ 139,160.00
150mm Base	975	m³	$ 115.00	$ 112,125.00
Two coat hot bitumen flush seal	6,500	m²	$ 9.00	$ 58,500.00
2 x 25mm asphaltic concrete	6,500	m²	$ 32.00	$ 208,000.00
2.5m Wide Shared Path				
Prepare, trim and compact under pathways	1,250	m²	$ 2.95	$ 3,688.00
2 Micron Black Plastic	1,250	m²	$ 4.00	$ 5,000.00
50mm Sand Bedding	1,250	m²	$ 8.00	$ 10,000.00
150mm Concrete 25MPa with SL82 Mesh, 50mm cover	1,250	m²	$ 85.00	$ 106,250.00
1.5m Wide Shared Path				
Prepare, trim and compact under pathways	750	m²	$ 2.95	$ 2,213.00
2 Micron Black Plastic	750	m²	$ 4.00	$ 3,000.00
50mm Sand Bedding	750	m²	$ 8.00	$ 6,000.00
125mm Concrete 25MPa with SL72 Mesh, 50mm cover	750	m²	$ 80.00	$ 60,000.00
Concrete Works *(rates include surface preparation, supply, formwork, lay, joint, finish and cure)*				
Kerb and Gutter	1,000	m	$ 75.00	$ 75,000.00
Kerb ramps (over and above kerb and pavement rate) - assume 1 per 50 on each side of road	20	each	$ 550.00	$ 11,000.00
Signage *(rates include supply, setout, fixings, poles, placement, installation, footings and traffic controls)*				
Sign Post - assume 1 per 50 on each side of road	20	each	$ 275.00	$ 5,500.00
Linemarking *(rates include supply, setout, placement, curing and traffic controls)*				
L1 separation line	1,000	m	$ 3.50	$ 3,500.00
S6, BS or BB dividing line including raised pavement markers	500	m	$ 12.00	$ 6,000.00
Edge line	1,000	m	$ 3.50	$ 3,500.00
Testing				
CBR verification and pavement testing	1	Item	$ 12,688.00	$ 12,688.00
SUB-TOTAL ROADS AND ASSOCIATED PAVEMENTS				**$ 887,312.00**
STORMWATER DRAINAGE				
Pipework *(rates to include excavation and trenching in OTR, supply, bed, place, joint and backfill)*				
DN375 RCP Class 2 (assumed smallest size pipe for cross overs)	250	m	$ 165.00	$ 41,250.00
DN675 RCP Class 2 (assumed average size pipe for main lineal run)	500	m	$ 375.00	$ 187,500.00
Extra over for backfilling with granular fill under roads	108	m³	$ 60.00	$ 6,480.00
Subsoil drainage to roads (one side of road and allowance for connections)	600	m	$ 50.00	$ 30,000.00
Flushing points to subsoils (1 per 80m)	8	each	$ 160.00	$ 1,280.00
Pits *(rates to include excavation in OTR, supply, bed, place, grates, step irons, benching and backfill)*				
Kerb inlet pit with Class "D" grate and 2.4m Lintel - 1 per 25m of pipework	30	each	$ 3,250.00	$ 97,500.00

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Traffic and Transport Infrastructure
New 20.8m Wide Corridor Collector Road

Description of Work	Quantity	Unit	Rate	Total
Structural design certification of pits	30	each	$ 135.00	$ 4,050.00
Miscellaneous				
CCTV Inspection, testing and Report for Submission to Council	750	m	$ 6.00	$ 4,500.00
SUB-TOTAL STORMWATER DRAINAGE				**$ 372,560.00**
SERVICES ROAD CROSSINGS				
Average 4 x 125mm dia HD PVC road crossings		m	$ 125.00	Excluded
SUB-TOTAL SERVICES ROAD CROSSINGS				**Excluded**
WATER MAINS				
SUB-TOTAL WATER MAINS				**Excluded**
SEWER WORKS				
SUB-TOTAL SEWER WORKS				**Excluded**
ELECTRICAL WORKS				
Establishment				
Site establishment incl. commencement procedures	1	Item	$ 950.00	$ 950.00
Excavation				
Excavate Trench - LV * (Includes rate for stepped / separation trenching for comms and gas up to 50mm)	500	m	$ 45.00	$ 22,500.00
Installation				
Install SL Cable - 16mm2 (in 50mm PVC Conduit)	600	m	$ 35.00	$ 21,000.00
Install Mechanical Protection & Tape	500	m	$ 6.00	$ 3,000.00
Install Column Ragbolt (allow 1 per 25m of road)	20	No	$ 650.00	$ 13,000.00
Install 10m street light poles and luminaires - 1 per 25m	20	No	$ 3,250.00	$ 65,000.00
Install Ducts - 50mm	500	m	$ 7.00	$ 3,500.00
Install Standard Service Conduit Bends	40	No	$ 5.00	$ 200.00
Jointing				
Column Termination	20	No	$ 150.00	$ 3,000.00
Ancillary Works				
Work As Executed drawings and procedures	1	Item	$ 2,000.00	$ 2,000.00
LV feed from street light supply or substation	1	Item	$ 1,250.00	$ 1,250.00
SUB-TOTAL ELECTRICAL				**$ 135,400.00**
TELECOMMUNICATIONS AND GAS				
SUB-TOTAL TELECOMMUNICATIONS PIT AND PIPE				**Excluded**
LANDSCAPE WORKS				
Softworks to Roads *(rates include supply, placement and establishment of vegetation, soil amelioration, planter preparation, reworking and subsoil drainage)*				
Street tree verges including allowance for edges, shrub planting surround, root barriers, topsoil and granular drainage backfill -100ltr - assume 2 per 12m	83	each	$ 650.00	$ 53,950.00
Turf to verge including allowance for amelioration of topsoil won from site stripping	1,900	m²	$ 14.00	$ 26,600.00
Hydroseeding to disturbed areas - allow 2.5m either side of road	2,500	m²	$ 0.45	$ 1,125.00
Maintenance Works				
12 Month Maintenance Works	1	Item		$ 6,847.00
SUB-TOTAL LANDSCAPING				**$ 88,522.00**
SUBTOTAL				**$ 1,538,644.00**
Preliminaries (6.5%)	1	Item	$ 100,011.86	$ 100,011.86
Margin (3.5%)	1	Item	$ 57,352.96	$ 57,352.96
LSL (0.35%)	1	Item	$ 5,936.03	$ 5,936.03
Total New 20.8m Wide Corridor Collector Road - Excluding Fees, Approvals, Management and Contingency	**10,400**	**m²**	**$ 163.65**	**$ 1,701,944.85**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1%)	1	Item	$ 17,019.45	$ 17,019.45
Delivery Agency and Professional Fees - Concept Design (2%)	1	Item	$ 34,038.90	$ 34,038.90
Delivery Agency and Professional Fees - Detailed Design (3%)	1	Item	$ 51,058.35	$ 51,058.35
Environmental Approvals (1%)	1	Item	$ 17,019.45	$ 17,019.45
Project Management (3%)	1	Item	$ 54,632.43	$ 54,632.43
Construction Contingency (7.5%)	1	Item	$ 140,678.51	$ 140,678.51
Contribution Plan Administration (1.5%)	1	Item		Excluded
Total New 20.8m Wide Corridor Collector Road	**10,400**	**m²**	**$ 193.88**	**$ 2,016,391.94**
Total per m				**$ 4,033.00**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Open Space Social Infrastructure

Description of Work	Quantity	Unit	Rate	Total
LOCAL PARK	11,500	m²		
Soil and water management	1	Item	$ 8,625.00	$ 8,625.00
Clear and grub site	1.15	ha	$ 12,500.00	$ 14,375.00
Allowance for clearing debris and remediation	1.15	ha	$ 10,000.00	$ 11,500.00
Strip topsoil over site and stockpile for reuse	11,500	m²	$ 1.25	$ 14,375.00
Bulk earthworks allowance	4,025	m³	$ 12.00	$ 48,300.00
Remove weeds	11,500	m²	$ 0.40	$ 4,600.00
Turfed areas - 60%	6,900	m²		
Ameliorate site topsoil for turf areas - 150mm	1,035	m³	$ 22.00	$ 22,770.00
Supply and lay turf and soil underlay	6,900	m²	$ 14.00	$ 96,600.00
Massed planted areas - 15%	1,725	m²		
Ameliorate site topsoil for mass planting areas	259	m³	$ 22.00	$ 5,692.50
150mm topsoil sourced from site	259	m³	$ 35.00	$ 9,056.25
200mm imported topsoil	345	m³	$ 90.00	$ 31,050.00
150mm plants (4 No. per m²)	6,900	No	$ 9.50	$ 65,550.00
200mm plants (1 No. per m²)	1,725	No	$ 15.00	$ 25,875.00
75mm mulch	130	m²	$ 5.50	$ 715.00
Allow for spade garden edge	207	m	$ 15.00	$ 3,105.00
Mature trees in plated area - assume 1 x 100 litre tree per 40m² of mass planted area	44	No	$ 375.00	$ 16,500.00
Irrigation to planted areas	1,725	m²		Excluded
Paved areas - 15%	1,725	m²	$ 160.00	$ 276,000.00
Male, female and accessible amenities	1	Item	$ 250,000.00	$ 250,000.00
Play space including soft fall, shade structure and play equipment - 10%	1,150	m²		
Large size equipment	-	No	$ 100,000.00	Excluded
Medium size equipment	-	No	$ 35,000.00	Excluded
Smaller size equipment	3	No	$ 16,500.00	$ 49,500.00
Rubber softfall - 40%	460	m²	$ 260.00	$ 119,600.00
Organic softfall - 60%	690	m²	$ 80.00	$ 55,200.00
Shade sail to play space areas	575	m²	$ 350.00	$ 201,250.00
Fencing to perimeter	146	m	$ 350.00	$ 51,100.00
BBQ facilities	1	No	$ 17,500.00	$ 17,500.00
Picnic tables	2	No	$ 7,500.00	$ 15,000.00
Bench seats	8	No	$ 2,850.00	$ 22,800.00
Bike racks	10	No	$ 950.00	$ 9,500.00
Shelter	1	No	$ 25,000.00	$ 25,000.00
Fitness equipment	5	No	$ 5,500.00	Excluded
Fencing to off-leash dog areas	280	m	$ 375.00	Excluded
Lighting - allowed to paved and softfall areas	2,875	m²	$ 35.00	$ 100,625.00
Stormwater to park space - allowed to paved and rubber softfall areas	2,185	m²	$ 25.00	$ 54,625.00
Allowance for signage, feature walls, tree grates, feature embellishments	1	Item	$ 17,250.00	$ 17,250.00
Water bubblers including water refill station, dog basin, connection to water main and RPZD	1	No	$ 12,500.00	$ 12,500.00
Garbage bins	2	No	$ 4,000.00	$ 8,000.00
Subtotal	**11,500**	**m²**	**$ 144.71**	**$ 1,664,138.75**
Preliminaries (8%)	1	Item	$ 133,131.10	$ 133,131.10
Margin (5%)	1	Item	$ 89,863.49	$ 89,863.49
LSL (0.35%)	1	Item	$ 6,604.97	$ 6,604.97
TOTAL LOCAL PARK EXCLUDING FEES, APPROVALS, MANAGEMENT AND CONTINGENCY	11,500	m²	$ 165.00	**$ 1,893,738.31**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1%)	1	Item	$ 18,937.38	$ 18,937.38
Delivery Agency and Professional Fees - Concept Design (2%)	1	Item	$ 37,874.77	$ 37,874.77
Delivery Agency and Professional Fees - Detailed Design (4%)	1	Item	$ 75,749.53	$ 75,749.53
Environmental Approvals (1%)	1	Item	$ 18,937.38	$ 18,937.38
Project Management (2.5%)	1	Item	$ 51,130.93	$ 51,130.93
Construction Contingency (10%)	1	Item	$ 209,636.83	$ 209,636.83
Contribution Plan Administration (1.5%)	1	Item		Excluded
TOTAL LOCAL PARK	**11,500**	**m²**	**$ 201.00**	**$ 2,306,005.13**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Open Space Social Infrastructure

