Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 1

Mountain bike downhill course

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
1	Clear track, remove trees and scrub	m2	1,560	15	23,400	
2	Downhill track say 1.2m wide	m2	1,560	20	31,200	
3	Extra over downhill track for sealed breaking area at end	m2	50	80	4,000	
4	Signage, markers	Item			3,000	
	Sub Total				61,600	
5	Preliminaries			10	6,160	
	Total				67,760	0.00

Base Date : 1st Qtr 2010

Location Factor : 1.00

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
	Stage 1 Cross Country					
1	Clear track, remove trees and scrub	m2	5,816	15	87,240	
2	Cross country track say 1.2m wide	m2	5,816	20	116,320	
3	Extra over cross country track for an allowance of 15% asphalting [Excluded, an allowance is included in External Works]	Exc	872			
4	Signage, markers	Item			10,000	
	Sub Total					
5	Preliminaries			10	21,356	
	Total				234,916	0.00

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 1

Davis Langdon

BMX Race Track

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
1	Bulk earthworks, grading and compacting to form BMX track approx 420 m long	m3	6,048	70	423,360	
2	Asphalt to starting lanes and pad including linemarking	m2	80	80	6,400	
3	Asphalt to 30% of race track including linemarking	m2	1,008	80	80,640	
4	8m Wide hinged flap down starting gate and grid	No	1	2,500	2,500	
5	Shelter over starting hill	Item			12,000	
6	Scoreboard and billboard structure	Item			30,000	
7	Chainlink permieter fence to track	m	340	65	22,100	
8	Entry gate to chainlink fence	No	4	300	1,200	
9	Signage, sundry fixtures	Item	1	3,000	3,000	
10	Crushed rock platform to spectator viewing platforms	m2	976	20	19,520	
11	Balustrade to viewing platforms	m	282	120	33,840	
	Sub Total				634,560	
12	Preliminaries			10	63,456	
	Total				698,016	0.00

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
1	Junior bicycle education training track	m2	679	120	81,480	
2	Signage	Item			5,000	
3	Linemarking	Item			5,000	
	Sub Total				91,480	
4	Preliminaries			10	9,148	
	Total				100,628	0.00

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 1

Davis Langdon

South Carparking

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
1	Carparking for 289 car spaces	m2	4,656	80	372,480	
2	Kerbs	m	400	60	24,000	
3	Linemarking per car	No	289	15	4,335	
4	Car park pole lighting	m2	4,656	20	93,120	
	Sub Total				493,935	
5	Preliminaries			10	49,394	
	Total				543,329	0.00

Base Date : 1st Qtr 2010

Location Factor : 1.00

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 1

Davis Langdon

External Works

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
	Pathways					
1	Allowance for footpaths to access courses, facilities	Item			30,000	
	Pedestrian Link from College Rd carpark to Facilities					
2	Clear track , remove trees and scrub	m2	2,156	15	32,340	
3	Pedestrian track 4m wide including Lilydale topping base, drainage, etc	m2	2,156	20	43,120	
	Sub Total - Pedestrian Pathway				75,460	
	Allowance for Hard Surface Topping to Bike Tracks					
4	Allowance as instructed by SGL Group 27th May 2010	Item			100,000	
	Landscaping					
5	Allowance for landscaping [Excluded]	Exc				
6	Allowance for seating, bins, bike racks	Item			20,000	
	External Services					
7	External Stormwater Drainage, tanks etc	Item			50,000	
8	External Sewer Drainage	Exc				
9	External Water Supply	Exc				
10	External Light and Power	Item			100,000	
	Sub Total - External Works				150,000	
11	Preliminaries			10	37,546	
	Total				413,006	0.00

Appendix C

[Cost Plan for Stage 2]

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 2

Davis Langdon

Project Summary

No.	Description	Unit	Quantity	Rate	Total
	S T A G E 2				
	Clubrooms				
1	Clubroom First Floor Level	m2	508	760	386,298
	Sub Total - Clubrooms				386,298
	Criterium Short Course Track				
2	Short course track				279,576
	Sub Total - Short Course				279,576
	Mountain Bike Cross Country Stage 2 only				
3	Mountain bike cross country course				251,317
	Sub Total - Cross Country Stage 2				251,317
	Sub Total - Stage 2				917,191
	Contingencies				
4	Design Contingency			5	45,860
5	Construction Contingency			8	77,044
6	Prolongation Contingency			1	10,401
	Sub Total - Stage 2 Contingency				133,305
	Project Costs				
7	Headworks, Fees and Authority Charges			2	21,010
8	Consultant's Fees			10	107,151
	Sub Total - Project Costs				128,161
	Sub Total - Total				1,178,657
	Escalation Allowance				
9	Escalation to construction commencement (allowing 24 months till commencement at 4% p.a)			8	94,292
10	Escalation during construction (allowing 12 months)			2	25,459
	GRAND TOTAL				1,298,408
	Total				1,298,408

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
	Superstructure					
1	Columns	m			12,000	23.62
2	Upper Floors	m2			11,400	22.44
3	Roof	m2			67,200	132.28
4	External Walls	m2			99,500	195.87
5	Windows (included in external walls)	m2				
6	External Doors	No				
7	Internal Walls	m2			57,000	112.20
8	Internal Doors	No			4,500	8.86
	Sub Total - Superstructure				251,600	495.27
	Finishes					
9	Wall Finishes	m2			8,840	17.40
10	Floor Finishes	m2			14,960	29.45
11	Ceiling Finishes	m2			15,600	30.71
	Sub Total - Finishes				39,400	77.56
	Fittings					
12	Fitments	m2			6,000	11.81
	Sub Total - Fittings				6,000	11.81
	Engineering Services					
13	Sanitary Fixtures	No				
14	Water Supply	m2				
15	Sewer Drainage	No				
16	Gas Service	m2				
17	Space Heating	m2				
18	Ventilation	m2				
19	Evaporative Cooling	m2				
20	Air Conditioning	m2			30,000	59.06
21	Fire Protection	m2				
22	Light and Power	m2			21,600	42.52
23	Communications	m2				
24	Transportation Systems	No				
25	Special Services	m2				
26	BWIC 5%	Item			2,580	5.08
	Sub Total Engineering Services				54,180	106.66
	External Services					
27	External Stormwater Drainage	Item				
	Carried Forward				351,180	691.30

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
	Brought Forward				351,180	691.30
1	External Sewer Drainage	Item				
2	External Water Supply	Item				
3	External Gas	Item				
4	External Fire Protection	Item				
5	External Light and Power	Item				
6	External Communications	m2				
7	External Special Services	m2				
8	External Alterations and Renovations	m2				
9	Special Provisions	m2				
	Sub Total - External Services					
10	Preliminaries (10%)			10	35,118	69.13
	Sub Total				386,298	760.43
	Total				386,298	760.43

No.	Description	Unit	Quantity	Rate	Total
	Columns				
1	Columns to clubhouse First floor	m2	240	50	12,000
	Total				12,000

No.	Description	Unit	Quantity	Rate	Total
	Upper Floors				
1	Surface finish to balcony	m2	95	120	11,400
	Total				11,400

No.	Description	Unit	Quantity	Rate	Total
	Roof				
1	Large cantilevered roof structure, purlins, metal deck and rain water goods	m2	336	200	67,200
	Total				67,200

No.	Description	Unit	Quantity	Rate	Total
	External Walls				
1	First floor walls includes doors	m2	199	500	99,500
	Total				99,500

No.	Description	Unit	Quantity	Rate	Total
	Internal Walls				
1	Concertina operable walls to first floor rooms	m2	114	500	57,000
	Total				57,000

No.	Description	Unit	Quantity	Rate	Total
	Internal Doors				
1	Single solid core doors incl frame and hardware	No	3	1,500	4,500
	Total				4,500

No.	Description	Unit	Quantity	Rate	Total
	Wall Finishes				
1	Plasterboard wall linings to inside face of First Floor external walls	m2	96	40	3,840
2	Allowance for sundry finishes	Item			5,000
	Total				8,840

No.	Description	Unit	Quantity	Rate	Total
	Floor Finishes				
1	Carpet to first floor	m2	232	60	13,920
2	Resilient flooring to servery	m2	8	130	1,040
	Total				14,960

No.	Description	Unit	Quantity	Rate	Total
	Ceiling Finishes				
1	Raked plasterboard ceiling to first floor	m2	240	50	12,000
2	Paint finish	m2	240	15	3,600
	Total				15,600

No.	Description	Unit	Quantity	Rate	Total
	Fitments				
1	Allowance for sundry metalwork, signage	m2	240	15	3,600
2	Statutory signage	m2	240	10	2,400
	Total				6,000

No.	Description	Unit	Quantity	Rate	Total
	Air Conditioning				
1	Split system air conditioning	m2	240	125	30,000
	Total				30,000

No.	Description	Unit	Quantity	Rate	Total
	Light and Power				
1	Light and Power	m2	240	90	21,600
	Total				21,600

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 2

Short course track

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
1	Clear area, remove trees and scrub	m2	7,176	15	107,640	
2	Short course track 6m wide	m2	7,176	20	143,520	
3	Extra over short course track for an allowance of 15% for ashphalt surface [Excluded, allowance is included in Stage 1 external works]	Exc	1,076			
4	Signage, markers	Item			3,000	
	Sub Total				254,160	
5	Preliminaries			10	25,416	
	Total				279,576	0.00

Base Date : 1st Qtr 2010

Location Factor : 1.00

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
	Stage 2 Cross Country					
1	Clear track, remove trees and scrub	m2	6,242	15	93,630	
2	Cross country track say 1.2m wide	m2	6,242	20	124,840	
3	Extra over cross country track for an allowance of 15% asphalting [Excluded, an allowance is made in External Works Stage 1]	Exc	936			
4	Signage, markers	Item			10,000	
	Sub Total				228,470	
5	Preliminaries			10	22,847	
	Total				251,317	0.00

Appendix D

[Cost Plan for Stage 3]

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 3

Project Summary

No.	Description	Unit	Quantity	Rate	Total
	S T A G E 3				
	Kermesse Long Course Track				
1	Long course track				474,661
	Sub Total - Long Course				474,661
	Carparking				
2	College Road carparking				682,550
	Sub Total - Carparking				682,550
	Sub Total - Stage 3				1,157,211
	Contingencies				
3	Design Contingency			5	57,861
4	Construction Contingency			8	97,206
5	Prolongation Contingency			1	13,123
	Sub Total - Stage 3 Contingency				168,190
	Project Costs				
6	Headworks, Fees and Authority Charges			2	26,508
7	Consultant's Fees			10	135,191
	Sub Total - Project Costs				161,699
	Sub Total - Total				1,487,100
	Escalation Allowance				
8	Escalation to construction commencement (allowing 24 months till commencement at 4% p.a)			12	178,452
9	Escalation during construction (allowing 12 months)			2	33,311
	Sub Total - Escalation				211,763
	STAGE 3 GRAND TOTAL				1,698,863
	Total				1,698,863

Base Date : 1st Qtr 2010

Location Factor : 1.00

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 3

Long course track

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
1	Clear track, remove trees and scrub	m2	12,186	15	182,790	
2	Long course track 6m wide	m2	12,186	20	243,720	
3	Extra over long course track for an allowance of 15% of ashpalting [Excluded, an allowance in made in External Works Stage 1]	Exc	1,828	0	0	
4	Signage, markers	Item			5,000	
	Sub Total				431,510	
5	Preliminaries			10	43,151	
	Total				474,661	0.00

Base Date : 1st Qtr 2010

Location Factor : 1.00

Project : Bathurst Bike Park

Cost Plan : A

Revision : Bathurst Stage 3

College Road carparking

No.	Description	Unit	Elemental Qty	Elemental Rate	Total	$/m2 GFA
1	College Road Carparking	m2	5,500	80	440,000	
2	Kerbs	m	900	60	54,000	
3	Linemarking	m2	5,500	3	16,500	
4	Car park pole lighting	m2	5,500	20	110,000	
	Sub Total				620,500	
5	Preliminaries			10	62,050	
	Total				682,550	0.00

Base Date : 1st Qtr 2010

Location Factor : 1.00

Our Offices

Australia	Adelaide	+61 8 8410 4044
	Brisbane	+61 7 3221 1788
	Cairns	+61 7 4051 7511
	Canberra	+61 2 6257 4428
	Darwin	+61 8 8981 8020
	Hobart	+61 3 6234 8788
	Melbourne	+61 3 9933 8800
	Perth	+61 8 9221 8870
	Sunshine Coast	+61 7 5479 2005
	Sydney	+61 2 9956 8822
	Townsville	+61 7 4721 2788
New Zealand	Auckland	+64 9 379 9903
	Christchurch	+64 3 366 2669
	Wellington	+64 4 472 7505

Our Services

Project Services – Project Management, Cost Management, Building Surveying, Urban Planning, Specification Services

Assurance Services – Infrastructure Verification Services, Technical Due Diligence, Property Performance Reporting, Make Good Assessments

Certification Services – Third Party Certification to National and International Standards

Sustainability Services – Strategies for New and Existing Buildings

Davis Langdon & Seah International

Australia, Bahrain, Botswana, Brunei, China, Croatia, England, Hong Kong, India, Indonesia, Ireland, Japan, Kazakhstan, Korea, Lebanon, Malaysia, New Zealand, Pakistan, Philippines, Qatar, Russia, Scotland, Singapore, South Africa, Spain, Thailand, UAE, USA, Vietnam and Wales

www.davislangdon.com

Davis Langdon

APPENDIX 8

UCI CYCLING REGULATIONS RELATING TO FACILITY PLANNING AND DESIGN

Extracts are from Relevant UCI Regulations. The numbers prior to each sentence/ paragraph refers to the number in full document.

