



Scope of works for repairs to

Knapsack Reserve Cross Country Circuit

Prepared for

Blue Mountains City Council

Prepared by

Blue Mountains Off Road Cyclists

Date

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Comments on the Proposed XC Alignments

Various options were given in a few areas where new alignments have been required due to changes with respect to the archaeological surveys. This is primarily around the "Caves" area in the southern part of the reserve. Many of these have been walked with BMORC and Matthew Chambers. Some others have arisen after discussions on site with both Michael Henson and with Matthew Chambers over the last 18 months. We have also listed outlines of proposed works that at minimum meet the Commonwealth requirements of making a sustainable trail.

BMORC require feedback on which alignments are to be sanctioned for approval, That is, which trail proposal gets sent to the commonwealth assessment. We feel that then this trail can be locked we have a starting point such that before any build day the micro details of construction and materials can be developed rather than having confusion and a process of bartering to get the broader trail routes even defined. This way we have a "design" that is to be worked towards rather than an indistinct plan which is how it feels after the last few years since the initial report was tabled by BMORC.

As much as we have concerns about locking in the XC route we have seen that many changes can occur such as already has happened with influences such as the archaeological assessments.

So having this proposed trail map on the signage will be inaccurate until all the changes and reroutes can be built. With minimal resources for time this will be a very long and ongoing project. So this signage will be highly misleading to riders and the community at best.

The Commonwealth decision also only stated "Signs stating that the tracks will be closed during wet weather must be erected prior to commencement of the action". This would imply that some form of temporary signage would be preferable in the interim until the full XC trail can be built and a proper accurate sign can then be designed.

For the purpose of validating the proposed conceptual plan of the trails we feel that it would be beneficial for BMCC to utilise an independent consultant such as IMBA or similar to provide this validation. As the Commonwealth decision stated the tracks must be designed and constructed such they meet IMBA requirements and that there is considerable attention given to this project by certain groups this would allow for this correct practice to be verified. While we have created detailed technical type designs for many sections we feel this will not be respected without a stamp of approval from a consultant.

This would allow for the meeting of the design requirements that have been previously approved before any build days and by whoever is involved in the construction of each particular section. If this can't be funded by BMCC this may need to be handled by application for grant funding.