Description of Work	Quantity	Unit	Rate	Total
DISTRICT PARK	65,000	m²		
Soil and water management	1	Item	$ 48,750.00	$ 48,750.00
Clear and grub site	6.50	ha	$ 12,500.00	$ 81,250.00
Allowance for clearing debris and remediation	6.50	ha	$ 10,000.00	$ 65,000.00
Strip topsoil over site and stockpile for reuse	65,000	m²	$ 1.25	$ 81,250.00
Bulk earthworks allowance	22,750	m³	$ 12.00	$ 273,000.00
Remove weeds	65,000	m²	$ 0.40	$ 26,000.00
Turfed areas - 55%	35,750	m²		
Ameliorate site topsoil for turf areas - 150mm	5,363	m³	$ 22.00	$ 117,975.00
Supply and lay turf and soil underlay	35,750	m²	$ 14.00	$ 500,500.00
Massed planted areas - 18%	2,070	m²		
Ameliorate site topsoil for mass planting areas	311	m³	$ 22.00	$ 6,831.00
150mm topsoil sourced from site	311	m³	$ 35.00	$ 10,867.50
200mm imported topsoil	414	m³	$ 90.00	$ 37,260.00
150mm plants (4 No. per m²)	8,280	No	$ 9.50	$ 78,660.00
200mm plants (1 No. per m²)	2,070	No	$ 15.00	$ 31,050.00
75mm mulch	156	m²	$ 5.50	$ 858.00
Allow for spade garden edge	249	m	$ 15.00	$ 3,735.00
Mature trees in plated area - assume 1 x 100 litre tree per 40m² of mass planted area	52	No	$ 375.00	$ 19,500.00
Irrigation to planted areas	2,070	m²		Excluded
Paved areas - 15%	9,750	m²	$ 160.00	$ 1,560,000.00
Carpark areas - 7% (including allowance for stormwater)	4,550	m²	$ 135.00	$ 614,250.00
Male, female and accessible amenities	1	Item	$ 350,000.00	$ 350,000.00
Play space including soft fall, shade structure and play equipment - 5%	3,250	m²		
Large size equipment	1	No	$ 100,000.00	Excluded
Medium size equipment	2	No	$ 35,000.00	$ 70,000.00
Smaller size equipment	6	No	$ 16,500.00	$ 99,000.00
Rubber softfall - 40%	1,300	m²	$ 260.00	$ 338,000.00
Organic softfall - 60%	1,950	m²	$ 80.00	$ 156,000.00
Shade sail to play space areas	1,625	m²	$ 350.00	$ 568,750.00
Fencing to perimeter	246	m	$ 350.00	$ 86,100.00
BBQ facilities	2	No	$ 17,500.00	$ 35,000.00
Picnic tables	4	No	$ 7,500.00	$ 30,000.00
Bench seats	8	No	$ 2,850.00	$ 22,800.00
Bike racks	10	No	$ 950.00	$ 9,500.00
Shelter	2	No	$ 25,000.00	$ 50,000.00
Fitness equipment	15	No	$ 5,500.00	Excluded
Fencing to off-leash dog areas	280	m	$ 375.00	Excluded
Lighting - allowed to carpark, paved and softfall areas	17,550	m²	$ 35.00	$ 614,250.00
Stormwater to park space - allowed to paved and rubber softfall areas	11,050	m²	$ 25.00	$ 276,250.00
Allowance for signage, feature walls, tree grates, feature embellishments	1	Item	$ 97,500.00	$ 97,500.00
Water bubblers including water refill station, dog basin, connection to water main and RPZD	2	No	$ 12,500.00	$ 25,000.00
Garbage bins	2	No	$ 4,000.00	$ 8,000.00
Subtotal	**65,000**	**m²**	**$ 98.35**	**$ 6,392,886.50**
Preliminaries (8%)	1	Item	$ 511,430.92	$ 511,430.92
Margin (5%)	1	Item	$ 345,215.87	$ 345,215.87
LSL (0.35%)	1	Item	$ 25,373.37	$ 25,373.37
TOTAL DISTRICT PARK EXCLUDING FEES, APPROVALS, MANAGEMENT AND CONTINGENCY	65,000	m²	$ 112.00	**$ 7,274,906.66**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1%)	1	Item	$ 72,749.07	$ 72,749.07
Delivery Agency and Professional Fees - Concept Design (2%)	1	Item	$ 145,498.13	$ 145,498.13
Delivery Agency and Professional Fees - Detailed Design (4%)	1	Item	$ 290,996.27	$ 290,996.27
Environmental Approvals (1%)	1	Item	$ 72,749.07	$ 72,749.07
Project Management (2.5%)	1	Item	$ 196,422.48	$ 196,422.48
Construction Contingency (10%)	1	Item	$ 805,332.17	$ 805,332.17
Contribution Plan Administration (1.5%)	1	Item		Excluded
TOTAL DISTRICT PARK	**65,000**	**m²**	**$ 136.00**	**$ 8,858,653.85**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Open Space Social Infrastructure

Description of Work	Quantity	Unit	Rate	Total
SPORTING FIELD	82,000	m²		
Soil and water management	1	Item	$ 61,500.00	$ 61,500.00
Clear and grub site	8.20	ha	$ 12,500.00	$ 102,500.00
Allowance for clearing debris and remediation	8.20	ha	$ 10,000.00	$ 82,000.00
Strip topsoil over site and stockpile for reuse	82,000	m²	$ 1.25	$ 102,500.00
Bulk earthworks allowance	28,700	m³	$ 12.00	$ 344,400.00
Remove weeds	82,000	m²	$ 0.40	$ 32,800.00
Playing field area	65,000	m²		
Bulk excavation for playing fields (cut to stockpile)	19,500	m³	$ 12.00	$ 234,000.00
Importation of drainage layer material - place and compact	13,000	m³	$ 65.00	$ 845,000.00
Geofabric layer	65,000	m²	$ 5.00	$ 325,000.00
Subsoil drainage including allowance for perimeter collection system	65,000	m²	$ 15.00	$ 975,000.00
Ameliorate site topsoil for turf areas - 150mm	9,750	m³	$ 22.00	$ 214,500.00
Place stockpiled ameliorated soil	9,750	m³	$ 8.00	$ 78,000.00
Irrigation system	65,000	m²	$ 12.00	$ 780,000.00
Supply and lay turf and soil underlay	65,000	m²	$ 14.00	$ 910,000.00
Linemarking	1	Item	$ 9,750.00	$ 9,750.00
Posts, markers, ropes and the like	1	Item	$ 20,000.00	$ 20,000.00
Turfed areas	5,600	m²		
Ameliorate site topsoil for turf areas - 150mm	840	m³	$ 22.00	$ 18,480.00
Supply and lay turf and soil underlay	5,600	m²	$ 14.00	$ 78,400.00
Massed planted areas	2,500	m²		
Ameliorate site topsoil for mass planting areas	375	m³	$ 22.00	$ 8,250.00
150mm topsoil sourced from site	375	m³	$ 35.00	$ 13,125.00
200mm imported topsoil	500	m³	$ 90.00	$ 45,000.00
150mm plants (4 No. per m²)	10,000	No	$ 9.50	$ 95,000.00
200mm plants (1 No. per m²)	2,500	No	$ 15.00	$ 37,500.00
75mm mulch	188	m²	$ 5.50	$ 1,034.00
Allow for spade garden edge	300	m	$ 15.00	$ 4,500.00
Mature trees in plated area - assume 1 x 100 litre tree per 40m² of mass planted area	63	No	$ 375.00	$ 23,625.00
Irrigation to planted areas	2,500	m²		Excluded
Paved areas	2,500	m²	$ 160.00	$ 400,000.00
Carpark areas - (including allowance for stormwater)	6,400	m²	$ 135.00	$ 864,000.00
Change rooms, male, female and accessible amenities	1	Item	$ 1,650,000.00	$ 1,650,000.00
Spectator seating	1	Item	$ 450,000.00	$ 450,000.00
Practice nets	1	Item	$ 105,000.00	$ 105,000.00
BBQ facilities	4	No	$ 17,500.00	$ 70,000.00
Picnic tables	10	No	$ 7,500.00	$ 75,000.00
Bench seats	12	No	$ 2,850.00	$ 34,200.00
Bike racks	20	No	$ 950.00	$ 19,000.00
Shelter	4	No	$ 25,000.00	$ 100,000.00
Fitness equipment	15	No	$ 5,500.00	$ 82,500.00
Lighting - allowed to carpark, paved and softfall areas	73,900	m²	$ 22.00	$ 1,625,800.00
Stormwater to park space - including in playing fields and carpark		m²	$ 25.00	Included
Allowance for signage, feature walls, tree grates, feature embellishments	1	Item	$ 123,000.00	$ 123,000.00
Water bubblers including water refill station, dog basin, connection to water main and RPZD	2	No	$ 12,500.00	$ 25,000.00
Garbage bins	4	No	$ 4,000.00	$ 16,000.00
Subtotal	**82,000**	**m²**	**$ 135.14**	**$ 11,081,364.00**
Preliminaries (8%)	1	Item	$ 886,509.12	$ 886,509.12
Margin (5%)	1	Item	$ 598,393.66	$ 598,393.66
LSL (0.35%)	1	Item	$ 43,981.93	$ 43,981.93
TOTAL SPORTING FIELD EXCLUDING FEES, APPROVALS, MANAGEMENT AND CONTINGENCY	82,000	m²	$ 154.00	**$ 12,610,248.71**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1%)	1	Item	$ 126,102.49	$ 126,102.49
Delivery Agency and Professional Fees - Concept Design (2%)	1	Item	$ 252,204.97	$ 252,204.97
Delivery Agency and Professional Fees - Detailed Design (4%)	1	Item	$ 504,409.95	$ 504,409.95
Environmental Approvals (1%)	1	Item	$ 126,102.49	$ 126,102.49
Project Management (2.5%)	1	Item	$ 340,476.72	$ 340,476.72
Construction Contingency (10%)	1	Item	$ 1,395,954.53	$ 1,395,954.53
Contribution Plan Administration (1.5%)	1	Item		Excluded
TOTAL SPORTING FIELD	**82,000**	**m²**	**$ 187.00**	**$ 15,355,499.86**

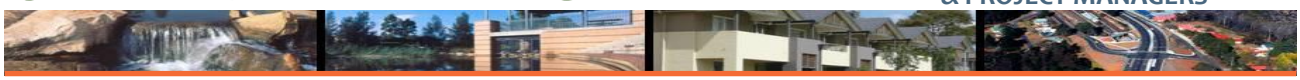
VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Open Space Social Infrastructure