1. TRACK RACES
TECHNICAL SPECIFICATIONS AND VELODROMES
HOMOLOGATION:
Velodromes
3.6.064 Track events included on the UCI International calendar must be held at a UCI-homologated
velodrome. Exceptionally, special dispensations may be granted by UCI for Velodromes in use prior
to 2001.
Track events included on national calendar may be held at a nationally homologated or a UCIhomologated
velodrome.
3.6.065 A velodrome may not be homologated by the UCI unless it meets the following conditions.
3.6.066 The stability and resistance of the materials and fixings which make up the structure of the velodrome
shall meet the legislation regarding construction and safety of the country in which it is built and shall take account of specific geological and climatic conditions.
These elements, along with general compliance of the construction and construction materials with
technical standards and good practice, remain the exclusive responsibility of the owner, contractor,
architect, consulting engineer, proprietor, operator, user, organiser or others, in accordance with local
legislation or regulations. The UCI is exempt from any responsibility in this regard.
Homologation of the velodrome by the UCI rests not on the technical and structural characteristics of
the velodrome, but solely on the compliance of its external features with the provisions of the present
paragraph at the time of the inspection. The UCI is not liable for any faults or defects which lie out-side the scope of such homologation, or which appear or come to light subsequent to the inspections
on which such homologation is based.
(text modified on 1.01.02).
TRACK GEOMETRY
Form
3.6.067 The inner edge of the track shall consist of two curves connected by two parallel straight lines. The
entrance and exit of the bends shall be designed so that the transition is gradual.
The banking of the track shall be determined by taking into account the radius of the curves and the
maximum speeds achieved in the various disciplines.
Length
3.6.068 The length of the track must lie between 133 metres and 500 metres inclusive.

The length of a track shall be such that a whole number of laps or half laps shall give a distance of
precisely 1 kilometre, with a tolerance of + 5 centimetres.

For the *World Championships and* the Olympic Games the length must be 250 metres. In the interest of the development of track cycling, the UCI may grant a special dispensation for Velodromes
already in use.
(text modified on 1.01.02, 24.09.09).
3.6.069 The length of the track shall be measured 20 cm above the inner edge of the track (the upper edge
of the blue band).
Width
3.6.070 The width of the track must be constant throughout its length. Tracks approved in categories 1 and
2 must have a minimum width of 7 metres. Others tracks must have a width proportional to its length of 5 metres minimum.
(text modified on 1.01.02).
Blue band
3.6.071 A rideable area sky-blue in colour known as the "blue band" must be provided along the inside edge
of the track. The width of this band must be at least 10% of the width of the track and its surface
must have the same properties as of the track. No advertising inscription is permissible in this area.
With the exception of mounted riders, no person or object may be on the blue band while one or
more riders are on the track.
(text modified on 1.01.02).
Safety zone
3.6.072 Immediately inside the blue band there shall be a prepared and marked safety zone. The combined
width of the blue band and the safety zone shall be at least 4 metres for tracks of 250 metres and
over, and 2.5 metres for tracks shorter than 250 metres.
With the exception of the commissaires, mounted riders or other persons authorised by the chief
commissaire, no person or object (including starting blocks) may be inside the safety zone when a
rider is on the track.
(text modified on 1.01.02; 26.08.04).
3.6.072 A fence, of a construction ensuring the adequate safety for riders at a height of at least
bis 120 cm, must be erected on the inner edge of the safety zone except if the following conditions are met:
1) there are no height difference or abrupt gradient between the safety zone and the track centre
or within the track centre, and
2) inside the safety zone and at a distance of 10 m of the blue band, is no unauthorized person or
object in accordance with article 3.6.072.

The fence must be transparent and in no circumstances may any advertising boards be attached to it.
In places where the level of the track proper is more than 1.5 m. higher than the actual track centre,
additional protective measures such as nets, panels, or the like, shall be erected in order to prevent
athletes being subjected to injury.

Any gates provided in the fencing must be fitted with simple and reliable fastenings. They must be
kept closed while racing and training is in progress.
(text modified on 1.01.02; 26.08.04).

Profile

3.6.073 At any point on the track, a cross section of the track surface must present a straight line. In the
bankings, the inner edge should have a curved transition onto the blue band.

3.6.073 At any point of the track or safety zone surface, a perpendicular distance from the surface of at least
bis 3 metres must be guaranteed free of any obstacle.
(text modified on 1.01.02).

Surface

3.6.074 The surface of the track shall be completely flat, homogenous, non-abrasive. The tolerance of flatness
for the track surface shall be 5 mm over 2 metres. The coating shall be uniform in all its
aspects over the entire track surface. Coatings intended to improve the rolling qualities of one part of
the track only are not permitted.
(text modified on 1.01.02).

3.6.075 The surface colour of the track must leave the track marking lines clearly visible.

MARKING

Painting

3.6.076 Any demarcation, line, advertisement or other marking on the track must be applied with a paint or
product which is non-slip and which does not alter the adhesion properties, consistency or homogeneity
of the surface.
(text modified on 1.01.02).

3.6.077 Advertisements on the track surface must be placed above the stayers' line within a longitudinal
band between 50 cm of the stayers' line and 50 cm from the fence (the outside edge of the track).
No advertisement may be placed within 1m either side of the pursuit and the 200 m lines, or within
3 m either side of the finish line, measured from the outside edge of the white band.
(text modified on 1.01.02).

The longitudinal lines covered by articles 3.6.079 to 3.6.081 shall have a constant width of 5 cm.
The perpendicular lines covered by articles 3.6.082 to 3.6.084 shall have a constant width of 4 cm.

Longitudinal markings:

Measuring line

3.6.079 A line, in black on a light background or in white on a dark background, known as the "measuring
line" shall be drawn at 20 cm from the inside edge of the track, numbered every 10 metres and
marked every 5 metres. The measurement of the measuring line shall be taken on its inside edge.

Sprinters' line

3.6.080 A red line, known as the "sprinters' line" shall be marked out 85 cm from the inner edge of the track.
The distance is to be measured to the inner edge of the red line.
(*text modified on 21.01.06).*

Stayers' line

3.6.081 A blue line, known as the "stayers' line" shall be drawn at one third of the total width of the track or 2.45 m (whichever is the greater) from the inner edge of the track. The distance is to be measured to the inner edge of the blue line. (*text modified on 21.01.06).*

Perpendicular markings:

Finish line

3.6.082 The finish line shall be situated towards the end of one of the straights but at least a few metres before the entrance of the banking, and in principle in front of the main grandstand. It shall be marked by a perpendicular black line 4 cm in width at the centre of a white band 72 cm in width. The finish line marking on the track shall continue up to the top of the flat surface of the fencing.

200 metre line

3.6.083 A white line shall be drawn across the track 200 metres before the finish line, from which point the times will be taken for sprint events.

Pursuit lines

3.6.084 Two red lines half the width of the track in length, perpendicular to the track and precisely in line with one another, shall be drawn at the precise midpoint of each of the straights to mark the finish points for pursuit events.

EQUIPMENT

Access tunnel

3.6.085 The track centre, which is located inside the safety zone, must be obligatorily accessible via one or more tunnels.

Riders' area

3.6.086 Within the track centre areas must be provided for riders to change and warm up, as well as waiting areas near the pursuit and finish lines.

Fencing

3.6.087 The outside edge of the track must be surrounded by a safety fence to protect riders and spectators. It must be stable and solidly mounted, with an overall height of at least 90 cm. The inside part must be completely smooth and unbroken to a height of at least 65 cm above the track. It must present no protrusions or projecting parts. At the places where the area outside the track is at a level 1.5 metres or more below the outside edge of the track surface, additional protective measures (nets, panels, etc.) must be provided to reduce the risks resulting from riders accidentally leaving the track. The colour of the outside fencing must contrast clearly with that of the track. Any gates provided in the outside fencing must open outwards and be fitted with simple and reliable fastenings. They must be kept closed while racing and training is in progress. *(text modified on 1.01.02).*

Miscellaneous

3.6.088 A lap counter clearly visible to riders and spectators and a bell audible through-out the track area
shall be placed near the finish line.
For pursuit events, bells and lap counters shall be placed on both side of the track, near the pursuit
lines, in accordance with article 3.2.066.
(text modified on 1.01.02).
3.6.089 A timing system including starting blocks, contact bands and an electronic display (times to the thousandth
of second, laps, points, etc.), a photofinish or video-finish system to assist in judging finishes, and
a general public address system clearly audible throughout the entire velodrome area must be provided.
Contact strips must be laid over the width of the track or an acceptable timing detector such as light
beams installed.
(text modified on 1.01.02).

Lighting

3.6.090 Suitable lighting must be provided which meets the safety conditions into force in that country.
The lighting system must be supplemented by an emergency lighting system operating independently
of mains electricity, capable of providing an intensity of at least 100 Lux for 5 minutes which must be effective instantaneously.
During training sessions without spectators, vertical lighting must be at least 300 lux. During competitions
at least 1400 Lux is required for the Elite World Championships and the Olympic Games (category
1 velodromes), at least 1000 Lux for category 2 velodromes and at least 500 Lux for category 3 and 4 velodromes.
(text modified on 1.01.02).

ACCOMMODATION FOR OFFICIALS

Finish judge's podium

3.6.091 A podium must be provided for the judge at the finish, located in the track centre in line with the finish
line.

Box for the Commissaires Panel

3.6.092 Adequate accommodation must be provided for the commissaires on the track centre adjacent to the
finish line.
(text modified on 1.01.02).

Box for the referee:

3.6.093 Provision must be provided for the judge-referee on the outside of the track. It must be in a quiet,
isolated location overlooking the track with an unimpeded view, e.g. at the top of the stand above
the finish line. During competitions there must be a radio link between the referee and the other
commissaires, including the starter and the president of the Commissaires Panel.
Category 1 and 2 velodromes must also provide the referee with a video filming system with slowmotion
replay which enables all the shots of the race to be reviewed.

Centre podium for the starter:

3.6.093 In the middle of the track center in line with the pursuit lines, a podium must be provided for the

bis starter. It must have an area of between 3 and 4 m2 and must be raised above track level.
(text modified on 1.01.02).

HOMOLOGATION OF VELODROMES

3.6.094 At the time of their homologation, velodromes shall be classified into four categories on the basis of the technical quality of the track and installations. The category determines the level of competition which can be organised in the velodrome, as shown in the following table:

CATEGORY HOMOLOGATION LEVEL OF EVENTS

1 UCI Elite World Championships and Olympic Games. World Cups
2 UCI Continental Championships Junior World Championships
3 UCI Other international events
4 NATIONAL FEDERATION National events

3.6.095 Category 1 and 2 tracks must meet the following criteria (calculated for maximum safe speeds in the range 85 km/h up to 110 km/h):

Length of the track	250 m	285.714 m	333.33 m 400 m
Radius of bends	19-25 m	22-28 m	25-35 m 28-50 m
Width	7-8 m	7-8 m	7-9 m 7-10 m

Other tracks must be designed to guarantee a minimum safe speed of at least 75 km/h.
(text modified on 1.01.02).