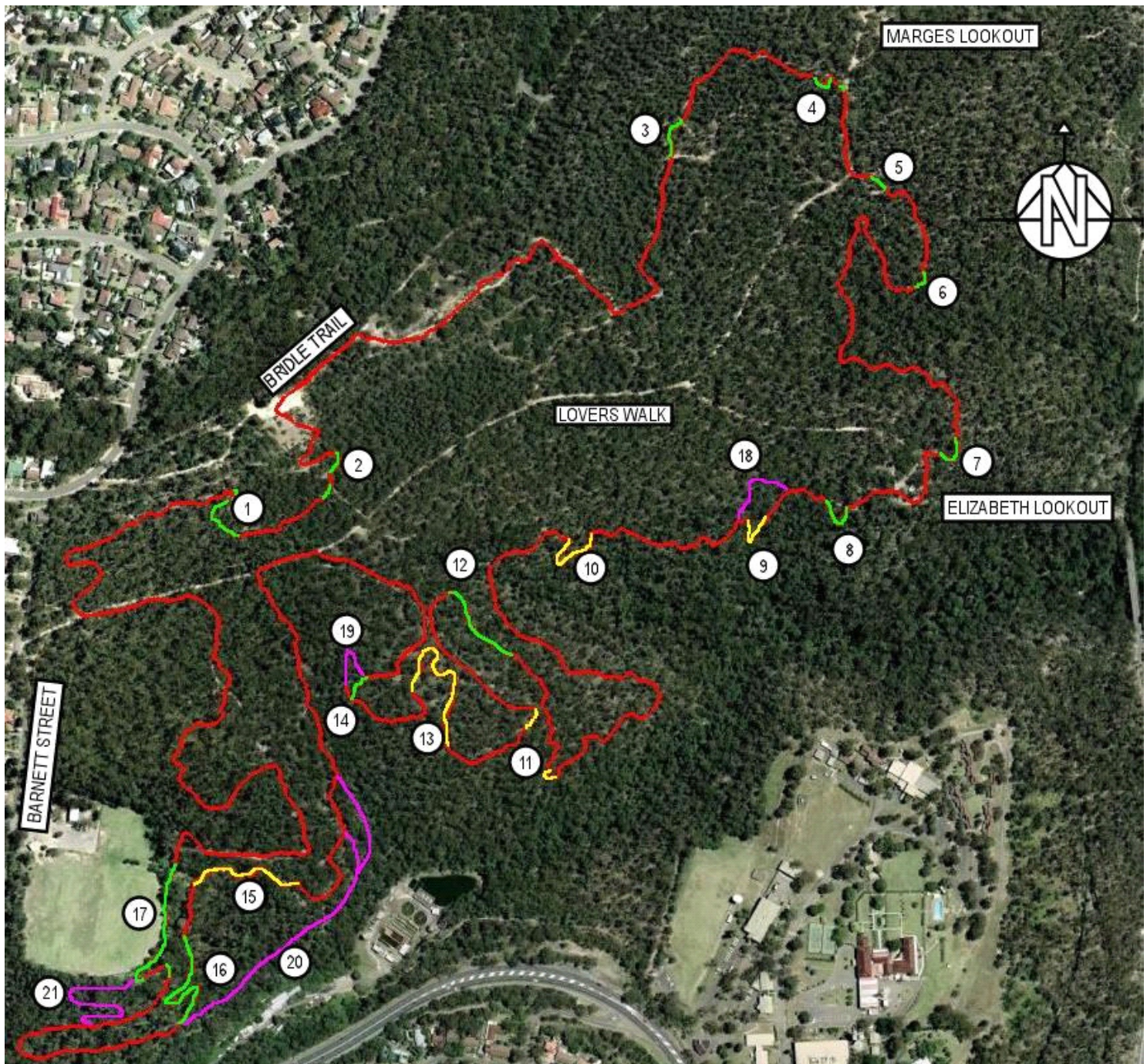


A major concern is that riders feel that despite this plan being reasonably conservative in comparison to other bike trail projects it looks like it will not actually be practical to implement. When this project was developed in 2010 there was a considerable interest from the riding community to donate whatever time was necessary. Riders were more than ready to put in considerable effort and hours of work to get the projects done. This was a case of riders working with council to develop legal trails that would be of benefit to both parties. However after the decision it has become apparent that this resource of time and labour is unable to be utilised to any percentage of what is on offer. This is wasteful and also very disheartening to riders who already view much of the project as a pipe dream in that there is no way to actually get it done.

To this end we need to locate extra funding from grants such that staff can be paid for more build days. Or alternatively a new model actively developed that allows for greater autonomy such as discussed in the current survey on Trailcare and Bushcare. Even when sections are finished and require maintenance it seems that the current practice would prevent simple maintenance occurring in preference to allowing further degradation to happen just because the current system doesn't allow for this flexibility.

The current 4 work days a year we understand is all that can be wrangled from BMCC budget and people like Trish having to give up their own time on the weekends working extra hours. However it is obvious not much of this project can get completed with the current allocation and approach. We feel this has to be realised such that a solution to this dilemma can be derived and such that riders can actually believe in this project by being involved in getting real results rather than walking away from the concept of working with council for legal trails.

Proposed Realignments



Legend:

Yellow - Existing approved re-alignments

Green - New proposed re-alignments

Magenta - Alternative re-alignments



Site 1

Problem: Straight Fall trail with grades reaching 18%

Proposed Alignment solution: New switch back at lower section. Half grade traverse to top. Rehabilitate unused trail. Offset 2:1

Site 2

Problem: Straight Fall trail with grades reaching 20%

Proposed Alignment solution: Half grade trail descending toward a survey marker and switches back onto the access trail away from the survey marker. Rehabilitate unused trail. Offset 1:1

Site 3

Problem: Trail connects with start of downhill

Proposed Alignment solution: Reopen a small amount of brush matted trail to create a narrow corridor. Rehabilitate unused trail. Offset 3:1

Site 4

Problem: Rock drop exceeding difficult rating (black diamond)

Proposed Alignment solution: keep drop open for experienced riders but signpost new B line alignment for the less experienced. Rehabilitate large lower area of unused trail for Offset 1:1

Site 5

Problem: Trail is used by the Downhill alignment.