Description of Work	Quantity	Unit	Rate	Total
RIPARIAN OPEN SPACE WITH PLAY SPACE	10,000	m²		
Soil and water management	1	Item	$ 7,500.00	$ 7,500.00
Clear and grub site	1.00	ha	$ 12,500.00	$ 12,500.00
Allowance for clearing debris and remediation	1.00	ha	$ 10,000.00	$ 10,000.00
Strip topsoil over site and stockpile for reuse	10,000	m²	$ 1.25	$ 12,500.00
Bulk earthworks allowance	3,500	m³	$ 12.00	$ 42,000.00
Remove weeds	10,000	m²	$ 0.40	$ 4,000.00
Turfed areas	5,800	m²		
Ameliorate site topsoil for turf areas - 150mm	870	m³	$ 22.00	$ 19,140.00
Supply and lay turf and soil underlay	5,800	m²	$ 14.00	$ 81,200.00
Mature trees in turfed area - assume 1 x 100 litre tree per 400m² of turfed area	15	No	$ 375.00	$ 5,625.00
Massed planted areas	4,000	m²		
Ameliorate site topsoil for mass planting areas	600	m³	$ 22.00	$ 13,200.00
150mm topsoil sourced from site	600	m³	$ 35.00	$ 21,000.00
200mm imported topsoil	800	m³	$ 90.00	$ 72,000.00
150mm plants (3 No. per m²)	12,000	No	$ 9.50	$ 114,000.00
75mm mulch	300	m²	$ 5.50	$ 1,650.00
Allow for spade garden edge	480	m	$ 15.00	$ 7,200.00
Mature trees in plated area - assume 1 x 100 litre tree per 40m² of mass planted area	100	No	$ 375.00	$ 37,500.00
Play space including soft fall, shade structure and play equipment	200	m²		
Smaller size equipment	2	No	$ 16,500.00	$ 33,000.00
Rubber softfall	200	m²	$ 260.00	$ 52,000.00
Shade sail to play space areas	150	m²	$ 350.00	$ 52,500.00
Fencing to perimeter	61	m	$ 350.00	$ 21,350.00
Male, female and accessible amenities	1	Item		Excluded
BBQ facilities	2	No	$ 17,500.00	$ 35,000.00
Picnic tables	4	No	$ 7,500.00	$ 30,000.00
Bench seats	6	No	$ 2,850.00	$ 17,100.00
Shelter	2	No	$ 25,000.00	$ 50,000.00
Fitness equipment	5	No	$ 5,500.00	$ 27,500.00
Lighting - allowed to paved and softfall areas	1,200	m²	$ 35.00	$ 42,000.00
Allowance for signage, feature walls, tree grates, feature embellishments	1	Item	$ 10,000.00	$ 10,000.00
Subtotal	**10,000**	**m²**	**$ 83.15**	**$ 831,465.00**
Preliminaries (8%)	1	Item	$ 66,517.20	$ 66,517.20
Margin (5%)	1	Item	$ 44,899.11	$ 44,899.11
LSL (0.35%)	1	Item	$ 3,300.08	$ 3,300.08
TOTAL RIPARIAN OPEN SPACE WITH PLAY SPACE EXCLUDING FEES, APPROVALS, MANAGEMENT AND CONTINGENCY	10,000	m²	$ 95.00	**$ 946,181.39**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1%)	1	Item	$ 9,461.81	$ 9,461.81
Delivery Agency and Professional Fees - Concept Design (2%)	1	Item	$ 18,923.63	$ 18,923.63
Delivery Agency and Professional Fees - Detailed Design (4%)	1	Item	$ 37,847.26	$ 37,847.26
Environmental Approvals (1%)	1	Item	$ 9,461.81	$ 9,461.81
Project Management (2.5%)	1	Item	$ 25,546.90	$ 25,546.90
Construction Contingency (10%)	1	Item	$ 104,742.28	$ 104,742.28
Contribution Plan Administration (1.5%)	1	Item		Excluded
TOTAL RIPARIAN OPEN SPACE WITH PLAY SPACE	**10,000**	**m²**	**$ 115.00**	**$ 1,152,165.08**

VINEYARD PRECINCT SECTION 7.11 CONTRIBUTION PLAN
Open Space Social Infrastructure

Description of Work	Quantity	Unit	Rate	Total
RIPARIAN CORRIDOR - MEDIUM EMBELLISHMENT	5,000	m²		
Clearing, grubbing and demolition	5,000	m²	$ 1.25	$ 6,250.00
Ameliorate topsoil	1,000	m³	$ 18.00	$ 18,000.00
Provision and maintenance of erosion & sediment control	5,000	m²		
Geofabric lined silt fence including steel dropper posts at 3m centres	500	m	$ 13.00	$ 6,500.00
Jute matting - 15% of area	750	m²	$ 5.50	$ 4,125.00
Medium allowance for forming riparian corridor	5,000	m²	$ 5.00	$ 25,000.00
Scour protection / forming ponds	500	m²	$ 140.00	$ 70,000.00
Planting to riparian corridor	5,000	m²	$ 32.00	$ 160,000.00
SUBTOTAL				**$ 289,875.00**
Preliminaries (8%)	1	Item	$ 23,190.00	$ 23,190.00
Margin (5%)	1	Item	$ 15,653.25	$ 15,653.25
LSL (0.35%)	1	Item	$ 1,150.51	$ 1,150.51
TOTAL RIPARIAN CORRIDOR - MEDIUM EMBELLISHMENT EXCLUDING FEES, APPROVALS, MANAGEMENT AND CONTINGENCY	**5,000**	**m²**	**$ 66.00**	**$ 329,868.76**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1%)	1	Item	$ 3,298.69	$ 3,298.69
Delivery Agency and Professional Fees - Concept Design (2%)	1	Item	$ 6,597.38	$ 6,597.38
Delivery Agency and Professional Fees - Detailed Design (4%)	1	Item	$ 13,194.75	$ 13,194.75
Environmental Approvals (1%)	1	Item	$ 3,298.69	$ 3,298.69
Project Management (2.5%)	1	Item	$ 8,906.46	$ 8,906.46
Construction Contingency (20%)	1	Item	$ 73,032.95	$ 73,032.95
Contribution Plan Administration (1.5%)	1	Item		Excluded
TOTAL RIPARIAN CORRIDOR - MEDIUM EMBELLISHMENT	**5,000**	**m²**	**$ 88.00**	**$ 438,197.68**

Description of Work	Quantity	Unit	Rate	Total
BUSH REGENERATION	40,000	m²		
Bush regeneration including weeding, propagating seeds, planting and maintenance - 90%	36,000	m²	$ 22.00	$ 792,000.00
Integration of paths and interpretative signage	4,000	m²	$ 80.00	$ 320,000.00
Subtotal	**40,000**	**m²**	**$ 27.80**	**$ 1,112,000.00**
Preliminaries (4%)	1	Item	$ 44,480.00	$ 44,480.00
Margin (5%)	1	Item	$ 57,824.00	$ 57,824.00
TOTAL BUSH REGENERATION EXCLUDING FEES, APPROVALS, MANAGEMENT AND CONTINGENCY	40,000	m²	$ 30.00	**$ 1,214,304.00**
Delivery Agency and Professional Fees - Pre-planning/Strategic Design (1%)	1	Item	$ 12,143.04	$ 12,143.04
Delivery Agency and Professional Fees - Concept Design (2%)	1	Item	$ 24,286.08	$ 24,286.08
Delivery Agency and Professional Fees - Detailed Design (4%)	1	Item	$ 48,572.16	$ 48,572.16
Environmental Approvals (1%)	1	Item	$ 12,143.04	$ 12,143.04
Construction Contingency (5%)	1	Item	$ 65,572.42	$ 65,572.42
Contribution Plan Administration (1.5%)	1	Item		Excluded
TOTAL BUSH REGENERATION	**40,000**	**m²**	**$ 34.00**	**$ 1,377,020.74**



ABN 67 002 318 621

Our Ref: 110592-02-IPART Review Letter.docx

24 June 2019

Hawkesbury City Council
366 George Street
Windsor NSW 2756

Attn: Andrew Kearns

Subject: Vineyard Precinct Contributions Plan;
Response to IPART Review Recommendations.

Dear Andrew

As requested by Hawkesbury City Council, J. Wyndham Prince (JWP) has reviewed the draft *Assessment of Vineyard Contributions Plan – Hawkesbury City Council* (VPCP) prepared by IPART in May 2019 with regards to the following items. These two (2) items were not accepted in the VPCP as part of the IPART review:

- DC2 Bank stabilisation along Killarney Chain of Ponds Creek; and
- SBC1-4 Cycleway Creek Crossings (proposed costs by Council during IPART's review).

Our investigation has involved the following specific tasks:

- Undertake a field inspection of Killarney Chain of Ponds Creek to obtain a photographic record of the current conditions of the creek;
- Review the need for DC2 stabilisation works with consideration of the *Vineyard Precinct Post Exhibition Water Cycle Management Report* prepared by Mott MacDonald (WCMS, MM Oct. 2017).
- Assess the controls under Section 2.4.1 of the Hawkesbury DCP to confirm consistency with the need for DC2 channel stabilisation works; and
- Provide an Opinion of Probable Construction Costs (OPCC) for cycleway crossings SBC1-4.

1. BACKGROUND

The Vineyard Precinct is located within the Hawkesbury City Council Local Government area and is bordered by Commercial Road and Menin Road to the north, Boundary Road to the east, Windsor Road and Bandon Road to the south, and remnant rural land to the west.

The first stage of the Vineyard Precinct development is bounded by Chapman Road to the northwest, Commercial Road and Menin Road to the north, Windsor Road to the southwest, and Boundary Road to the southeast.

The *Vineyard Precinct Post Exhibition Water Cycle Management Report* (WCMS) was prepared for the NSW Department of Planning & Environment by Mott MacDonald in October 2017 to support the master planning of the Vineyard Precinct. The WCMS confirmed the stormwater management infrastructure required to support the proposed development of this precinct while ensuring that stormwater quantity, quality and flood management were given appropriate consideration within the relevant statutory framework.

The Vineyard Precinct Section 7.11 Draft Contributions Plan (VPCP) relates to the first stage of the Vineyard Precinct development. Section 3.2 of the VPCP outlines the need for regional stormwater infrastructure, which was based on the WCMS (MM, Oct. 2017).

Killarney Chain of Ponds (KCOP) Creek is identified as VPCP item DC2. An extract of Figure B1 from the VPCP showing the location of the stormwater infrastructure is provided in Plate 1-1 below.

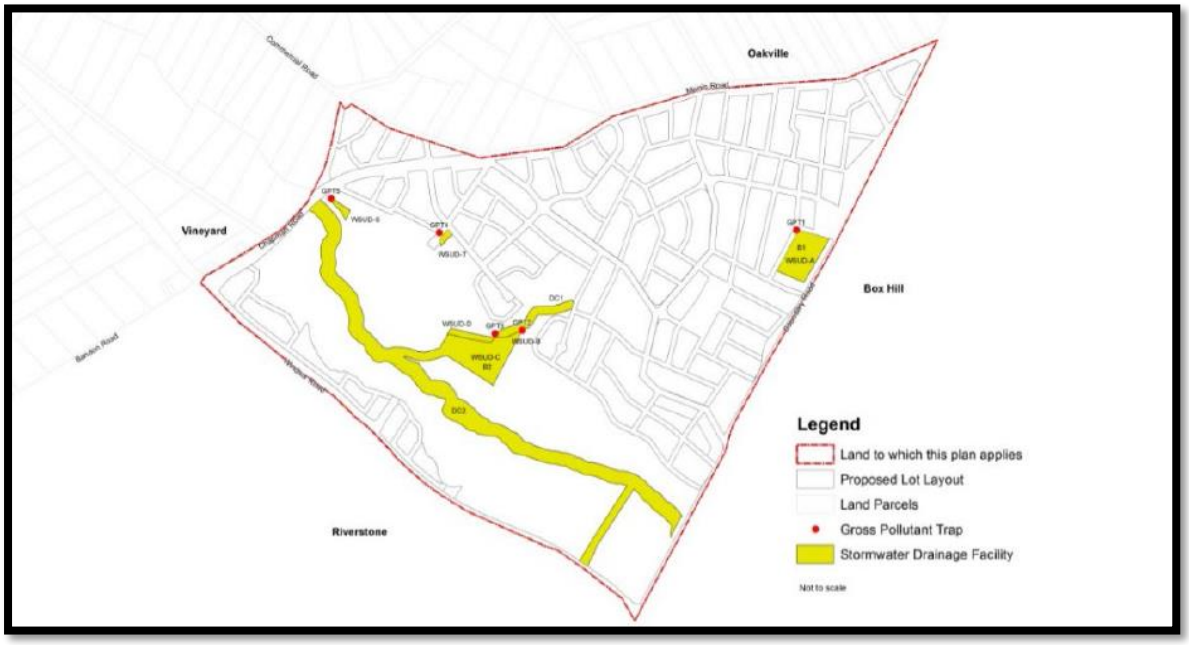


Plate 1-1 – Vineyard Precinct - Location of Stormwater Infrastructure (source: Fig B1 VPCP).