3.6.096 Requests for homologation shall be submitted to the UCI by the national federation of the country in which the velodrome is located.

3.6.097 The request for homologation must be sent to the UCI at least 2 months before the planned inspection date. It must be accompanied by a technical file complying with the UCI's standard model. The UCI may require any additional document or information.
(text modified on 1.01.02).

3.6.098 The national federation shall organise the inspection of the velodrome in the presence of a specialist responsible for carrying out the regulation measurements under the direction of a UCI delegate. On this occasion a test of the track by a group of riders must be carried out.
All expenses incurred in connection with the inspection of the velodrome are to be covered by the applicant, the national federation being held jointly liable.
The costs of the UCI delegate are covered in accordance with the conditions specified in the UCI financial obligations in force.
(text modified on 1.01.02).

3.6.099 A detailed inspection report shall be drawn up by the UCI delegate and countersigned by the persons responsible for the measurement of the track and a representative of the national federation.

3.6.100 Should the UCI consider that there are aspects which might lead to homologation being withheld, it shall invite the parties requesting homologation to justify these aspects before a decision is reached.
Failing this, and in the event that homologation for the velodrome is withheld, the Federation concerned may appeal to CAS.

(text modified on 1.01.10).
3.6.101 Any changes to or renovation of the facilities following the inspection of the velodrome shall nullify
the homologation. New homologation is subject to the procedure described in articles 3.6.097 and
following.
(text modified on 1.01.02).

2. Mountain Bike

Course
4.1.042 As far as possible, the course for cross-country, four cross and downhill events must be totally separate
from that of all other events organised on the same site. If this is not the case, the training and race timetable must be drawn up so that the courses cannot be used simultaneously.

2.1 CROSS-COUNTRY EVENTS
Race characteristics
Cross-country Olympic – XCO
4.2.001 The duration of cross-country Olympic format races shall lie within the following ranges or as close as
possible to them (in hours and minutes).
Minimum Maximum
Junior Men 1.30 (1.15*) 1.45
Junior Women 1.15 (1.00*) 1.30
Under 23 Men 1.45 (1.15*) 2.00
Under 23 Women 1.30 (1.15*) 1.45
Elite Men 2.00 (1.30*) 2.15
Elite Women 1.45 (1.30*) 2.00
Masters Men 1.45 2.00
Masters Women 1.30 1.45
*Minimum time for a Class 1, Class 2 or Class 3 event on the international calendar.
In the event of very severe weather conditions, the president of the commissaires panel shall aim for
a race time as close as possible to the minimum time.
(text modified on 25.09.07).
4.2.002 The circuit for an Olympic format cross-country event shall be between 5 km and 9 km in length.
Ideally it shall be in the form of a cloverleaf.
The course must be marked every kilometre by a sign indicating the distance remaining to the finish line.
(text modified on 25.09.07).
4.2.003 Riders shall start in a single group.
Cross-country Marathon – XCM
4.2.004 The cross-country Marathon format races must respect the following minimum distances:
Minimum distance
Marathon 60 km
Continental championships 80 km
World championships 80 km

The maximum distance will be 120 km.

Course

4.2.012 The course for a cross-country race should include a variety of terrain such as road sections, forest tracks, fields, and earth or gravel paths, and include significant amounts of climbing and descending.
Paved or tarred/asphalt roads should not exceed 15% of the total course.
(text modified on 25.09.07).
The course must be wholly ridable even in difficult weather conditions. Parallel sections must be provided on sections of the course likely to deteriorate easily.
(text modified on 25.09.07).

4.2.014 [Article transferred to art. 4.1.043 on 25.09.07].

4.2.015 Extended single track sections must have periodic passing sections.

4.2.016 [Article transferred to art. 4.1.042 on 25.09.07].

4.2.017 On the course for a cross-country event at world championships, continental championships and world cup and hors class events, provision must be made for at least 6 crossing points for spectators.
The crossings must be marshalled on each side.
(text modified on 25.09.07).

Course marking

4.2.018 The course must be marked and indicated according to the following system:

4.2.019 Direction arrows (black arrows on white or yellow panels) will indicate the route to be followed showing changes of course, intersections, and all potentially dangerous situations. The minimum dimensions of direction arrows shall be 40 cm by 20 cm and they must not be sited more than 1.5m above ground level.
(text modified on 25.09.07).

4.2.020 The arrows should be on the right-hand side of the course except for right turns in which case arrows before and at the turn should be on the left-hand side of the course.

4.2.021 An arrow will be located 10 m before each junction, at the junction and 10 m after the junction to confirm that the correct route has been followed.
A clearly visible "X" sign will be used to mark wrong directions.
(text modified on 25.09.07).

4.2.022 In a potentially dangerous situation, one or more arrows pointing downwards will be placed 10 m to 20 m before the obstacle or potential danger, and also where the obstacle or potential danger is.
Two arrows pointing downwards shall be used for a more dangerous situation.
A serious hazard requiring great caution shall be marked with three arrows pointing downwards.

Start and finish zones

4.2.028 The start and/or finish banners must be placed immediately above the start and finish lines at least 2.5 metres above ground level and cover the whole width of the riding surface.

4.2.029 The start zone for a cross-country event (massed start events) must:

- be at least 8 metres wide for at least 50 metres before the start line
- be at least 8 metres wide for at least 100 metres after the start line
- be on a flat or uphill section of the course.

The first narrowing after the start must allow riders to pass through together easily.

The finish zone for a cross-country event (massed start event) must:
• be at least 4 metres wide for at least 50 metres before the finish line; for world championships
and world cup events this zone will be at least 8 metres wide for at least 80 metres.
• be at least 4 metres wide for at least 20 metres after the finish line; for world championships and world cup events this zone will be at least 8 metres wide for at least 50 metres.
• be on a flat or uphill section of the course.
(text modified on 25.09.07).
4.2.031 Barriers must be in place on both sides of the course for a minimum of 100 metres before and 50
metres after the start and finish line(s).
4.2.032 The final kilometre of the race must be clearly and precisely indicated.
Duration and stages
4.2.067 Stage races are run over at least three days, with a maximum of nine days.
Only one stage per day may be run. No stage shall start before 09:00 a.m.
(text modified on 25.09.07).
4.2.068 The different types of cross-country events mentioned in articles 4.2.001 to 4.2.010 can be chosen
for the stages.
4.2.069 Distance and duration of stages:
• XCO: circuit of between 5 km and 9 km per lap
• XCM: stages of between 60 km and 120 km
• XCP: course or circuit of between 25 km and 60 km
• XCC: circuit of no more than 5 km with a race duration of 30 to 60 minutes
• XCT: between 5 and 25 km
• team time trial: between 5 and 25 km. The team time shall be that of the second rider and counts towards the team general classification.
(text modified on 25.09.07).

2.2 MOUNTAIN BIKE DOWNHILL EVENTS
Organisation of competition
4.3.001 A single run format must be used. This may involve either:
• a qualifying run, called the **qualifying round** following which a predetermined number of riders
set by the particular race regulations will be admitted to the final. The fastest rider of the final will be declared the winner (the system used for the world cup).
• a run that determines the start order for a single run in which the rider with the fastest time wins.
(text modified on 25.09.07; 25.09.08).
4.3.002 A two run system (with the fastest single time from either run counting to the result) may be acceptable
under exceptional circumstances subject to prior authorisation from the UCI mountain bike commission.
4.3.003 A system based on two runs using the average or combined times of both is not permitted.
Course
4.3.004 The course for a downhill must follow a descending route
4.3.005 The course should comprise varied terrain sections: narrow and broad tracks, woodland roads and
paths, field paths and rocky tracks. There should be a mixture of fast and technical sections . The
emphasis of the course should be to test the riders' technical skills rather than their physical ability.
(text modified on 25.09.07).

4.3.006 The length of the course and the duration of the event are determined as follows:
Minimum Maximum
Course length 1500 m 3500 m
Duration of the event 2 minutes 5 minutes
A race on a course where the time taken is below the minimum or exceeds the maximum set above
may only be held if it is the subject of an exemption issued by the UCI mountain bike commission.
(text modified on 25.09.07).
4.3.007 [Article transferred to art. 4.1.042 on 25.09.07].

The course of a downhill must be marked as per articles 4.2.018 to 4.2.027.
4.3.009 The use of straw bales to mark off the course is not permitted.
4.3.010 The start area must be at least **1 meter and no more than** 2 meters wide. The start area must
be covered.
The finish area must be at least 6 meters wide.
(text modified on 25.09.08).
4.3.011 There must be a braking area of a minimum 50 m after the finish line.
This area must be free of obstacles.
(text modified on 25.09.07).
FOUR CROSS (4X) EVENTS
Course
4.4.014 Ideally, the course should be set up on moderate slopes with regular gradients. It must also include
a mixture of jumps, humps, banked turns, berms, dips, natural tables and other special features. It
may also include unbanked turns. There should be no climbing requiring the riders to pedal.
The course must also be wide enough to allow four riders to line up side by side, and to enable overtaking.
The course must be fully marked out in accordance with the diagram in article 4.2.024 (Zone A and Zone B). Zone A must be at least 2 meters from the course and will be at least 2 meters wide.
(text modified on 25.09.07; 25.09.08).
4.4.015 The duration of the race should be between 30 seconds and 60 seconds with an optimum time
between 45 and 60 seconds for the winner of the qualifying round.
(text modified on 25.09.07).
4.4.016 The first 10 metres of the course must be free of all obstacles. Over this distance, four lanes must
be marked by white lines (using tape, biodegradable paint or flour). Any rider crossing or riding on
these white lines will be disqualified.
4.4.017 The start straight must be at least 30 metres long.
4.4.018 The gates on the course must be made of non-metallic stakes (slalom stakes), preferably in bamboo
or PVC, 1.5 to 2 metres high.
The gates should preferably be set up with the lower part inwards and the higher part outwards.
(text modified on 25.09.07).
The last gate on the course must be located at least 10 metres from the finish line.
4.4.020 The organiser must provide a raised platform from which the 4-Cross judge has an unobstructed view
of the entire course. The platform will be located in a zone to which spectators do not have access.

3. BMX

Chapter GENERAL RULES

Categories

6.1.002 BMX events can be distinguished in two competing levels, the championship level, comprising elite and junior categories and the challenge level.

The single categories are laid down in article 6.1.003 and the following.

The track must be of a compact, closed looped design, forming a circuit where length measured along its centre line is not less than 300 metres nor greater than 400 metres.

The track must be a minimum of 10 metres wide at its start and may not taper to a width of less than 5 metres at any point along its course.

6.1.028 Starting hill

The starting hill must accommodate a track width of at least 10 metres and be at an elevation at least 1.5 metres above the grade of the first straight.

The initial incline extending from the starting gate to level grade must be at least 12 metres in length

6.1.029 Starting gate

The starting gate shall be a minimum of 8 metres in width and for all international events an electronically controlled system is mandatory.

The gate shall have a height of at least 50 cm, with no greater angle than 90 degrees with the slope of the ramp which supports the bicycles' wheels when they are in their starting position.

Starting positions 1 through 8 must be clearly marked on the gate.

The electronically controlled gate, to be used at all UCI sanctioned BMX events, must be outfitted with a system of appropriately coloured starting lights located so as to be clearly visible from all starting lanes without disadvantage to any rider who is in the "riders ready" position. In case of a failure of the gate release system, the gate shall fall to the dropped position.

A “voice box” system is mandatory at all UCI sanctioned events described in Appendix 5.

Whenever a timing scoring system is utilised, the timing system must be activated, whereupon the time starts running, at the moment the gate-start mechanism is activated causing the gate to drop.

6.1.030 Initial straight

The initial straight shall be a minimum of 40 metres in length.

It is recommended that the bottom of the front side of the first obstacle in the initial straight shall be located not less than 35 metres from the starting gate nor less than 20 metres from the point of curvature of the first turn. However, on tracks especially designed for highly skilled riders, the distance between the starting gate and the front side of the first obstacle may be shorter.

6.1.031 First turn

The first turn may go in either direction and shall be banked to a degree which allows safe entry and exit for riders of all ages at race speeds.

At the first turn, the track shall be a minimum of 6 metres wide measured along a straight line extending from its surface at the inner radius to the top of the berm at its outer radius.

6.1.032 Turns and obstacles

The track shall have a minimum of 3 turns.

The track shall be a minimum of 5 metres wide throughout each turn.