Proposed Alignment solution: Re-alignment roughly 10 metres down from the existing alignment. Rehabilitate unused trails in area. Offset 4:1

Site 6

Problem: Trail Cross over with Downhill alignment.

Proposed Alignment solution: Safer cross over with improved line of sight. Offset 1:1

Site 7

Problem: Badly eroding straight fall trail.

Proposed Alignment solution: Extend trail. South at half grade with switch back on rock back to existing trail. Offset 1:2

Site 8

Problem: Very wide straight fall trail. Eroded with a lot of loose rock.

Proposed Alignment solution: Align trail south towards a gentle sloped rock ramp. Turning back towards the existing trail with s grade reversal. Offset 1:1

Site 9

Approved realignment under existing Ref.



Site 10

Approved realignment under existing Ref.

Site 11

Approved realignments under existing Ref.

Site 12

Problem: Original planned loop ran through a cultural sensitive location.

Proposed Alignment solution: New track in different location to offset for the closure and maintain a looped circuit. Offset 1:1

Site 13

Approved realignment under existing Ref.

Site 14

Problem: Wide straight fall trail split in 2 with steep grades.

Proposed Alignment solution: Half grade traverse to remove straight fall. Offset 1:1

Site 15

Approved realignment under existing Ref.

Site 16

Problem: Original Ref approved trail ran close to cultural sensitive sight.

Proposed Alignment solution: Realignment uses part of existing then traverses down steep slope. Will require a large built up switch back to be built in a dense tree area.

Site 17

Problem: Original Ref approved trail ran close to cultural sight.

Proposed Alignment solution: Realign trail with grade reversals close to the soccer field fence. This promotes exposure to each others sport.



Proposed Alternative re-alignments

Site 18

Proposed Alignment solution: Trail follows contour with low grades. Easier to build and minimal future maintenance.

Site 19

Proposed Alignment solution: Uses more existing trail and extends north at half grade switching back to existing trail.