The VPCP also discusses the provision of a formal cycleway network following the Killarney Chain of Ponds Creek. Plate 1-2 below provides location details of the cycle path network and future creek crossings.

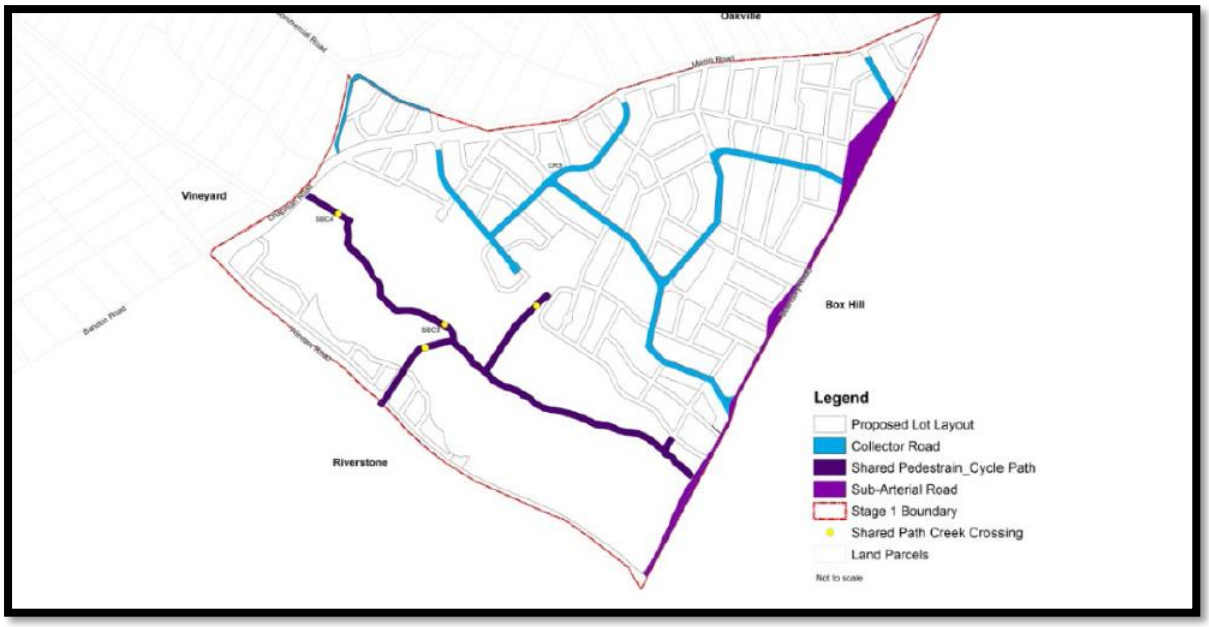


Plate 1-2 – Vineyard Precinct Location of Stormwater Infrastructure (source: Fig B1 VPCP).

This investigation provides a review the control documents to determine if both the need for the KCOP/DC2 channel stabilisation works and construction costs for the four (4) cycleway crossings are justified. Details of the investigation are provided below.

2. FIELD INSPECTION AND FLOODING

A field inspection was undertaken on Thursday 13 June 2019 to document the current condition of Killarney Chain of Ponds (KCOP) Creek. This field investigation also provides a context for the discussion provided in Section 3 of this report on the likely impact that development will have on this watercourse.

The field investigation commenced at the Boundary Road crossing of KCOP Creek, working in a westerly direction along the southern banks of the watercourse until access became restricted. The northern bank of KCOP Creek was also traversed in a westerly direction starting from Boundary Road, and access was also gained from the Chapman Road end.

A catalogue of photographs is provided in Appendix A.

It was observed that in the reach of KCOP Creek immediately downstream of Boundary Road, the creek has limited stream definition with evidence of erosion and incised banks in some areas. The creek then transitions to very flat marsh type areas which have a poorly defined bank, with evidence of frequent overtopping and broad flood extents.

Based on our experience in preparing riverine flood studies throughout Western Sydney, we have generally observed that more frequent flow events such as the 0.5 EY (2yr ARI) are usually contained within defined banks of the watercourse. However, based on the Water Cycle Management Strategy (MM, Oct. 2017) it is evident from the Appendix D flood map drawings (drawing VY_PRL_2yr_720m_D - Rev. A) that the 50% AEP (1.44yr ARI) flood extent is well beyond the banks of the watercourse. This flow regime is also typical of a 'chain of ponds' geomorphology where defined stream banks are not a feature of the landscape.

3. WATER CYCLE MANAGEMENT STRATEGY REVIEW

A high level review of the WCMS (MM, Oct. 2017) has been undertaken to confirm whether Council's proposed channel stabilisation works in DC2 are justified by this document.

The WCMS notes that the overall existing catchment extent (including upstream catchments) is some 930 hectares in area, and that the 0.5 EY regional flow is in the order of 100 m³/s (MM, Oct. 2017, p.27). It is evident from the field inspection that the capacity of the existing, poorly defined watercourse is likely to be much less than this relatively frequent regional flood event.

While the WCMS confirms that the peak post-development flows within KCOP Creek are no greater than existing conditions, it is noted from the MM catchment plan (drawing MMD-334311-C-DR-VY-XX_0209) that some development will discharge directly into the watercourse without attenuation. Plate 3-1 below provides a snapshot of some unmanaged developed catchments.

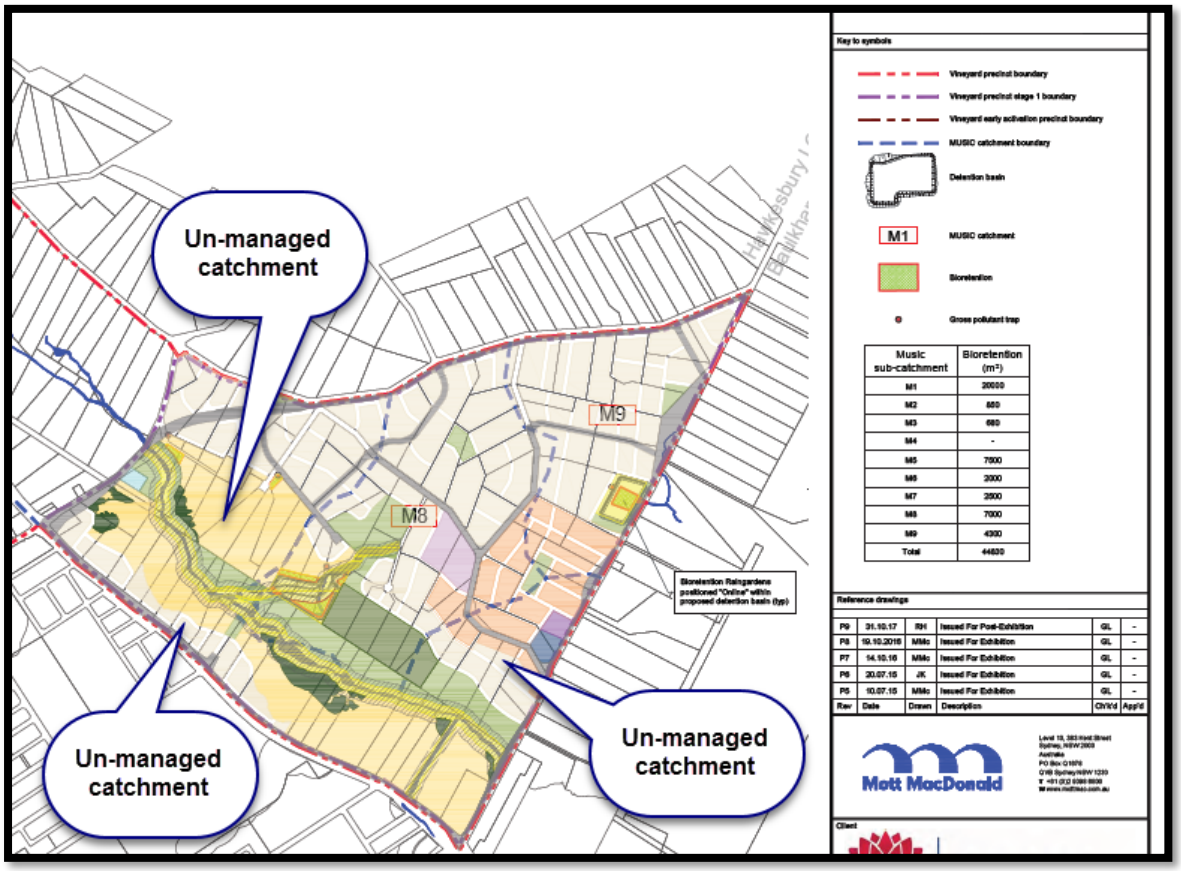


Plate 3-1 – WCMS Undetained Catchments (Source MM WCMS, Oct. 2017)

The WCMS notes that bio-retention raingardens are to provide stormwater quality treatment for all catchments, with the exception of catchment M4 (MM, Oct. 2017 p.46.) The MUSIC Catchment Plan and the Stormwater Treatment Plan (drawings MMD-334311-C-DR-VY-XX_0220 and 0221 respectively) confirm that portions of the development will discharge directly into the KCOP watercourse, and therefore it is inferred that these bypassing catchments may be compensated for in the overall raingarden areas noted for each catchment. However it is unclear if this is the case.

It is also noted that as part of the water quality modelling, a Stream Erosion Index (SEI) assessment was not undertaken as part of the WCMS. The NSW MUSIC Modelling Guidelines (BMT, 2015) note that *"the SEI index aims to assist with protecting streams from increased erosion potential resulting from urban development. The SEI is the ratio of the developed catchment stormwater volume exceeding the 'stream forming flow' to the pre-development catchment stormwater volume exceeding the 'stream forming flow'".*

Consistent with other Development Control Plans in the Northwest Growth Centres, the Hawkesbury City Council Growth Centre Precinct DCP 2015 requires the stormwater management objectives to achieve an SEI of 3.5 - 5.0:1, and if at all possible reduce this ratio as close as possible to 1:1 (i.e. a desirable target of existing conditions for stream-forming flows).

Given that the portions of the catchment shown in Plate 3-1 appear to discharge to the watercourse without stormwater management, it is likely that the SEI index will increase significantly from existing conditions and be well in excess of the upper limit of 5.0. Given that the existing rural/semi-rural landscape watercourses are already in a sensitive state due to various upstream (i.e. external to the Vineyard Precinct) development and landuse changes, the conversion to an urban catchment is likely to cause significant impacts on the remnant rural/semi-rural land and watercourses unless it is ameliorated appropriately.

Therefore, it is our opinion that stabilisation works within DC2 are justified for the full extent of DC2 in order to restore the existing damage to the watercourse (which Council considers necessary to facilitate new development in the precinct) as well as protect the stream from further damage associated with urbanisation of the broader catchment discharging to KCOP Creek.

It is important to note that our brief did not include a review of the costs associated with the stream rehabilitation.

4. DCP REVIEW

As requested by Hawkesbury City Council, the stormwater management controls set out in Section 2.4.1 of the Hawkesbury City Council Growth Centres Development Control Plan (DCP 2017) have been reviewed to confirm whether '*Council's proposal for these works are consistent with these controls*' (i.e. the proposed DC2 channel stabilisation works).

The *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (SEPP) is the overarching framework which outlines statutory planning controls governing the use of land in the Growth Centres. Both the *Northwest Priority Growth Area Land Use and Infrastructure Implementation Plan* (DoP&E, 2017) and the *Hawkesbury City Council Growth Centres Development Control Plan* (DCP) (DoP&E, 2017) provide practical specific guidance for the development of infrastructure and land to ensure compliance with the statutory controls set out in the framework.

The Hawkesbury City Council Growth Centres Development Control Plan (DCP 2017) was adopted by the Department of Planning on 8 January 2018 and came into force on 18 January 2018. Together with communicating the planning, design, environmental objectives and promoting a high quality urban design outcome, the purpose of the DCP is to ensure orderly, efficient and environmentally sensitive development of the Precinct.