All obstacles on the track must be constructed with the safety of all riders, regardless of age, in mind. Consideration must be given to the abilities of the youngest riders in competition when designing obstacles intended to present special challenges to older competitors. On the first straight the minimum distance between two obstacles shall be 10 metres. An obstacle is defined by its front and back slope and can be a single obstacle, double, triple or multi-jump as well as a 4-pack, 5-pack or multi-pack.

Tracks may be designed to include alternate sections to be traversed only by championship categories.

These sections may offer obstacles which are inherently more challenging than those found on the course's main circuit.

6.1.033 Race track markings

The boundaries of the race track including alternate sections track shall be clearly marked.

6.1.034 Fencing

In order to provide a barrier between the event's participants and it spectators, the track must be enclosed by a perimeter fence which shall not be located at any point closer than 2 metres from the competition course.

The fence must be constructed of a substantial material such as plastic webbing which is capable of absorbing the full impact of a rider of any size striking it at race speed.

6.1.035 Finish line

The track must have a clearly marked finish line to indicate the point at which competitors will be scored. The finish line shall comprise a straight line of 4 cm in width, painted in black in the middle of a white strip 24 cm wide, thus leaving 10 cm of white on each side of the black line.

Any banners extending across the track above the finish line or elsewhere along the track must be at an elevation sufficiently above the track level to avoid interference with the riders crossing beneath them.

All finish line commissaires shall operate from an area immediately adjacent to the finish line, which permits them a clear and unobstructed view of the riders as they cross the line.

Competition facilities

6.1.036 National federations and organizers seeking the UCI sanction for a competition event must be able to demonstrate to the UCI that the facilities proposed for the event meet the specifications set forth in this section.

6.1.037 Staging area

Close to the starting hill a staging area consisting of ten staging lanes numbered 1 to 10 shall be established, where riders shall assemble in accordance with the instructions given by the staging officials.

6.1.038 Riders pit area
An area where the riders may congregate between races shall be established and clearly marked
close to the track's staging area.
6.1.039 Inspection/transponder area
An area shall be established close to the staging area for the inspection of bicycles, installation of
timing transponders and riders' equipment.
6.1.040 Announcing area
There shall be reserved for the announcer and race commentator, preferably at an elevation above
that of the track, an area which permits these officials to have a clear and unobstructed view of the
track.
6.1.041 Bulletin boards
Well-constructed and weather-resistant bulletin boards and/or scrolling monitors for posting the
moto draws/ race results shall be erected in minimum 3 different locations, such as riders area,
team manager area and staging area. Clear plastic sheeting must be available to cover moto boards
and/or scrolling monitors in case of wet weather conditions.
Parking and spectator facilities
Parking for a number of cars commensurate with the anticipated size of each race must be available
in the vicinity of the track. On race days parking areas shall be adequately staffed to assure the
orderly flow of traffic and the systematic parking of automobiles.
Spectator facilities including, without limitation, seating, washrooms and food service, with capacities
appropriate to the numbers listed below, shall be provided for the following events:
- International BMX Events: 3000 spectators;
- Continental BMX championship events: 5000 spectators;
- BMX supercross world cup events: 3000 spectators;
- BMX world championships: 7500 spectators;
- Olympic Games 5000 spectators.

Separate food service facilities shall be provided for competition commissaires and officials.
6.1.045 Indoor events
Indoor BMX events may be held on tracks with earthen, wooden or concrete surfaces, having obstacles
constructed of similar materials. The rules set forth in this section shall apply equally to indoor events.

4. CYCLO CROSS

What is Cyclo Cross?
Cyclo-cross (sometimes cyclocross, CX, CCX, cyclo-X or 'cross') is a form of bicycle racing. Races take place typically in the autumn and winter (the international or "World Cup" season is September-January), and consists of many laps of a short (2.5–3.5 km or 1.5–2 mile) course featuring pavement, wooded trails, grass, steep hills and obstacles requiring the rider to quickly dismount, carry the bike whilst navigating the obstruction and remount in one motion.[1][2] Races for senior categories are generally between 30 minutes and an hour long, with the distance varying depending on the ground conditions. The sport is strongest in the traditional road cycling countries such as Belgium (and Flanders in particular), The Netherlands and the Czech Republic .

Cyclo-cross has some obvious parallels with mountain bike racing, cross-country cycling and criterium racing. Many of the best cyclo-cross riders cross train in other cycling disciplines. However, cyclo-cross has reached a size and popularity that racers are specialists and many never race anything but cyclo-cross races[citation needed]. Cyclo-cross bicycles are similar to racing bicycles: lightweight, with narrow tires and drop handlebars. However, they also share characteristics with mountain bicycles in that they utilize knobby tread tires for traction, and cantilever style brakes for clearance needed due to muddy conditions. They have to be lightweight because competitors need to carry their bicycle to overcome barriers or slopes too steep to climb in the saddle. The sight of competitors struggling up a muddy slope with bicycles on their shoulders is the classic image of the sport, although unridable sections are generally a very small fraction of the race distance.

Compared with other forms of cycle racing, tactics are fairly straightforward, and the emphasis is on the rider's aerobic endurance and bike-handling skills. Drafting, where cyclists form a line with the lead cyclist pedaling harder while reducing the wind resistance for other riders, is of much less importance than in road racing where average speeds are much higher than in cyclo-cross.

Course

5.1.012 A cyclo-cross course shall include road, country and forest paths and meadowland alternating in such
a way as to ensure changes in the pace of the race and allowing riders to recuperate after difficult
sections.
[2nd paragraph abrogated on 1.08.00].

5.1.013 The course shall be usable in all circumstances, whatever the weather conditions.
Clay or easily flooded areas and agricultural land should be avoided..

5.1.014 A maximum of 5 events may be run on one course on the same day.
(text modified on 1.09.04).

5.1.015 The organiser must take steps to avoid damage to the course by spectators.
Before the start of each race, the organiser must check the condition of the course and carry out any
repairs required.
For the UCI world championships, the UCI world cup events ***and the national championships****, a*
parallel course is required for sections of the course which deteriorate easily.
(text modified on 1.09.99; 1.09.03 ; 1.09.04; 1.07.09).

5.1.016 (moved last paragraph to article 5.1.008 on 1.09.08).

5.1.017 The course must form a closed circuit of a minimum length of 2.5 km and maximum 3.5 km, of
which at least 90% shall be ridable.
(text modified on 1.09.99; 1.09.04).

5.1.018 The course must be at least 3 metres wide throughout and clearly marked and protected on both sides.

Start section

5.1.020 The start section must be on firm ground, and preferably on surfaced road. It must have a length of
at least 200 metres and a width of at least 6 metres. It must be as straight as possible and not include any descent. The first narrowing or obstacle after the start section may not be abrupt, it must
be such as to allow all the riders to pass easily. The **angle of the** first corner must be greater than
90 degrees. The start banner shall be erected at least 2.5 m above the ground over the start line and shall cover the whole width of the start section.

(text modified on 1.09.03; 1.09.04; 1.09.06; 1.09.08).

Finish section

5.1.021 The finish section must run straight for at least 100 metres. The width must be at least 6 metres for UCI world championships, UCI world cup events and events in class 1, and at least 4 metres for other events. The section must be flat or uphill. **The finish banner shall be erected at least 2.5 m above the ground over the finish line and shall cover the whole width of the finish section.**

(text modified on 1.09.04; 1.09.06; 1.09.08)

5 ROAD RACES

Includes Criterium

5.1 CRITERIUMS

Distances

2.7.016 The circuit shall measure between 800 and 10,000 metres.

The maximum distance for the race shall be set as follows:

Length of circuit	Maximum distance
800 to 1599 m	80 km
1600 to 2999 m	110 km
3000 to 3999 m	132 km
4000 to 10 000 m	150 km

5.2 ONE-DAY RACES

Method

2.3.001 (N) One-day races are competitions that take place on one day with only one start and only one arrival.

One-day races are only contested by teams and - when authorised by the present regulations - by mixed teams.

(text modified on 1.01.05; 1.01.09).

Distances

2.3.002 The maximum distance for one-day road races shall be as follows:

International Calendar Category Class Distance

Olympic Games and ME From 250 to 280 km

world championships WE From 120 to 140 km

MU From 160 to 180 km

MJ From 120 to 140 km

WJ From 60 to 80 km

Continental championships ME Maximum 240 km

MU Maximum 180 km

WE Maximum 140 km

MJ Maximum 140 km

WJ Maximum 80 km

Regional games ME Maximum 240 km

MU Maximum 180 km

WE Maximum 140 km

MJ Maximum 140 km

WJ Maximum 80 km

World calendar ME UPT Distance determined by the UCI ProTour Council

ME HIS Distance determined by the management committee

UCI Continental Circuits ME 1.HC Maximum 200 km*

ME 1.1 Maximum 200 km*
ME 1.2 Maximum 200 km
MU 1.2 Maximum 180 km
Women Elite WE Wcup From 120 to 140 km
WE 1.1 Maximum 140 km
WE 1.2 Maximum 140 km
Men Junior MJ 1. Ncup Maximum 140 km
MJ 1.1 Maximum 140 km
Women Junior WJ 1.1 Maximum 80 km

Course

2.3.004 The organiser shall place permanent panels indicating: kilometre zero (the real start), the fiftieth kilometre and then the last 25, 20, 10, 5, 4, 3 and 2 km points. In races ending on a circuit, only the last 3, 2 and 1 km points and the laps remaining to be covered are to be displayed.
The organiser shall also indicate the following distances from the finishing line: 500 m, 300 m, 200 m, 150 m, 100 m and 50 m.
(text modified on 1.01.06).
The last kilometre shall be marked by a red triangle. Apart from the finish banner, no banner may be put up after the red triangle.

2.3.006 The organiser shall, before the finish line, provide a detour which all vehicles (including motorbikes) must follow other than those of the event management, the commissaires, the official doctor and the team manager of the winner, provided that the latter has a clear lead of at least one minute over the rest of the field.
(text modified on 1.01.05).

2.3.007 If the race is run on a circuit, it shall be at least 12 km long.
The race organiser may request that the UCI make exemptions to this provision. He must send such a request to the UCI via his national federation, to be received not less than 90 days before the start of the race. This request shall include a detailed description of the course and a supporting statement giving reasons for the exemption requested.
(text modified on 1.01.99).

2.3.008 Races may finish on a circuit under the following conditions:
• The length of the circuit shall be at least 3 km;
• The maximum number of laps on the circuit shall be:
- 3 for circuits of between 3 and 5 km;
- 5 for circuits of between 5 and 8 km;
- 8 for circuits of between 8 and 12 km.

6. Extracts from Cycling Australia 2010 Regulations

CRITERIUM

3.46.01 Definition / Course

A criterium is a circuit race held on a circuit of not less than 800m and not more than 3km and must have a minimum width of 6 metres, except for the finishing straight, which shall be a minimum of 8 metres wide for the last 200 meters at least before the finish line (unless approved by the CA Technical Commission). The course must be closed to all traffic except for the officials' vehicles.

AUSTRALIAN ROAD CHAMPIONSHIPS ORGANISATION -

General
3.31.01 The CA Road Commission in consultation with the Technical Commission shall approve the program for an Australian Road Championship.
3.31.04 Course
The events should be held on a circuit of not less than ten and not more than 25km. The road surface should be in good condition and should not be less than five metres wide, except for the finishing straight, which shall be a minimum of 7 metres wide for the last 200 meters before the finish line at least. The course shall include flats and hill climbs.
3.31.05 Equipment
The equipment listed below shall be provided/arranged by the event organiser.
- Relevant flags
- Lap numbers
- Bell
- Public address facility
- Photo finish equipment and timing equipment
- Radio Communication for the Chief Commissaire, Principal Commissaires and assistant commissaires as required as well as the first aid personnel.
- Six manual stop watches, with a split hand or display capability, which shall record in hundredths of a second.
- Sufficient barricades to ensure a safe venue.
- *Bike measuring equipment/ frame*
- *Set of scales with support post*
- *Vernier calip*

3.32 **AUSTRALIAN TRACK CHAMPIONSHIPS ORGANISATION** -
General
3.32.01 The CA Track Commission in consultation with the Technical Commission shall approve the program for an Australian Track Championship.
3.32.02 The events should be held on a track of not less than 250m or more than 400m for one lap. The surface can be either of concrete, bitumen or wood and must be in first class condition.
3.32.03 The markings shall be:
1. A black line, 4cm wide known as the ‘measuring line’ to be marked at a constant distance of 20cm from the inside edge of the track. This line shall be marked every five metres and numbered every ten metres.
2. A red line, 4cm wide, known as the ‘sprinters line’ to be marked at a constant distance 90cm from the inside edge of the track, including the width of the line.
3. A blue line, 4cm wide, known as the ‘stayer’s or safety line’ to be marked approximately one third of the track width from the inside edge of the track.
4. A blue band at least 60cm wide to be marked on the inside edge of the track.
5. A white line, 4cm wide will be marked across the track, exactly 200m from the “finish” line.
6. The finish line is defined as a 4cm black line with a 34cm white band on either side and extends to a vertical plane on the safety fence for a minimum height of 80cm.
7. Commencing point for pursuit and time trials must be clearly marked. The finishing line for pursuit events shall be a 4cm wide red line marked across half the width of the track in the centre of each straight, exactly opposite to each other.
8. Other colours may be used where track surfaces do not assist distinctive markings. Non-skid paints must be used.