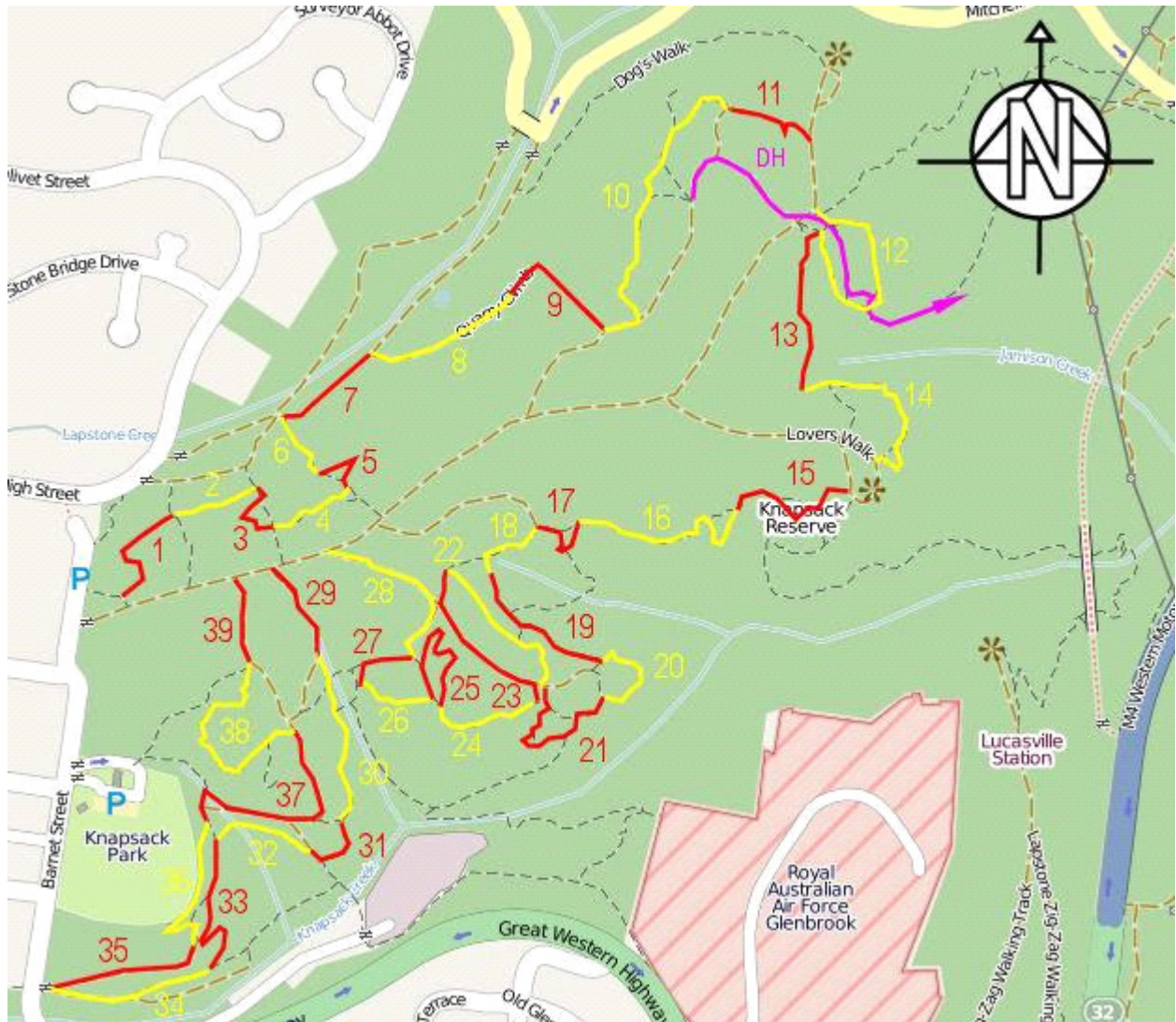
Site 20

Proposed Alignment solution: Use existing trail along contour avoiding cultural area. One bridge will be required. Eastern end has an existing trail that traverses up the slope but is a high grade and would require high future maintenance. Extending east further will find a more gentle grade to meet the existing trail.

Site 21

Proposed Alignment solution: Alternative alignment through a rocky landscape provides a challenge for the advanced riders.

Proposed Repairs



Section 1

Repairs required: Improve water diversion through the use of knicks. Close straight fall trail from lovers walk. Improved drainage at bottom to prevent further sediment build up caused from erosion.

Priority: Low

Workload: Low

Section 2

Repairs required: Improve water diversion through the use of knicks.

Priority: Low

Workload: Low



Section 3

Repairs required: Close wide straight fall trail and build realignment.

Priority: High

Workload: High

Section 4

Repairs required: Vegetation Maintenance, improve drainage with use of Knicks. Build realignment and offset with trail rationalisation.

Priority: High

Workload: Medium

Section 5

Repairs required: Build realignment and offset with trail rationalisation.

Priority: High

Workload: Medium

Section 6

Repairs required: Build Cambered corner to catch and redirect riders. Improve drainage. Rehabilitate large unused area at top.

Priority: Medium

Workload: Large

Section 7 - Bridle Trail

Repairs required: Large erosion and sediment build up. Located next to creek area. Discuss with council for a viable solution.

Priority: Medium

Workload: Unknown

Section 8

Repairs required: Rock armouring may be required at the lower section. Upper section is prone to ponding. Improved drainage may be required in the form of a water crossing to allow ponding to drain to the lower sediment pond.

Priority: Low

Workload: Medium

Section 9

Repairs required: Rock armour small sections to improve sustainability.

Priority: Low

Workload: Medium - High



Section 10

Repairs required: Narrow trail to improve offsets. Raise trail surface where ponding is occurring near western end. Eastern end has 2 straight fall sections of trail with signs of erosion. Improve drainage with raised trail surface and rock water bar steps.