The objective of Section 2.4.1 of the DCP is *"…to manage stormwater from urban parts of the Precinct to replicate pre-development flows."* (DCP, 2017). The key DCP stormwater management controls directly related to urban stormwater discharge and stream management within adjacent watercourses are discussed in detail below and how the statutory framework relates to the proposed stream stabilisation works.

DCP Section 2.4.1, Control C1

Stormwater management is to be designed and implemented with all subdivisions.

Noted. The WCMS (MM, Oct. 2017) provides the basis of the stormwater management for the Vineyard Precinct, and its relevance to channel stabilisation works is discussed in Control 2 below.

This control is not inconsistent with Council's proposed channel stabilisation works in DC2.

DCP Section 2.4.1, Control C2

Stormwater is to be managed and associated infrastructure provided in accordance with the provisions of *Water Cycle Management Report, October 2017* prepared by Mott MacDonald or other water cycle management plan (or equivalent) approved by Council and the Hawkesbury City Council's *Civil Works Specifications.*

Within Stage 1 of the Vineyard Precinct, the WCMS (MM, Oct. 2017) nominates two (2) detention basins to ensure that post developed flows are no greater than pre-developed flows. The proposed catchment plan in Appendix A of the WCMS (MM, Oct. 2017) confirms that some portions of the developed catchment will discharge directly to the adjacent watercourses without detention.

It is often found that developed conditions peak flows are no greater than existing conditions flows where small local catchments discharge to a major watercourse. This is usually due to the developed catchment flows from the small local catchment discharging to the watercourse before the relatively larger flow from the existing upstream catchment passes through the discharge point. Indeed, the WCMS (MM, Oct. 2017) confirms that a number of un-detained developed catchments discharge to KCOP/DC2 without resulting in any net increase in peak flows in both the 2 year and 100 year ARI (39.35% and 1% AEP) events.

Notwithstanding, it is the increase in the duration and frequency of stream forming flows due to un-detained catchments that result in damage to existing watercourses. In other words, the provision of peak flow management does not ensure that changes to the geo-morphology of the existing watercourse will not occur.

It is noted that the stormwater quality modelling section of the WCMS (p.46) indicates that all catchments with the exception of catchment M4 will receive stormwater quality treatment in bio-retention raingardens prior to discharge to the adjacent watercourses. However, the MUSIC Catchment Plan and the Stormwater Treatment Plan within the WCMS both indicate catchment areas that will discharge to the adjacent watercourses without stormwater quality treatment measures.

It is therefore implied that the two (2) detention basins and five (5) bio-retention raingardens that are provided for Vineyard Stage 1 compensate for the bypassing catchments and discharge from both a stormwater quality and quantity management perspective will be delivered at the Vineyard Precinct boundary. It is reasonable to expect that any areas of the watercourse which are receiving un-managed stormwater runoff will need some stabilisation work to reduce the risk of erosion due to an increased frequency of stream forming flows.

Therefore, the need for channel stabilisation works within DC2 are supported on the basis that the WCMS (MM, Oct. 2017) indicates direct developed catchment discharges to DC2.

DCP Section 2.4.1, Control C3

In order to achieve the stormwater quality and quantity management objectives for the precinct all dwellings are to be provided with a 3000L minimum rainwater tank which must be plumbed for internal use.

Noted. The WCMS (MM, Oct. 2017) assumed the provision of a 3000L rainwater tank on each lot with internal re-use. Notwithstanding, as discussed in Control 2, the WCMS includes unmanaged catchments discharging to DC2. The inclusion of rainwater tanks on each lot will provide a small incremental improvement on the SEI, however would not be sufficient on their own to reduce the SEI to an acceptable level.

This control is not inconsistent with Council's proposed channel stabilisation works in DC2.

DCP Section 2.4.1, Control C4

Management of 'minor' flows using piped systems for the 20% AEP (residential land use) and 5% AEP (commercial land use) shall be in accordance with Hawkesbury City Council's *Civil Works Specifications.* Management measures shall be designed to:

- **Prevent damage by stormwater to the built and natural environment;**
- **Control stormwater to minimise localised flooding and reduce nuisance flows to a level that is acceptable by the community;**
- **Provide a stormwater system that can be economically maintained and that uses open space in a compatible manner;**
- **Minimise urban water run-off pollutants to watercourses; and**
- **Meet the standards for a 20% AEP flood level for residential development.**

This clause appears more relevant to the urban street drainage systems than stream management. However, un-managed catchments proposed in the WCMS will have localised impacts within the adjacent watercourses as the regional devices are understood to deliver the required stormwater management outcomes at the Vineyard Precinct boundary. See discussion under control C2 on how peak flow management is provided in the WCMS.

This control is not inconsistent with Council's proposed channel stabilisation works in DC2.

DCP Section 2.4.1, Control C5

Management of 'major' flows using dedicated overland flow paths such as open space areas, roads and riparian protection areas for all flows in excess of the pipe drainage system capacity and above the 20% AEP shall be in accordance with Hawkesbury City Council's *Civil Works Specifications.* Management measures shall be designed to:

- **Prevent both short term and long term inundation of habitable dwellings;**
- **Control localised flooding from storm events to maintain access to lots, maintain the stability of the land form and to control erosion;**
- **Provide for the orderly and safe evacuation of people away from rising floodwaters;**
- **Meet the standards of the *flood planning level*;**
- **where practical, development shall attenuate up to the 50% AEP peak flow for discharges into the local tributaries. This will be achieved using detention storage within water quality features and detention basins.**
- **the developed 1% AEP peak flow is to be reduced to pre-development flows through the incorporation of stormwater detention and management devices; and**
- **The trunk drainage system is to be designed in accordance with the water cycle management strategy shown in (sic)**
- **(sic), satisfy the requirements of Appendix B – Riparian Protection Area Controls and achieve the water quality targets in Table 2-1.**

As per discussion on Control C4, dot points 1-4 in this clause appears more relevant to the urban street drainage and overland flow management than stream management. Un-managed catchments proposed in the WCMS will have localised impacts within the adjacent watercourses, however the regional devices are understood to deliver the required stormwater management outcomes at the Vineyard Precinct boundary.

The WCMS (MM, Oct. 2017) indicates that the water quality targets in Table 2-1 of the DCP (extract provided in Plate 4-1 below) can be met via the proposed stormwater quality treatment system, which compensates for catchments discharging directly to the watercourse. The DCP Appendix B referred to in this control is listed in the beginning of the DCP, but does not appear to be available.

Table 2-1 Water quality and environmental flow targets

	WATER QUALITY % reduction in pollutant loads				ENVIRONMENTAL FLOWS Stream erosion control ratio[1]
	Gross Pollutants (>5mm)	Total suspended solids	Total phosphorous	Total nitrogen	
Stormwater management Objective	90	85	65	45	3.5-5.0: 1
'Ideal' stormwater outcome	100	95	95	85	1:1

[1] This ratio should be minimised to limit stream erosion to the minimum practicable. Development proposals should be designed to achieve a value as close to one as practicable, and values within the nominated range should not be exceeded. A specific target cannot be defined at this time.

Plate 4-1 – DCP Extract Table 2-1.

It should be noted that the WCMS did not include an SEI assessment, however it is anticipated that the SEI will be well in excess of the upper limit of 5.0 documented in Table 2-1 of the DCP as a result of the un-detained catchments discharging directly to KCOP/DC2.

Therefore, the relevant controls outlined in Hawkesbury City Council's DCP provide support for the need for KCOP/DC2 stream work as the intent of the DCP is to ensure the long term viability of the downstream watercourse. Therefore the DCP is consistent with Hawkesbury City Council's proposal for channel stabilisation works in DC2.

DCP Section 2.4.1, Control C6

Where appropriate detention basins are to be planted with wetland species of local provenance for the purposes of establishing suitable wetland/aquatic habitat.

Noted. The basins indicted in the WCMS could be planted accordingly.

This clause is not inconsistent with Council's proposed DC2 channel stabilisation works.

5. CYCLEWAY CROSSINGS SBC1-4 CONSTRUCTION COSTS

The costs associated with the proposed cycleway crossings have been reviewed to confirm, based on our experience, whether Council's updated cost estimates of $250,000 per crossing are reasonable.

The location of the four (4) Cycleway Crossings within Stage 1 of the Vineyard Precinct are shown on Plate 5-1 below.

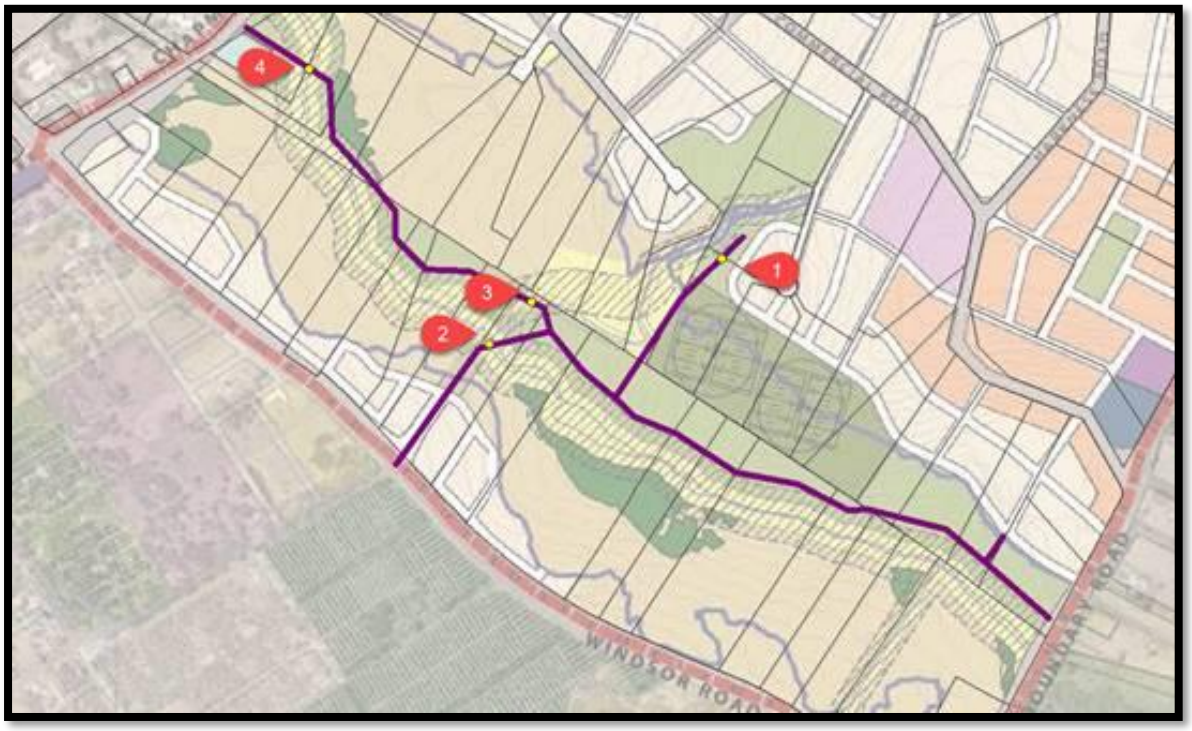


Plate 5-1 – Vineyard Precinct Location of Cycleway Crossings (source: Fig B1 VPCP).

While there is no specific detail of the Cycleway Crossings proposed, typical cycleway crossings of creeks such as KCOP would normally be expected to have the following design requirements:

- approximately 3 metres wide;
- typical span lengths of 25- 30 metres (with steel girder / timber decking construction);
- reasonable level of serviceability (i.e. at least above the 0.5 EY flood level);
- deck level sitting approximately 0.5m – 1m above the agreed flood level;
- appropriate fencing with "bump rails", but not covered or provided with anti-throw screens;
- not impede flood flows for larger storm/flood events (e.g. collapsible rails/balustrading).

It should be noted however that in the case of KCOP Creek, the 0.5 EY flood extents are quite broad and shallow, which may require substantially longer bridge spans to provide an acceptable level of serviceability.