3.32.04 The equipment listed below shall be provided/arranged by the event organiser/promoter:
a. Flags
b. Lap numbers (two sets)
c. Bells (two)
d. Pursuit indicator lights
e. Foam strips
f. Whiteboard and marker
g. Whistle and gun
h. Electronic timing device and photo finish equipment
i. Six manual stop watches, with a split hand or display capability, which shall record in hundredths of a second
j. Head phones for the Chief Commissaire, Principal Commissaires and other appointed commissaires as required
k. Video camera and playback equipment for the sprint judge
l. Set of scales capable of weighing the bicycle
m. Starting gates shall be used, if available, at all National Track Championships.
n. Bike measuring equipment/ frame
o. Vernier callipers

For all track events (time trials, individual or team pursuits), the "blue band" must be made impracticable to ride on in the bends, by placing foam rubber strips (50cm long, 8cm square) every 5m, 20cm below the measuring line.
(1/1/2010)
3.32.06 Judging the Finish
1. For all scratch races, sprints, keirin and points races the finish shall be judged from the tip of the front wheel at the point of the tangent with a vertical plane extended above the finishing line.
2. For all timed events the placings will be determined as per the regulations as set out in the rules governing the relevant championship.
3 When dead heats are declared in championships, the winner shall be determined as set out in the rules governing the relevant championship.
3.32.07 Timing
1. An electronic timing device shall be used, such device being supported by manual timekeepers for each event. The electronic timing device will be tested by the operator in the presence of the Chief Commissaire and at least three timekeepers prior to the commencement of the championship series. Times must be recorded in hundredths of a second and in the event of a dead heat and when an electronic timing device is fitted with calibration of thousandths of a second, this unit shall be used to break the dead heat.
2. All hand held watches must have a split hand or display panel.
3. The electronic timing device shall have precedence over hand held watches.
4. When, in the event of hand held watches (three required) being used, when two (or three) record the same time, that time will be recognised.
5. When each watch is different, the middle time will be recognised.
6. The official watches approved for the series must be synchronised prior to the start of the series.
7. In the event of an electronic malfunction, hand held times shall be used during the period of malfunction only. If hand held watches are used during a period of malfunction and the time/s recorded apply to a placegetter, then hand held watch times shall determine the placings.

CRITERIUM
3.42.01 Definition / Course
A criterium is a circuit race held on a circuit of not less than 800m and not more than 3km with a minimum width of 6 metres, except for the finishing straight, which shall be a minimum of 8 metres wide for the last 200 meters at least before the finish line (unless approved by the CA Technical Commission).The course must be closed to all traffic except for the officials' vehicles.

BMX
Track as per UCI Regulations and meets Track Inspection Guidelines

Mountain Bike MTBA
The Venue
4.14.1. Start and Finish
4.14.1.1. The start and/or finish banners must be placed immediately above the start and/or finish lines (minimum clearance 3m) and cover the whole width of the riding surface. The riding area at the start for events where riders start in groups (such as XCO):
4.14.1.1.1. Must be at least 6m wide for a minimum of 100m after the line, after which the riding area may narrow.
4.14.1.1.2. Should be either on the flat or climbing for a minimum of 750m, or 3 minutes.
4.14.1.2. The riding area at the finish for events must be:
4.14.1.2.1. At least 6m wide for a minimum distance of 50m before the finish line.
4.14.1.2.2. At least 4m wide for a minimum distance of 20m after the finish line, either on the flat or climbing.
4.14.1.3. Barriers must be erected for a minimum of 50m before and 50m after the start line (and finish line if not the same) on both sides of the course. There must not be any obstacles that might cause a crash or any chance of collision between the riders in the start and finish areas.
4.14.1.4. For Downhill events the start area must be at least 2m wide and the finish area must be at least 6m wide. The start area must be covered.
4.14.1.5. For Downhill events, there must be an additional braking area of a minimum 50m after the finish line. This area must be free of obstacles.
4.14.2. The Course
4.14.2.1. The course for a mountain bike race should include, where possible, forest roads and tracks, fields, earth or gravel paths. Paved or asphalt roads should not exceed 15% of the total course. Exceptions may be granted for Stage Races or Marathon events.
4.14.2.2. The course must be free of all significant obstacles which have not been planned and/or notified to the riders.
4.14.2.3. Extended single track sections must also have periodic passing sections.
4.14.2.4. Individual Cross Country and Downhill courses must be apart and should not have common trails. If, however, they do share common trails, exclusive training periods must be allocated on each course.
4.14.3. Facilities
4.14.3.1. The race organiser must set aside a warm up area near the staging area where riders may prepare themselves for the XC event.
Course Design Parameters
7.1.1. The course must be 100% rideable regardless of the terrain and weather conditions. Brief and unavoidable dismounts may be approved by the Technical Delegate or in the absence of a Technical Delegate, the Chief Commissaire.
7.1.2. The course should be marked every kilometer by a sign indicating the distance yet to be raced.
7.1.3. The optimum winning time for a cross country circuit race should be within the following range.
Class Target race time (h:mm)

Elite Men/U23 2:00 - 2:15
Expert Men 2:00 - 2:15
Elite Women/U23 1:45 - 2:00
Veteran Men 1:30 - 1:45
Veteran Women 1:15 - 1:30
Masters Men 1:15 - 1:30
Masters Women 1:00 - 1:15
Super Master men 1:00 - 1:15
U19 Men 1:30 - 1:45
U19 Women 1:15 - 1:30
U17 Men 1:15 - 1:30
U17 Women 1:00 - 1:15
U15 Men 1:00 - 1:15
U15 Women 0:45 - 1:00
Sport Men 1:00 - 1:15
Sport Women 0:45 - 1:00
Recreational Men & Women 0:45 - 1:00

7.1.4.Weather conditions may make a change to these time targets. In such cases the changes will only be made by consultation with the presiding Technical Delegate or Chief Commissaire.

7.1.5. If weather conditions require the use of an alternative route(s) it must be fully marked for the last training session and marked clearly on the rider information board.

7.1.6. The courses will be marked by the use of arrows or plastic tape. If arrows are used they will accord to the following system:

Short Track Cross Country (XCC)

Rules

8.1. The Course

8.1.1. The course shall consist of a lap which will ideally take competitors no longer than 1 minute and 30 seconds to complete for each lap during the race

8.1.2. The course width will be at least 2 bike widths for the entire length.

8.1.3. The course will not encompass any technical aspects to any significant extent.

8.1.4. Single track sections are specifically excluded.

8.1.5. Different elements such as berms, sweeping bends can link the course together with the aim of keeping speed as high as possible. Very slow sections on the course must not be used.

8.1.6. The start and finish straight should be at least 3m wide.

8.1.7. The final 100m of the course will be straight and devoid of any obstacles.

8.1.8. Before racing the Commissaires will identify a suitable section of the course where lapped riders and/or riders who are judged to be in imminent danger of being lapped can be removed from the course.

8.1.9. This section will be notified to the competitors at the start of each race.

Down Hill (DHI) Specific Rules

10.1. Format for racing

10.1.1. A single run format must be used. This may involve either:

10.1.1.1. A system in which a qualification and a semi final lead to a final in which the fastest time wins - such as the world cup system.

10.1.1.2. A seeding run, followed by a single run by all competitors based on the seeding run, with the fastest time winning - such as the world championships system.

10.1.1.3. A two run system (with the fastest single time from either run counting to the result) may be acceptable under certain circumstances.

10.1.2. Two runs with a combined time is not an acceptable system at any category event above Category 4.

10.2. Course Design Parameters

10.2.1. The following course design parameters must be followed:

	Minimum	Maximum
Course Length	1,500 m	3,500 m
Race Time	3 minutes	5 minutes

APPENDIX 9

99 Burrangong Road
Young NSW 2594
Private Bag 4
Young NSW 2594

Phone 61 2 6382 8222
Fax 61 2 6382 4263
www.pipelinetrust.com.au

APA Group

Australian Pipeline Ltd
ACN 091 344 704

Australian Pipeline Trust
ARSN 091 678 778

APT Investment Trust
ARSN 115 585 441

20 August 2010

Darren Sturgiss
Manager Technical Services
Bathurst Regional Council
158 Russell Street
Bathurst NSW 2795

Dear Mr Sturgiss

CONSTRUCTION OF PROPOSED VELODROME AND CYCLE FACILIY

We have reviewed Council's proposed Velodrome & Cycle Facility over Lot 20 DP119593 and advise that, prior to any final approvals being determined, the following is requested:

- Ensure all the relevant risks are identified under Reg 55 of the SEPP Infrastructure legislation in conjunction with AS2885.
- All costs associated with and subsequently arising from the risk assessment are met in full by your Council.
- A guarantee that APA Group will be indemnified against any losses arising from the subject development.

Maintaining public safety and pipeline integrity is paramount to us and whilst we do not like to place unnecessary restrictions on these types of developments all necessary measures must be taken to ensure this is achieved.

Should you require any assistance in this matter please don't hesitate to contact Vladeo Maric, Lands Manager NSW (vladeo.maric@apa.com.au) Private Bag 4, Young NSW 2594.

Yours faithfully,

Fiona Douglas
Lands Supervisor

File 30.5395-10/1; C10/666

The General Manager
Bathurst Regional Council
Private Mail Bag 17
BATHURST NSW 2795

Dear Sir

Pre DA Cycle Park, Lot 20 DP 1119593, Vale Road (MR 54) Bathurst

I refer to email correspondence from Nial O'Brien of Aurecon Transport received on 29 June 2010 requesting Pre-DA advice for a cycle park off Vale Road. The material submitted has been examined and the Roads and Traffic Authority (RTA) provides the following additional comments for consideration in preparation of a development application:

- The Development Application / Traffic Report needs to consider interaction between vehicles approaching the site and interaction with the railway level crossing, in particular queuing from the level crossing onto MR54 while giving way to a train.
- Intersection design on MR54 will need to cater for any additional queuing as a result of level crossing operation. A CHR treatment is recommended.
- Adequacy of level crossing control needs to be assessed and referred to the rail authority.
- Provision for cyclists from Bathurst to the site by either widened and sealed shoulders or preferably a separate path designed for high-speed cyclist travel e.g. 50km/h.
- It would be preferable for both cost-effective road safety measures and event advertising, that one access is determined as the main access, the other only used for emergencies or unusual access requirements or as egress only.

Should you have any further enquiries, please contact Wayde Hazelton on (02) 6861 1482.