Priority: Medium

Workload: Medium

Section 11

Repairs required: Improve upper section water diversion via the use of knicks, rollers, rock armour and grade reversals. Build B-line alignment around rock drop. Rehabilitate large area of lower section. Slight realignment of trail in lower section to raise tread out of the fall line.

Priority: High

Workload: Very high.

Section 12

Repairs required: Close off shoot trails to improve offsets. Build 2 realignments, improve drainage with knicks and grade rollers.

Priority: Medium

Workload: Medium

Section 13

Repairs required: Build 2 water crossings, rebuild and rock armour eroded Pinch climb. Improve drainage with knicks and grade reversals.

Priority: High

Workload: Very High

Section 14

Repairs required: Build realignment, rock armour pinch climb. Improve water diversion with knicks and grade reversals.

Priority: High

Workload: High

Section 15

Repairs required: Build realignment, build water crossing and Improve water management

Priority: Medium

Workload: High

Section 16

Repairs required: Build realignment, rehabilitate offset. Improve water diversion with knicks

Priority: Medium

Workload: Medium



Section 17

Repairs required: Build realignment, rehabilitate offset. Improve water diversion with knicks and grade reversals

Priority: Medium

Workload: High

Section 18

Repairs required: Build 2 water crossings and trail narrowing through rehabilitation.

Priority: High

Workload: Medium

Section 19

Repairs required: Improve water diversion through the use of knicks.

Priority: Low

Workload: Low

Section 20

Repairs required: Improve water diversion through the use of knicks.

Priority: Low

Workload: Low

Section 21

Repairs required: Improve water diversion through the use of knicks and grade reversals.

One small re-alignment.

Priority: Medium

Workload: Medium

Section 22

Repairs required: Construct realignment. Improve water diversion through the use of knicks.

Close offset trails

Priority: High

Workload: High

Section 23

Repairs required: Potential trail narrowing to improve offsets. Improve water diversion through the use of knicks and grade reversals.

Priority: Low

Workload: Medium-High



Section 24

Repairs required: Narrow trail to improve offsets. Improve water diversion through the use of knicks.

Priority: Low

Workload: Low

Section 25

Repairs required: Build realignment, build A-line rollers over fallen trees for advanced riders.

Priority: Low

Workload: High

Section 26

Repairs required: Improve water diversion through the use of knicks and grade reversals.

Priority: Medium

Workload: Low



Section 27

Repairs required: Build realignment, Improve Water diversion and Narrow trail to improve offsets.

Priority: Low

Workload: Low

Section 28

Repairs required: Potential for trail narrowing to improve offsets. Improve water diversion.

Priority: Low

Workload: Low

Section 29

Repairs required: (Vehicle Access trail) install water bars to improve drainage.

Priority: Low

Workload: Medium-high

Section 30

Repairs required: Improve water diversion through the use of knicks and grade reversals.

Priority: High

Workload: Medium

Section 31

Repairs required: Improve water diversion through the use of knicks

Priority: Low

Workload: Low

Section 32

Repairs required: Build Realignment, build raised surface catwalk over swamp ground/creek and over soft soil mound. Weed Management.

Priority: High

Workload: Very High

Section 33

Repairs required: Improve water diversion through the use of knicks and grade reversals.

Build Realignment, Build large switch back with rock armouring.

Priority: High

Workload: Very High

Section 34

Repairs required: Improve water diversion through the use of knicks and grade reversals.

Priority: Low

Workload: Low



Section 35

Repairs required: Improve water diversion through the use of knicks and/or grade reversals.

Priority: Low

Workload: Low

Section 36

Repairs required: Weed Removal and Build Realignment

Priority: Medium

Workload: High

Section 37

Repairs required: Potential for trail narrowing to improve offsets. Improve water diversion through the use of knicks and/or grade reversals.

Priority: Low

Workload: Low

Section 38

Repairs required: Improve water diversion through the use of knicks and/or grade reversals. Improve trail flow on some corners.

Priority: Low

Workload: Low

Section 39

Repairs required: Potential for trail narrowing to improve offsets. Close offset trails

Priority: Medium

Workload: Medium