Infrastructure Cost Estimates

On the basis of recent construction costs obtained for a footbridge of a similar design width, we have concluded that an average cost rate, at average height and footing requirements, is in the order of $5,693 / metre length. This rate includes the appropriate Contractor's Indirect Costs and Margin. In addition to these costs, we would normally allow for appropriate management costs on implementation and design with an additional contingency to be applied. As the design progresses, from Strategic through to Business Case and then detail design, the contingency would normally reduce. At this stage of a project, we would recommend rates as Council's On-costs Project Management (10%), Design Costs (5%), and Contingency (30%). These are cumulative additional costs ($5,693 x 1.10 x 1.05 x 1.30).

There are no location adjustment factors considered necessary for the Vineyard Precinct. Other adjustment factors, risk of flooding, soft ground materials and the like are potentially managed within the appropriate contingency – without further increasing the cost of the elements.

Accordingly, the base cost rate is shown in Table 5-1 below:

Table 5-1 – Cycleway Crossing Base Cost Rate

Item	Allowances	Rate/m
Avg. Tender rate*	100%	$ 5,693
Council On-Costs	10%	$ 569
Design Costs	5%	$ 313
Contingency	30%	$ 1,973
Total	150%	$ 8,548

*Avg, tender rate includes Direct and Indirect costs + Margin

Accordingly, the proposed rate for each of the Cycleway Crossings is $ 8,548 per metre length.

APPLICATION OF RATE TO SBC 1-4

The Cycleway Crossing locations have been reviewed. Although it would be desirable to provide a crossing that spanned the entire width of the 0.5 EY flood extent, this would extend for approximately 500 metres in three (3) of the four (4) locations. Therefore, the existing riparian corridor width has been used to support the proposed bridge spans. The relevant length of each crossing is listed below:

- SBC1 – 50 metres
- SBC2 – 100 metres
- SBC3 – 100 metres
- SBC4 – 90 metres

Based on our experience, the anticipated costs for each of the Cycleway Bridges are provided in Table 5-2 below using the proposed rate of $ 8,548 per metre length.

Table 5-2 – Cycleway Crossings SBC1-4 Cost Estimate

Crossing	Estimated Length (m)	Estimated Cost
SBC 1	50	$ 427,500
SBC 2	100	$ 854,900
SBC 3	100	$ 854,900
SBC 4	90	$ 769,400

We do note that the Council has previously estimated crossing lengths in the order of 30 metres for each location. If this was to be adopted, then the cost per bridge would be $ 256,440. Whether the crossings are appropriately serviceable at this length will need to be reviewed during the concept design process.

6. SUMMARY/CONCLUSION

J. Wyndham Prince (JWP) has reviewed the draft Assessment of Vineyard Contributions Plan – Hawkesbury City Council (VPCP) prepared by IPART in May 2019 with regard to stormwater drainage item DC2 and cycleway crossings SBC1-4.

VPCP stormwater drainage item DC2 is also known as Killarney Chain of Ponds Creek and traverses the entire length of the Vineyard Precinct (Stage 1). A field inspection was undertaken to verify the current conditions of KCOP Creek. It was found that the creek is generally poorly defined, with evidence of erosion, incised banks and frequent overtopping of the shallow banks in the upper reach of the Precinct near Boundary Road. Approximately 200 metres downstream of Boundary Road, KCOP transitions to a broad flat floodplain with little watercourse definition where access is restricted. The lower reach of KCOP within Stage 1 of the Vineyard Precinct appears to have broader formal channel definition as it transitions to the culvert crossing under Chapman Road.

A high level review of the need for channel stabilisation works within DC2/KCOP Creek was undertaken utilising the information presented in the *Vineyard Precinct Post Exhibition Water Cycle Management Report* prepared by Mott MacDonald (WCMS, MM Oct. 2017).

It is important to note that the WCMS did not include an SEI assessment. The SEI assessment measures the ratio of developed stream forming flow volumes against existing conditions stream forming flow volumes. Attenuation through stormwater quality management measures can be used to ensure that this ratio is no more than 3.5 – 5.0:1, with a stretch target of 1:1.

The WCMS appears to provide stormwater quality and quantity management facilities that compensate for bypassing catchments. While un-attenuated catchments may not necessarily result in an increase in peak flow rates, the frequency of stream forming flows from unmanaged catchments is much greater and can lead to de-stabilisation of existing watercourses. Given that the existing rural/semi-rural catchment and watercourse is already under pressure due to development in the broader upstream catchment, DC2 channel stabilisation works would be justified in order to not only rectify existing channel degradation (which Council considers necessary to facilitate new development), but also to protect the watercourse from degradation due to the further urbanisation of the catchment.

The controls in Section 2.4.1 of Hawkesbury City Council Growth Centres Development Control Plan (DCP 2017) were reviewed to confirm consistency between Hawkesbury City Council proposal for channel stabilisation works in DC2. It was found that the DCP controls are generally met by adherence to the WCMS. As the WCMS indicates compensation for unmanaged bypassing developed catchments discharging to DC2, it is anticipated that KCOP/DC2 will be further degraded without appropriate stream works.

The costs associated with the proposed cycleway crossings have been reviewed to confirm whether Council's updated cost estimates of $250,000 per crossing are reasonable. Based on our experience, we believe that the cost of these crossings will range from $427,500 to $854,900 each, and therefore it appears that Council's costs have been underestimated.

It is therefore our professional opinion that the full amount of funding as listed in the Vineyard Precinct Contributions Plan be made available to deliver VPCP items DC2 and SBC1-4.

If you have any queries in relation to this investigation, please do not hesitate to contact us.

Yours faithfully,

David Johnson
Director

APPENDIX A
FIELD INSPECTION PHOTOGRAPHS

Photo 1 KCOP Creek southern bank approx. 20 m looking east toward Boundary Road culvert crossing.

Photo 2 KCOP Creek southern bank approx. 50 m downstream of Boundary Road looking northwest.

Photo 3 KCOP Creek southern bank approx. 90 m downstream of Boundary Road culvert crossing looking northeast.

Photo 4 KCOP Creek southern bank approx. 100 m downstream of Boundary Road culvert crossing looking northwest.

Photo 5 KCOP Creek southern bank approx. 130 m downstream of Boundary Road culvert crossing looking north-northwest.

Photo 6 KCOP Creek southern bank approx. 150 m downstream of Boundary Road culvert crossing looking west.

Photo 7 KCOP Creek southern bank approx. 185 m downstream of Boundary Road culvert crossing looking north.

Photo 8 KCOP Creek southern bank approx. 195 m downstream of Boundary Road culvert crossing looking northwest.

Photo 9 KCOP Creek southern bank approx. 195 m downstream of Boundary Road culvert crossing looking south along drainage channel that extends to Windsor Road.

Photo 10 KCOP Creek downstream (west) side of Boundary Road culvert looking west.

Photo 11 KCOP Creek downstream (west) side of Boundary Road culvert looking at culvert exit

Photo 12 KCOP Creek northern bank approx. 80 m downstream of Boundary Road culvert crossing looking southwest.

Photo 13 KCOP Creek northern bank approx. 140 m downstream of Boundary Road culvert crossing looking east toward Boundary Road.

Photo 14 KCOP Creek northern bank approx. 95 m upstream of Chapman Road culvert crossing looking south.

Photo 15 KCOP Creek northern bank approx. 95 m upstream of Chapman Road culvert crossing looking west toward Chapman Road Culvert.

Photo 16 KCOP Creek northern bank approx. 95 m upstream of Chapman Road culvert crossing looking east.

K.D. WOOD VALUATIONS (AUST.) PTY. LTD.

ACN: 098 993 367 ABN: 33 098 993 367

Directors
K.D. Wood F.A.P.I Registered Valuer No. 11
J.M.Wood A.A.P.I Registered Valuer No. 6289

Valuers and Property Analysts

24 June 2019

Ref: KDW:19HCC04

Ms. Linda Hewitt
Hawkesbury City Council
PO Box 146
WINDSOR NSW 2756

Dear Linda,

We have been instructed to comment on the recommendations that the Independent Pricing and Regulatory Tribunal (IPART) is seeking to reduce the amount Hawkesbury City Council can charge developers in Stage 1 of the Vineyard Precinct. Our recommendation in particular relates to englobo rates applied to land of various categories.

9.1: Criterion 3 Reasonable Cost of Land

"The Vineyard C.P. includes $79,460,000 for land acquisition as shown in Table 9.1. The total area to be acquired is estimated at 45.63 hectares".

Table 9.1

Infrastructure Category	Total Area	Total Cost	Rate/m²
Transport	4.33 has	$12,417,439	$286/m²
Storm Water	14.8 has	$21,132,209	$142/m²
Open Space	26.21 has	$44,406,700	$167/m²
Community Services	0.3 has	$1,500,000	$500/m²
TOTAL:	**45.63 has**	**$79,458,348**	**$174/m²**

IPART, in their criticism of the application of the above values found that:

1. For "unconstrained" land the method of applying the application of average land values to be reasonable.

2. For "constrained" land the method of estimating costs is not reasonable and not supported by sufficient market evidence.

3. The cost estimate for District Park 5 is not reasonable because the Council has applied the average value for unconstrained land despite the park containing protected vegetation.

4. For Open Space and Community Services land, Council did not index the estimated cost to base period of the plan, i.e. March 2018.

Draft Recommendations

IPART has recommended:

1. The adoption of $85/m² for flood liable land.

2. The adoption of $120/m² for land within the bounds of a transmission line.

3. The cost of acquiring land within District Park 5 be reduced by $7,527,714 to account for the presence of protected vegetation. District Park 5 has a total area of 3.8945 has of which 26,557m² has been identified as Existing Native Vegetation (ENV) valued at $85/m² ($2,257,345) and 12,388m² Non-Certified land at $300/m² (unconstrained rate) less 50% for ecology risk at $150/m² ($1,858,200), total $4,115,545. This sum equates to $105.67/m² overall. This would reduce acquisition costs by $7,527,714 or $193/m².

   It would appear that in Council's estimates a value of $300/m² was attributed to the area of 38,945m² @ $300/m², total $11,683,500, less $4,115,545 = $7,567,955.

   From the Draft 'IPART' recommendations and the rates supplied by this office to GLN Planning, we note the following agreements and issues.

   1. Unconstrained Rate $300/m²: ..... $300/m² - $300/m²

   2. Constrained Rate/Flood Liable Rate, i.e. land below 17.3m contour: ..... $100/m² - $85/m²

   3. Land within TLE area: .....$120/m² - $150/m² - $120/m²

   4. Land subject to Endangered Species Legislation: .....Not identified - $85/m²

We will now address the four rates applicable to each land category.

1. Unconstrained Land (the unconstrained rate of $300/m²)

Whilst IPART has recommended this rate be adopted in light of more recent sales evidence and the rates adopted in the neighbouring precincts of Marsden Park, Marsden Park North and Box Hill, we consider this rate should be revised to $350/m². This would bring the rate in line with that adopted by Blacktown Council and the Department of Planning in these release precincts for land of similar topography and in close proximity to the subject, in fact, land within the Elara Estate, Stockland and New Park Estate, Winten was increased to $385/m² for Voluntary Planning Agreement (VPA) purposes in line with market movements. The rate of $350/m² is supported by the following market transactions.

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sale 1: 226-228 Grange Avenue, Marsden Park

Price Paid:	$15,500,000
Date Sold:	August 2018
Area:	38,460m²
Zoning:	Part R3 and part R2
Terms:	Subject to 12 months delayed settlement – staged payments.
D.A.	No.
Analysed Rate:	$403/m² overall
Cash Equivalent:	$373/m²

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sale 2: 27 Campbell Street, Riverstone

Price Paid:	$5,700,000
Date Sold:	June 2018
Area:	12,510m²
Zoning:	R2
Terms:	Settled June 2018
D.A.	Lodged 17/01989.
	Approved April 2018 for 30 residential lots.
Analysed Rate:	$456/m² overall

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sale 3: 19-21, 23 & 25 Boundary Road, Box Hill

Price Paid:	$37,000,000
Date Sold:	April 2018
Area:	10.09 hectares
Zoning:	Part R2, part RE1
D.A.	Yes for 177 residential lots, 6 residue lots, 1 public open space lot.
Analysed Rate:	$367/m² overall
Comment:	Adjoins Vineyard precinct.
	Large site, would throw a lesser rate/m².
	$366/m² includes D.A. and land zoned for Public Recreation which should be discounted by 20%.
	Shows a rate of $366/m² overall.