Yours faithfully

Tony Hendry
Road Safety and Traffic Manager
Western
9 AUG 2010

Roads and Traffic Authority

51-55 Currajong Street, PARKES NSW 2870
PO Box 334, PARKES NSW 2870 (DX 20256)
www.rta.nsw.gov.au | 13 17 82

G:\Road Safety and Traffic\LAND USE DEVELOPMENT\Letters Final\2010\Bathurst Pre DA Cycle Park MR54.doc

SECTION 2 – ARCHITECTURAL LAYOUT PLANS

COX RICHARDSON

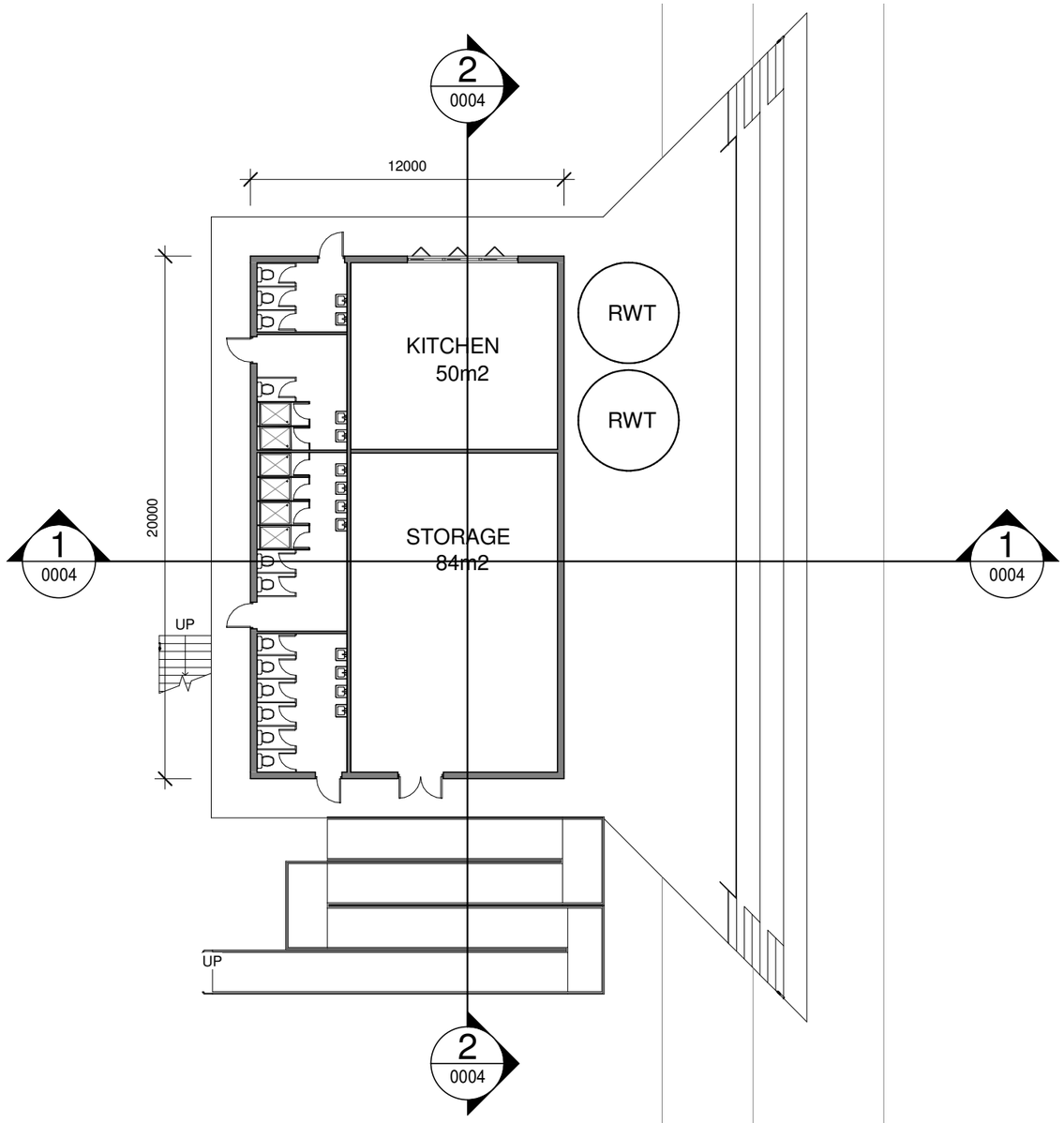
1 SITE PLAN
0004
SCALE 1 : 4000

Cox Richardson
Level 2. 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au
Architecture Planning Urban design Interior design Health Facility design

Bathurst Bike Park

Vale Road
Bathurst

Drawing Title
SITE PLAN
Drawing Number
0001
Date
31-05-2010



2m 10m
1m 5m

1 GROUND LEVEL PLAN
0004

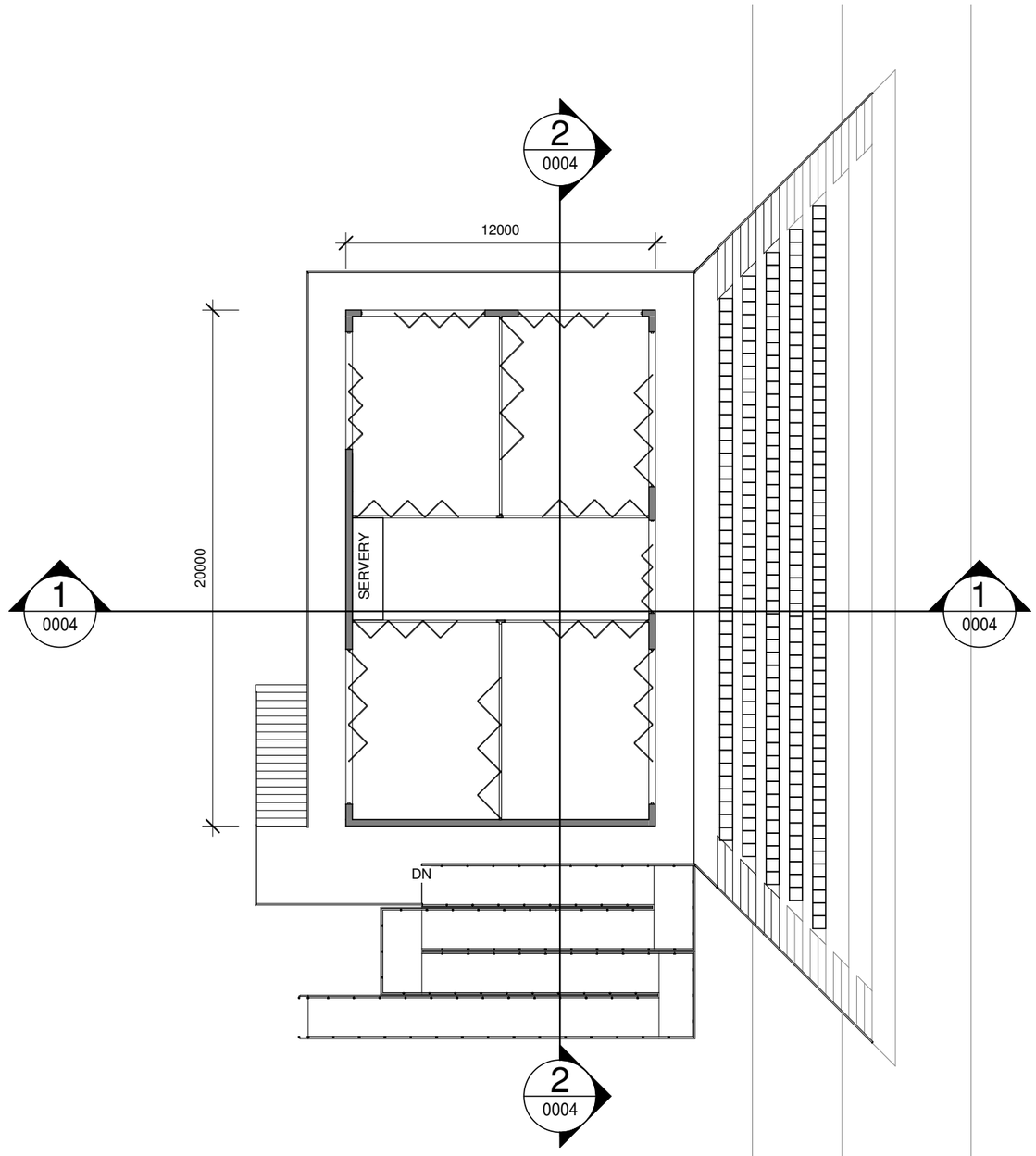
SCALE 1 : 200

Cox Richardson
Level 2. 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au
Architecture Planning Urban design Interior design Health Facility design
COX

Bathurst Bike Park

Vale Road
Bathurst

Drawing Title
GROUND FLOOR
Drawing Number
0002
Date



2m 10m
1m 5m

1 LEVEL 1 PLAN

1
0004

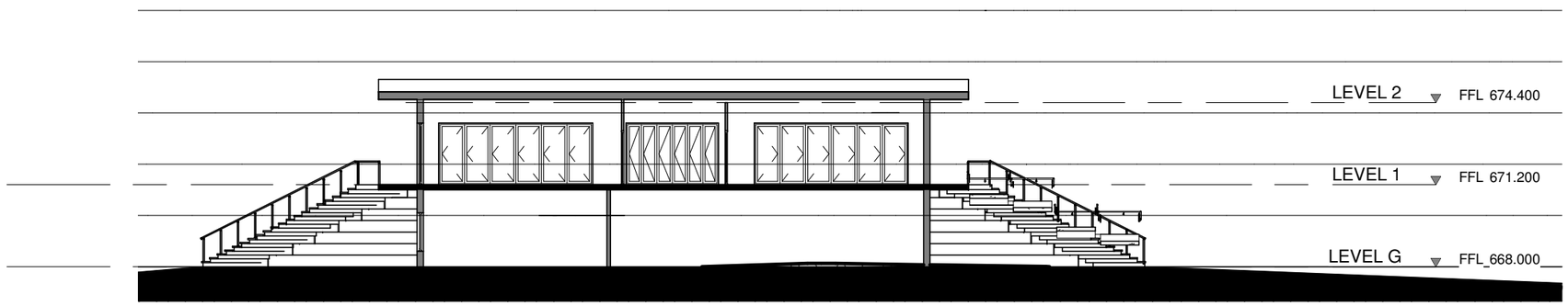
SCALE 1 : 200

Cox Richardson
Level 2, 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au
Architecture Planning Urban design Interior design Health Facility design
COX

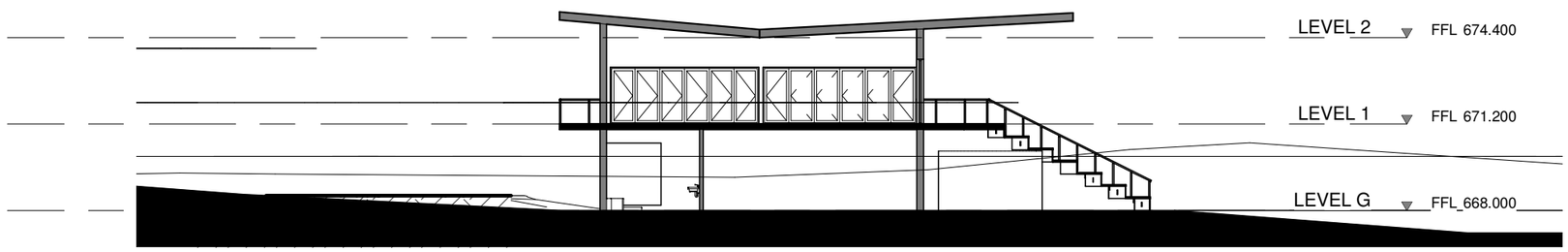
Bathurst Bike Park

Vale Road
Bathurst

Drawing Title
FIRST FLOOR
Drawing Number
0003
Date



2 0002 **Section 2**
SCALE 1 : 200



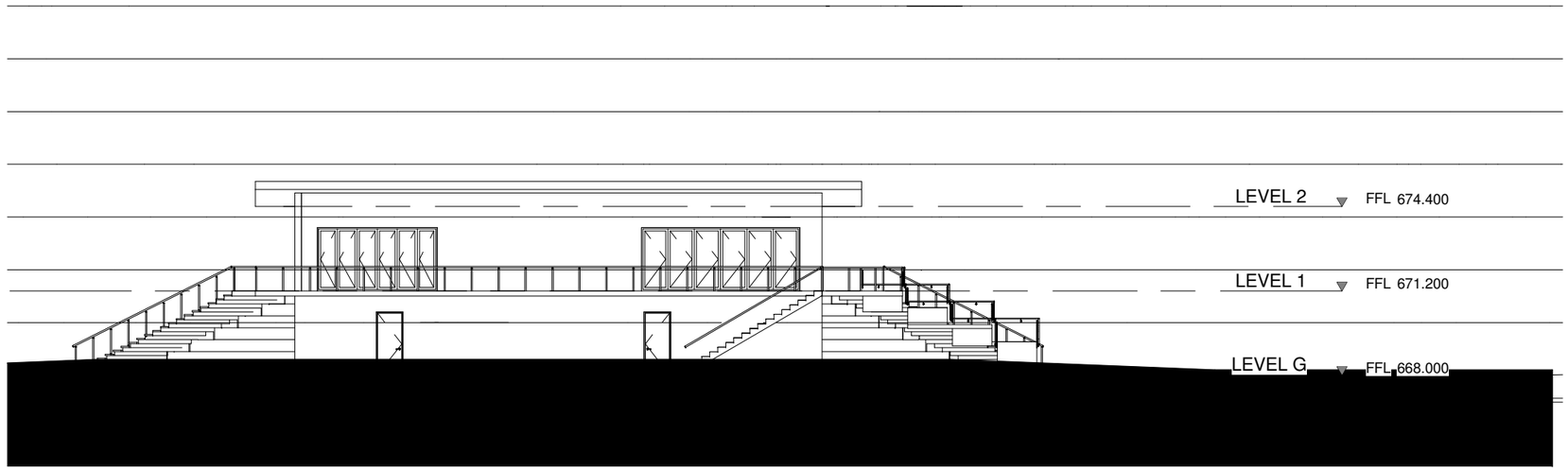
1 0002 **Section 1**
SCALE 1 : 200

Cox Richardson
Level 2. 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au
Architecture Planning Urban design Interior design Health Facility design