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sale 4: 132 Old Pitt Town Road, Box Hill

Price Paid:	$8,900,227
Date Sold:	January 2018
Area:	25,100m²
Zoning:	R2
Terms:	30 day settlement.
D.A.	Yes (542/2017/ZA) for 155 residential lots and 5 residue lots.
Analysed Rate:	$355/m² overall
Comment:	Adjoining owner purchase. Sold with D/Consent Adjoins Vineyard precinct on western side of Boundary Road.

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sale 5: 18 Gordon Road, Schofields

Price Paid:	$8,150,000
Date Sold:	August 2017
Area:	20,300m²
Zoning:	R2
D.A.	No. Subsequently approved for a staged 43 lot subdivision, 34 residential lots and 9 community title lots.
Analysed Rate:	$401/m² overall
Comment:	Benefits from three street frontages.

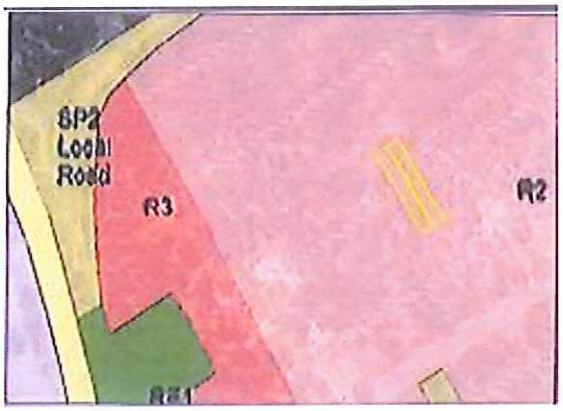
1. Unconstrained Land (the unconstrained rate of $300/m²)

Sales of Smaller Sites within the Scheduled Lands Area of Riverstone/Vineyard

1. Lots 61-62 Clyde Street, Vineyard

Price Paid:	$385,000
Date Sold:	February 2017
Area:	1,113m²
Zoning:	R2
Analysed Rate:	$346/m² site area. $192,500 per lot
Comment:	Two vacant adjoining bushland lots with no formed road access.

2. Lots 33-34 Dulwich Road, Vineyard

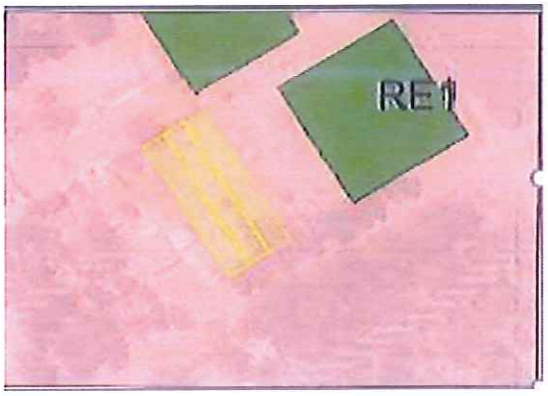


Price Paid:	$395,000
Date Sold:	May 2017
Area:	1,112m²
Zoning:	R2
Analysed Rate:	$355/m² site area. $197,500 per lot
Comment:	Two vacant adjoining bushland lots with no formed road access.

1. Unconstrained Land (the unconstrained rate of $300/m²)

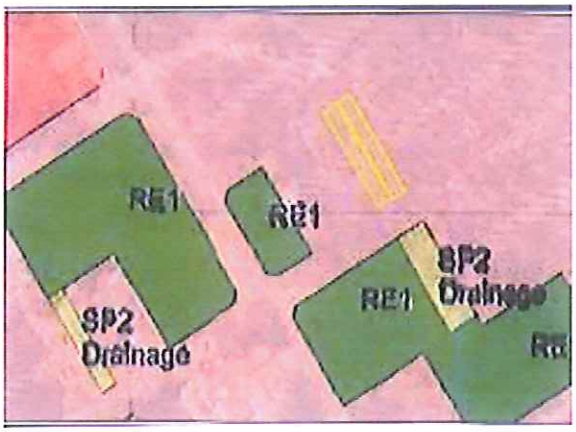
Sales of Smaller Sites within the Scheduled Lands Area of Riverstone/Vineyard (cont.)

3. Lots 57-59 Princes Street, Riverstone



Price Paid:	$550,000
Date Sold:	March 2017
Area:	1,669m²
Zoning:	R2
Analysed Rate:	$330/m² site area. $183,3330 per lot
Comment:	Three adjoining vacant bushland lots with formed road access.

4. Lots 61-62 Clyde Street, Riverstone

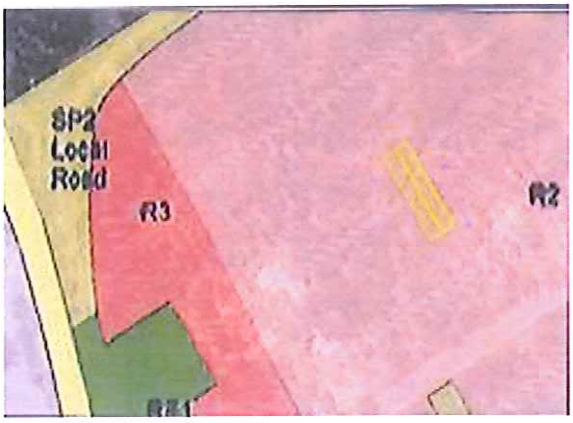


Price Paid:	$385,000
Date Sold:	February 2017
Area:	1,113m²
Zoning:	R2
Analysed Rate:	$346/m² site area. $192,500 per lot
Comment:	Two adjoining vacant bushland lots with no formed road access.

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sales of Smaller Sites within the Scheduled Lands Area of Riverstone/Vineyard

5. 33-34 Dulwich Road, Vineyard



Price Paid:	$395,000
Date Sold:	May 2017
Area:	1,112m²
Zoning:	R2
Analysed Rate:	$355/m² site area. $197,500 per lot
Comment:	Two adjoining vacant bushland lots with no formed road access.

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sales in the North Kellyville Release Area

Sale 1: 100Z Barry Road, North Kellyville, (Lot 51 in DP 1155205)

Price Paid:	**$4,480,000**
Date Sold:	14 December 2018
Area:	8,375m²
Zoning:	Part R2 Low Density Part RE1 Public Recreation
Improvements:	Cottage and outbuildings of no added value.
Parties:	Caruso to Hills Shire Council
Comment:	Mixed zoning 90% RE1, 10% R2 Acquired on an R2 basis.
Analysed Rate:	$536/m² of site area

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sales in the North Kellyville Release Area (cont.)

Sale 2: 104Z Barry Road, North Kellyville, (Lot 10 in DP 1244739)

Price Paid:	**$5,500,000**
Date Sold:	19 September 2018
Area:	10,200m²
Zoning:	Part R2 Low Density Part E4 Environmental Living
Improvements:	Cottage and farm buildings of no added value.
Analysed Rate:	$539/m² of site area.

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sales in the North Kellyville Release Area (cont.)

Sale 3: 158 Foxall Road, North Kellyville, (Lot 2 in DP 527671)

Price Paid:	**$13,010,000**
Date Sold:	26 September 2017
Area:	10,200m²
Zoning:	R2 Low Density
Parties:	Church of Jesus Christ of Latter Day Saints to Norwest Kellyville Developments Pty Ltd
Improvements:	Cottage and farm buildings. Battleaxe shaped lot. Corner of Withers Road and Barry Road.
Analysed Rate:	$644/m² of site area

1. Unconstrained Land (the unconstrained rate of $300/m²)

Sales in the North Kellyville Release Area (cont.)

Sale 4: 81-95 Foxall Road, North Kellyville, (Lot 11 in DP 1232585)

Price Paid:	**$9,915,000**
Date Sold:	21 December 2017
Area:	18,200m²
Zoning:	R2 Low Density
Parties:	Apap to Foxall Road Pty Ltd
Improvements:	Irregular shaped parcel.
Analysed Rate:	$545/m² of site area

2. Constrained Land (Court References)

Cassidy v Sydney Water [2008] NSW LEC 223
Lot 4 DP 258947, Memorial Avenue, Kellyville

Acquisition Date 22 September 2006.
Sales evidence ranged from $75/m² - $85/m².
Jagot J. adopted $85/m² for land below the 1:100 year flood level.
The land formed a part of Strangers Creek.

Davies v Sydney Water [2012] NSW LEC 130 (6th June 2012)
3 Arnold Avenue, Kellyville

Both the Valuer for the Applicant and Respondent agreed on a rate of $85/m² for land within the Riparian Corridor.
Land acquired 7th December 2007.
Creek Corridor below the 1:100 year flood level.
Part of Strangers Creek.

Constantine v Blacktown City Council (No. 2) [2016] NSW LEC 81 (6th July 2016)
51 Glengarrie Road, Marsden Park

Land acquired 13 February 2015.

Moore J. concluded:

- The value of the R2 land was $250/m².
- The value of land within the transmission line easement was $100/m², (i.e. a $60% discount).
- The value of the E2 Environmental Conservation land was determined at $80/m² but was not supported by comparable sales evidence.

Groghan v Blacktown City Council [2019] NSW LEC 23
1568 Windsor Road, Vineyard

Date of acquisition 12th August 2016.

Molesworth A.J. adopted the following rates:

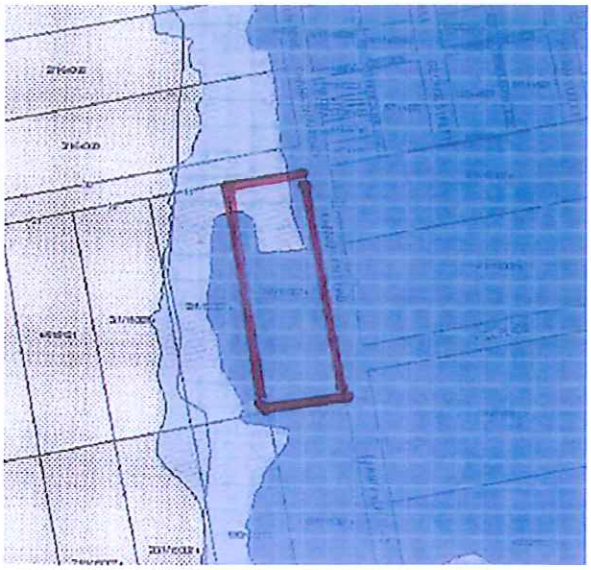
- Existing flood free R2 zoning $270/m²
- Potential flood free $216/m² (A 20% discount applied to land which was capable of being rendered flood free).
- Existing flood free school zoning $216/m² (20% discount)
- Permanently flood prone $80/m²

It is noticeable that the rate attributable to constrained land flood prone has not increased since *Cassidy v Sydney Water* in September 2006 whilst the rate applicable to 'R2' 'R3' Residential land would have increased by at least 100% since this time.

The $80/m² was accepted by the Court on the basis that it was supported by recent purchases by Council of flood affected drainage lands. Whilst it is acknowledged that significant increases in the value of R2 land do not (because of the constrained nature of SP2 Drainage land) result in similar increases in the value of these lands, however it is noted that the value of R2 land has increased by 60% from January 2016 to January 2019, one would contemplate that a 20% increased would be warranted. Such increase is illustrated by recent sales of constrained englobo lands.

2. Constrained Land Sales Evidence

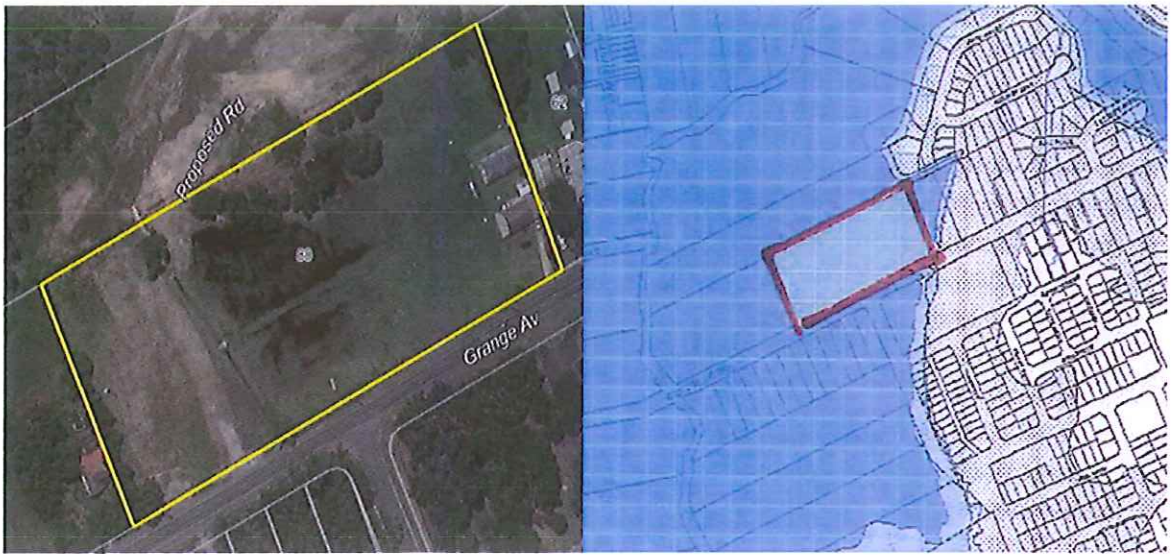
Sale 1: 1 Vine Street, SCHOFIELDS



Price Paid:	**$860,000**
Date Sold:	29 January 2015 (dated sale)
Area:	10,930m²
Zoned:	Part 'E3' Environmental Management Part 'E2' Environmental Conservation Part 'RU4' Small Holdings
Analysis:	$79/m²
Comment:	Rectangular parcel on the corner of Fermoy Road and Vine Street East (unmade), bisected by Bells Creek. Approximately 90% of land is shown as flood prone and major creek land. Older sale, would require upward adjustment of say 15% = $91/m² as adjusted.

2. Constrained Land Sales Evidence (cont).

Sale 2: 80 Grange Avenue, SCHOFIELDS (Lot 1, DP27259)



Price Paid:	**$2,500,000**
Date Sold:	17 July 2015 (dated sale)
Area:	22,200m²
Zoned:	Part 'E4' Environmental Living Part 'E2' Environmental Conservation
Analysis:	$112/m² overall
Comment:	Long frontage of 220 metres to Grange Avenue. Due to its location/proximity to Eastern Creek, it is shown as within high risk flooding (95%) and low risk flooding (5%). Improvements comprise a circa 1980 brick veneer/tile cottage and single garage. 'E4' zone permits single dwellings and property has existing dwelling. It is also subject to transmission line easement. Dated sale with added potential because of 'E4' zoning.

2. Constrained Land Sales Evidence (cont.)

Sale 3: 83 Hambledon Road, SCHOFIELDS (Part Lot 67, DP 28833)

Sale:	Blacktown City Council acquisition Agreement reached at $82.50/m²
Date Sold:	23 December 2015 (dated sale)
Area:	10,670m²
Zoned:	'SP2' Infrastructure - Drainage
Analysis:	$82.50/m² of site area
Comment:	Part potentially developable. Part flood prone at rear of No. 83 Land is traversed by First Ponds Creek zoned SP2 Dated transaction.

2. Constrained Land Sales Evidence (cont.)

Sale 4: 79 Hambledon Road, SCHOFIELDS (Part Lot 65, DP 28833)

Sale:	Blacktown City Council acquisition Agreement reached at $82.50/m²
Date Sold:	December 2015 (dated sale)
Area:	9,440m²
Zoned:	'SP2' Infrastructure - Drainage
Analysis:	$82.50/m² of site area
Comment:	Located at the rear of No. 79 Similar situation to No. 83.

2. Constrained Land (cont.)

There can be no doubt that this land whether flood prone or environmentally sensitive provides an added amenity to adjoining or nearby developable lands and one which is reflected in the prices achievable for developed lots.

I have also considered the following acquisitions of SP2 Infrastructure land within the broader north-west growth areas of Schofields, Riverstone, The Ponds and Kellyville.

Lot / DP	Suburb	Zoning	Area	Contract Date	Paid	Rate
500/1207819 503/1207825 504/1207825	The Ponds	Pt. SP2 Pt. E2	609,670m²	Jun 2017	$7,050,000	$116/m²
122/1203646	Schofields	SP2	54,700m²	Jun 2015	$5,208,500	$95/m²
318/1199955	Kellyville	SP2	1,248.2m²	Mar 2015	$205,000	$164/m²
Part 125/208203	Rouse Hill	Pt. SP2 Pt. RE1	5,200m²	Mar 2016	$442,000	$85/m²
	Identified as flood prone, major creek land, riparian protection area, NVP area.					
84/28833	Schofields	Pt. SP2 Pt. RE1	2,250m²	Feb 2016	$191,250	$85/m²
83/28833	Schofields	Pt. SP2 Pt. RE1	2,250m²	Feb 2016	$191,250	$85/m²

Zonings

SP2: Drainage/Storm Water Management
E2: Environmental Conservation
RE1: Public Recreation

Note:
These sales with February 2016 are all dated and reflect rates from $85/m² to $164/m². It would not in my opinion be unreasonable to apply an 18% increase to constrained land in light of more recent sales evidence, considering the market for residential englobo land has increased 60% since January 2016, i.e. from $250/m² to $400/m².

I note that in the Submission forwarded by Mr. Lunney of Lunney & Watt Valuers, he proposes a rate of $100/m² for constrained land and was recommended.

3. Land within Transmission Line Area

Land within a transmission line easement is normally acquired as a part of an englobo parcel and is reflected in the rate paid for the englobo parcel when land for a TLE is acquired under Section 88K of the Conveyancing Act or Section 40 of the Land Acquisition (Just Terms Compensation) Act 1991. It is normally a percentage discount of the unconstrained rate as agreed to between the parties or as determined by the Court.

The percentage discount is normally within the range of 50% to 60% of the unconstrained rate depending on the "imposition" of the easement on the land, i.e. land affected by an easement if the adopted unconstrained rate be $300/m^2$ would be within the range of from $120/m^2$ to $150/m^2$ and $350/m^2$ would be $140/m^2$ to $175/m^2$.

I note IPART has recommended a rate of $120/m^2$ which is at the lower end of the range notwithstanding that developers will be contending Council pay the dispossessed owner rates commensurate with the higher end on the basis that compensation be weighted in favour of the dispossessed owner.

4. District Park 5

The area of ENV has been calculated at 26,557m² to which IPART has recommended a rate of $85/m² (Lunney Watt recommendation $100/m²) and Non Certified land 12,388m² to which a recommended rate is $150/m², i.e. $300/m² unconstrained less 50% for risk as per the Lunney Watt recommendation. The 50% reduction theoretically is to capture the element of risk to a potential developer not being able to gain development consent for 'R2' Low Density Residential housing development. My understanding based on the final planning reports for Vineyard precinct is that District Park 5 is to be reclassified as "Non Certified" land pursuant to the Biodiversity Conservation Order (B.C.O.).

In my opinion, if land is reclassified to permit a usage as a Public Park for sporting and recreational uses, a Valuer in the determination of Market Value, Section 56, must attribute an "alternative" or "underlying" zoning to the land. If the adjoining land use be 'R2' Residential, then the value must be assessed on this basis.

In the determination of a rate per m² attributable to the land any physical constraints inherent in the composition of the land must be brought to account, e.g. flooding. The vegetation on the land would only be an issue were the land "certified". The fact that it was certified before rezoning but has since been reclassified would surely negate this issue or require a developer to offset the area of native vegetation by the purchase of Bio-Credits through the Office of Environment and Heritage as a Condition of Development Consent.

It should be noted that the $350/m² recommended for 'R2' land is an average only, some properties will be more or less depending on location, size and topography.

We note that the Landscape Character diagram (pre development) 2016 indicates the land consists of a clearance rate of 80% to 100% and that the potential impact of residential development could be minimised by the retention and planting of alluvial woodland vegetation along the creek line (Killarney Chain-O-Ponds) to enable other areas to be cleared for development.

Accepting the foregoing it is considered that an appropriate rate of District Park 5 Land be at the rate of $300/m², i.e. $350/m² less $50/m² for likely contingencies and $100/m² for the Riparian Corridor.

Adopting a total area as per item 9.2 of the IPART report of 38,945m² of which we estimate approx. 9,000m² is the subject of riparian corridor (constrained) and 29,945m² is now "Non Certified" or otherwise potentially developable, produces the following.

Constrained Land (Riparian Corridor) estimated at:

9,000m² @ $100/m² = $ 900,000

plus,

29,945m² @ $300/m² = $8,983,500

Total: = $9,883,500

Say $10,000,000

4. **District Park 5** (cont.)

These costs exclude any additional claims under Sec. 55(b) Special Value, Sec. 55(c) Severance, Sec. 55(d) Disturbance (legal and valuation fees), Sec. 55(e) Relocation, Sec. 55(f) Decrease in Value attributable to Council in acquiring the land which may increase the foregoing amount by an additional 10%.

Happy to discuss at your convenience.

Regards,

[redacted]

Kent D. Wood
CERTIFIED PRACTICING VALUER
Registered Valuer No. 11 (FAPI)
K.D. Wood Valuations (Aust) Pty Ltd

Figure 1: Draft Development Control Plan District Park 5 (Red Outline)

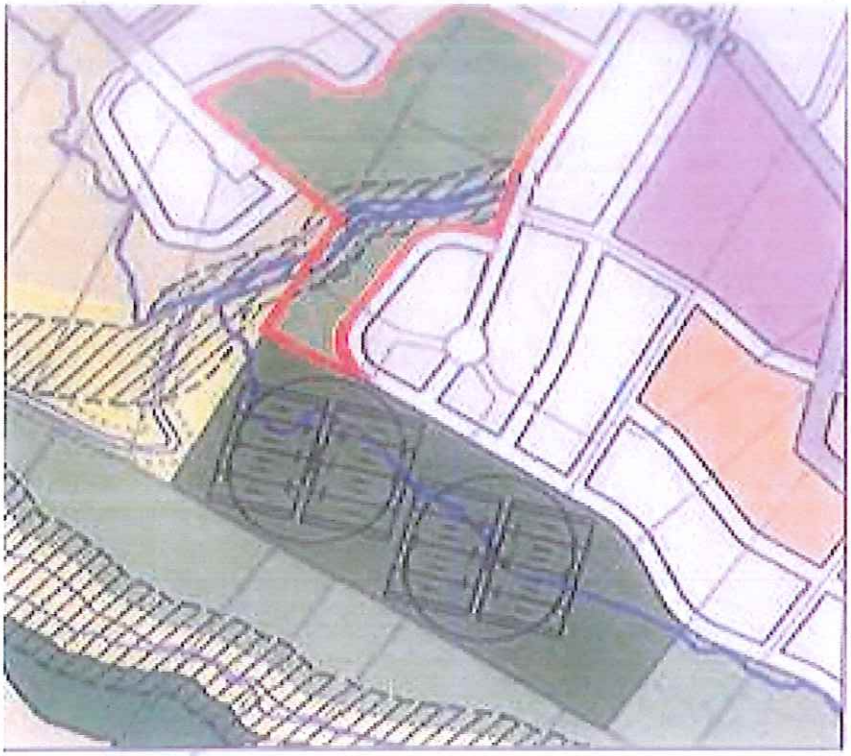


Figure 2: Riparian Corridor Est. 9,000m²