Bathurst Bike Park

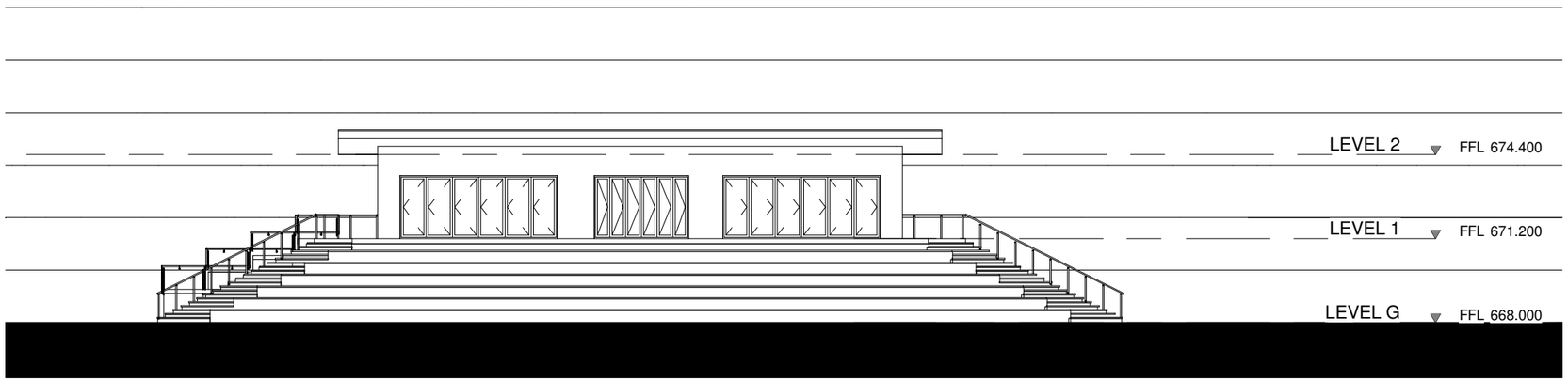
Vale Road
Bathurst

Drawing Title
SECTIONS
Drawing Number
0004
Date



2 WEST ELEVATION

SCALE 1 : 200



1 EAST ELEVATION

SCALE 1 : 200

Cox Richardson

Level 2. 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au

Architecture Planning Urban design Interior design Health Facility design

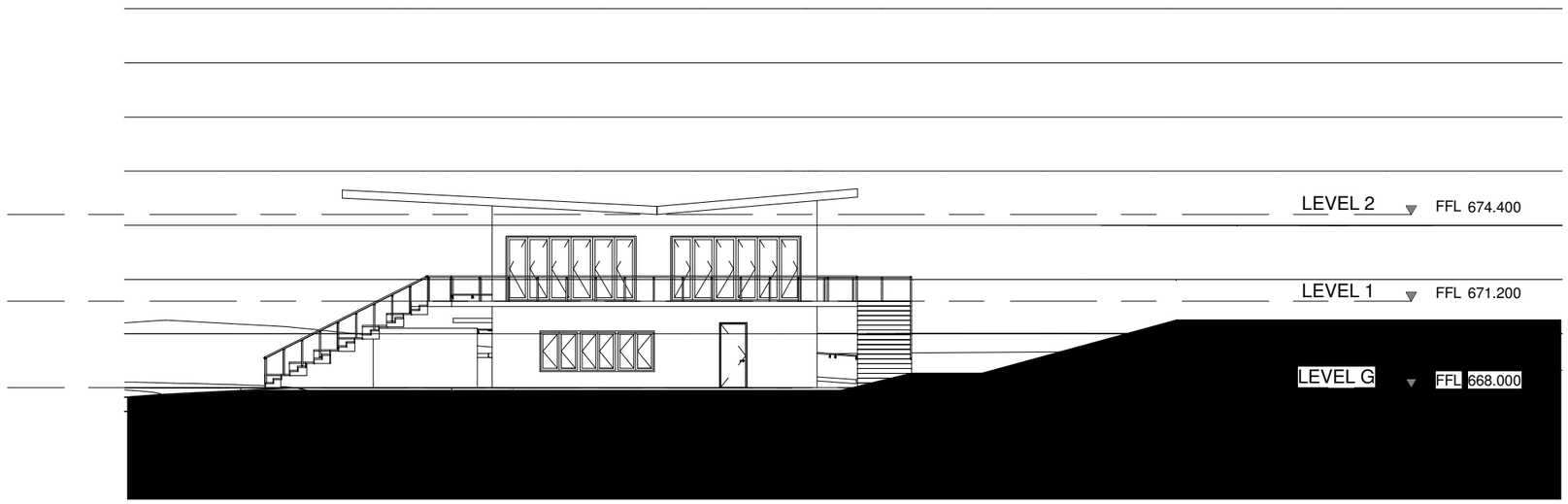
Bathurst Bike Park

Vale Road
Bathurst

Drawing Title
ELEVATIONS 1

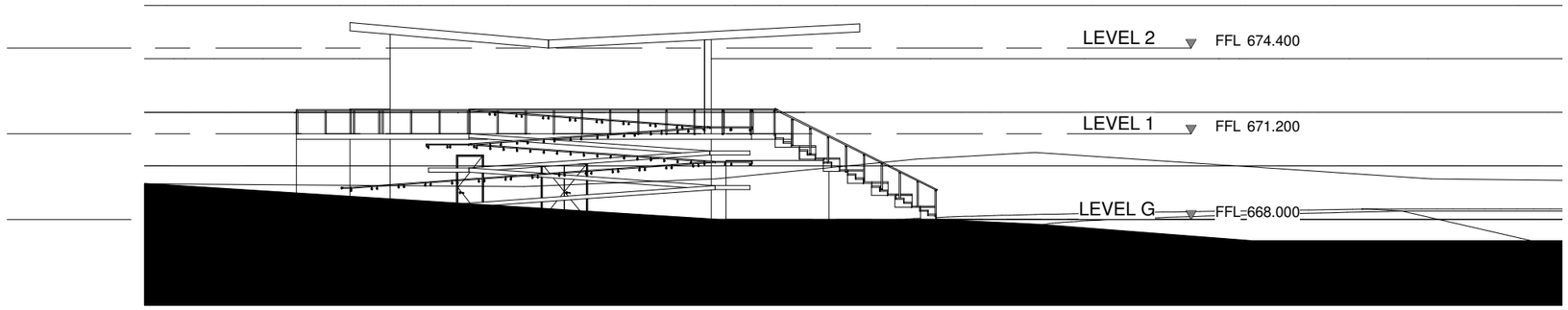
Drawing Number
0005

Date



1 NORTH ELEVATION

SCALE 1 : 200



2 SOUTH ELEVATION

SCALE 1 : 200

Cox Richardson

Level 2. 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au

Architecture Planning Urban design Interior design Health Facility design

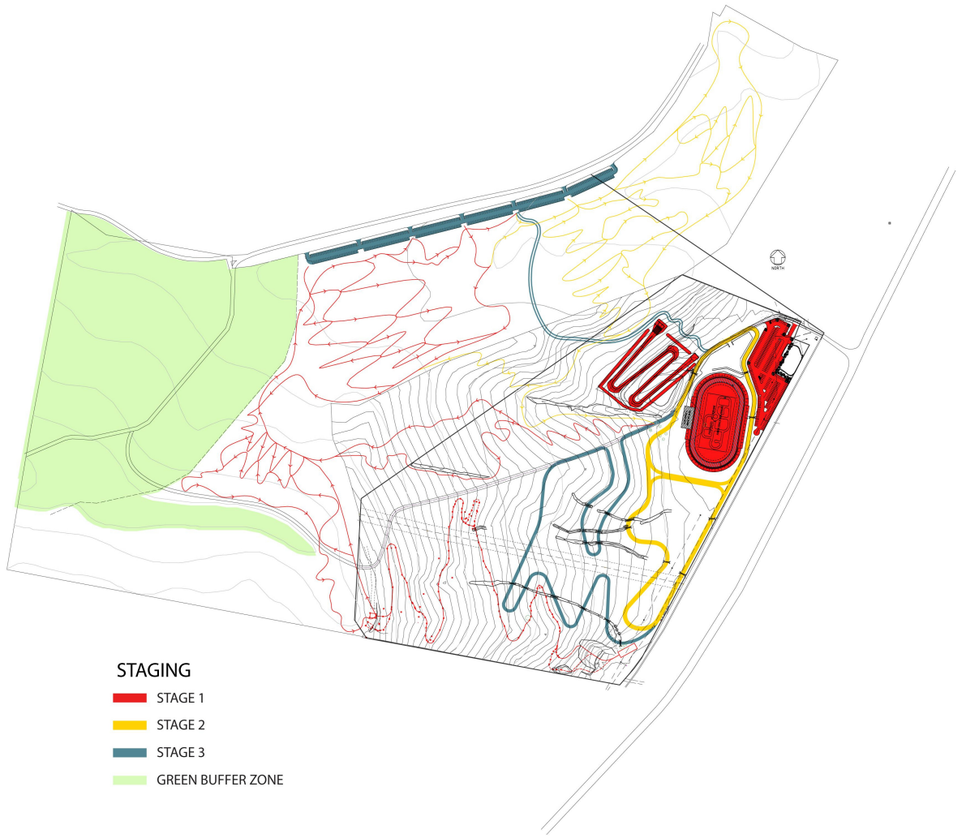
Bathurst Bike Park

Vale Road
Bathurst

Drawing Title
ELEVATIONS 2

Drawing Number
0006

Date



Cox Richardson

Level 2, 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au

Architecture Planning Urban design Interior design Health Facility design

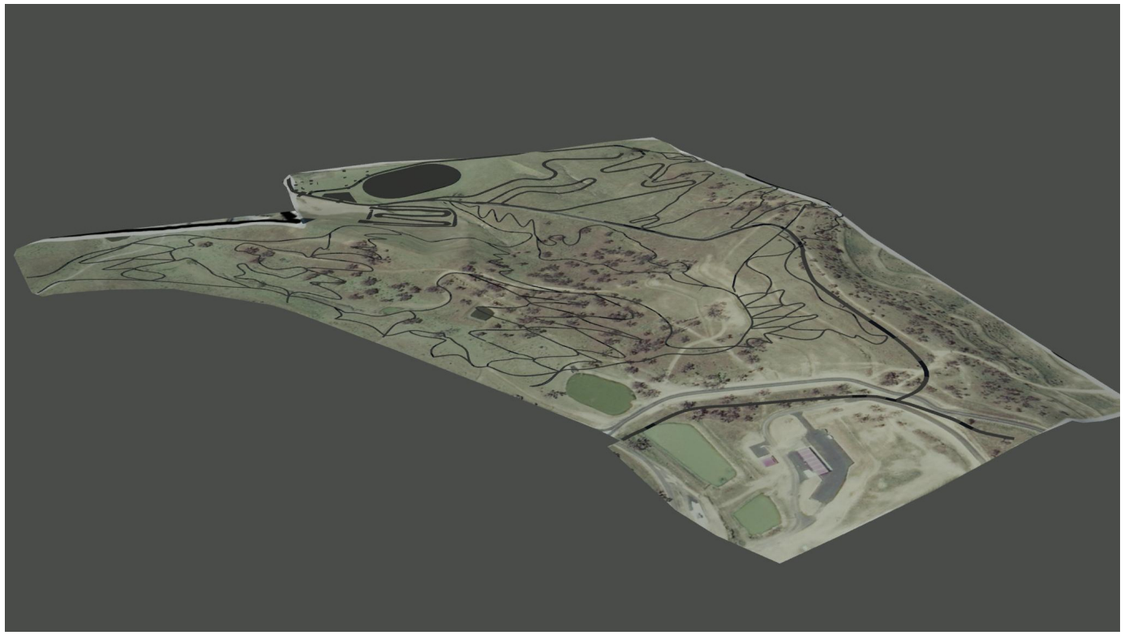
Bathurst Bike Park

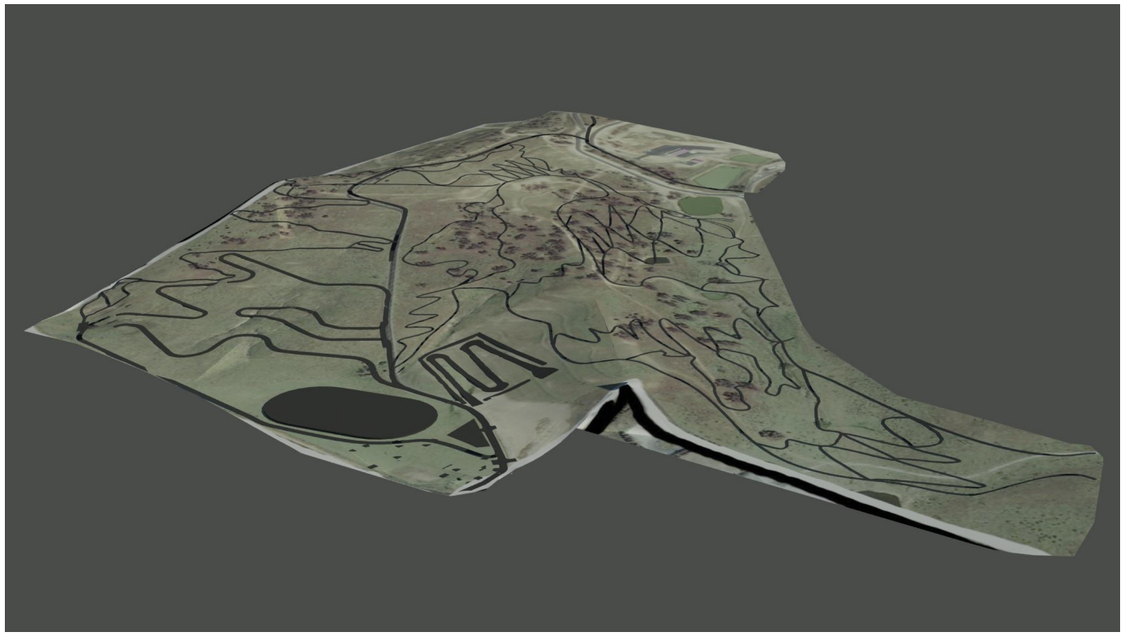
Vale Road
Bathurst

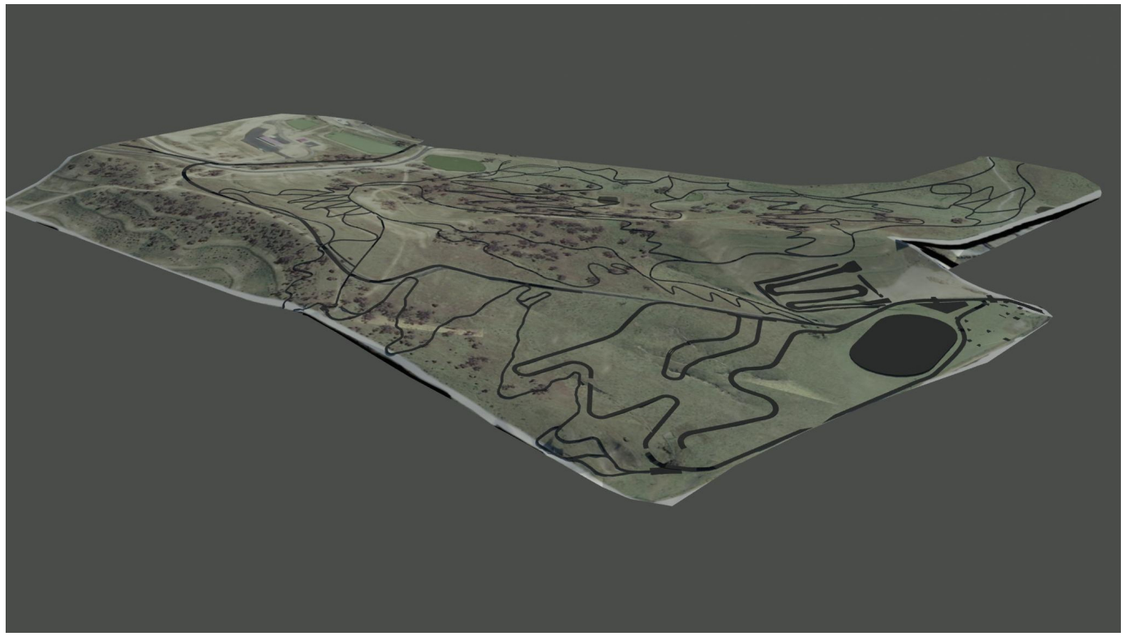
Drawing Title
STAGING

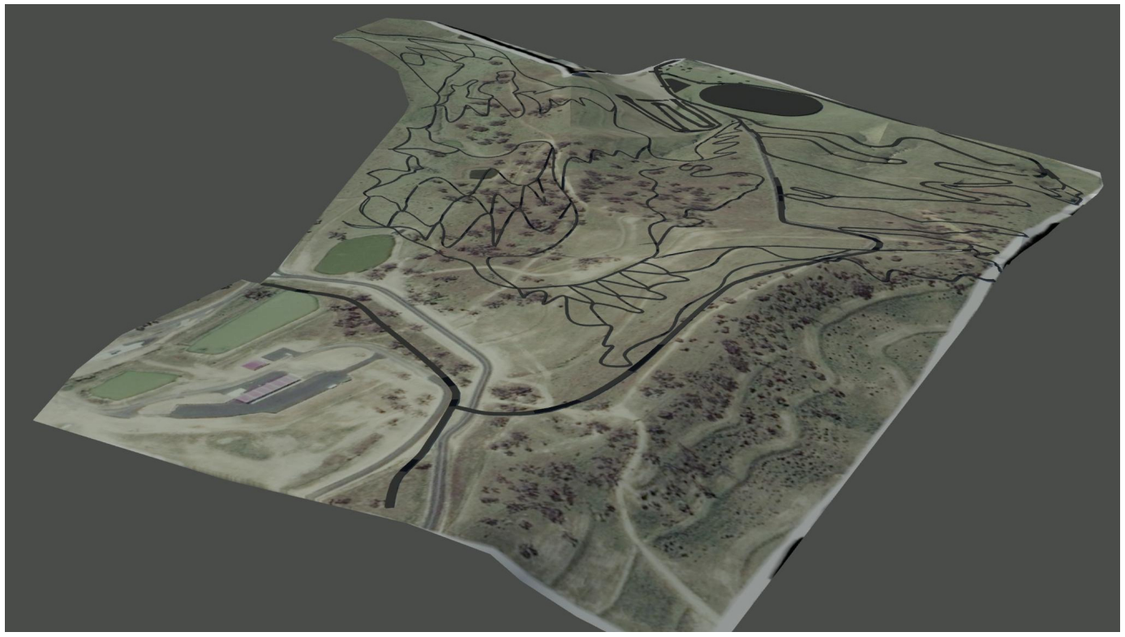
Drawing Number
0007

Date









Cox Richardson

Level 2. 204 Clarence Street, Sydney 2000 Australia
Tel : 612 9267 9566 Fax : 612 9264 5844
Email : sydney@cox.com.au

Architecture Planning Urban design Interior design Health Facility design

Bathurst Bike Park

Vale Road
Bathurst

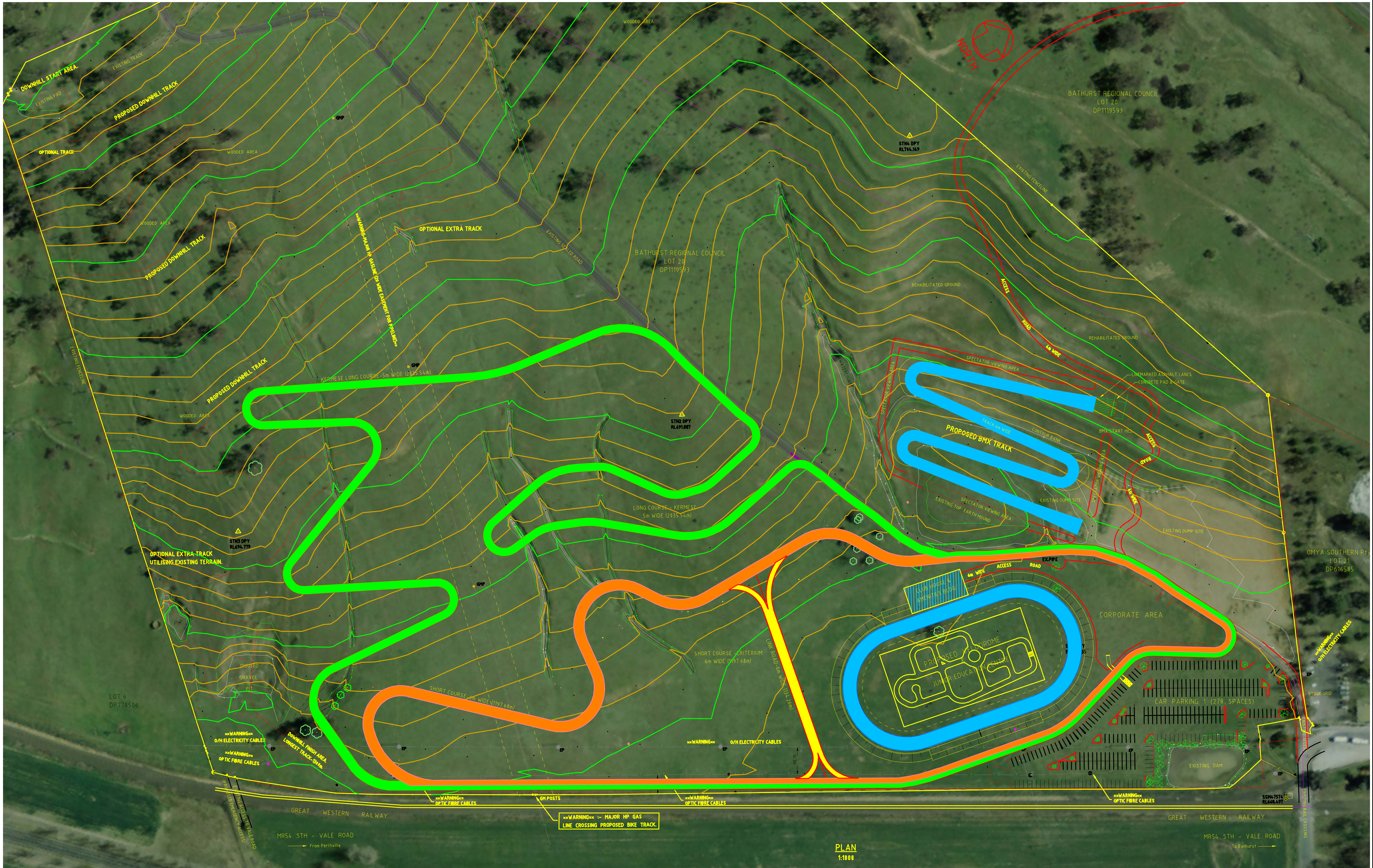
Drawing Title
SITE PERSPECTIVES

Drawing Number
0008

Date

SECTION 3 – ENGINEERING PLANS

BATHURST REGIONAL COUNCIL



CONSULTANT	
CHECKED	APPROVED

REV	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR APPROVAL	GW	15-08-09
B	ISSUED FOR APPROVAL	GW	19-10-10

SCALES (A1)

Scale	Divisions
1:10	0 0.1 0.2 0.3 0.4 0.5 Metres
1:20	0 0.2 0.4 0.6 0.8 1.0
1:50	0 0.5 1.0 1.5 2.0 2.5
1:100	0 1 2 3 4 5
1:200	0 2 4 6 8 10 Metres
1:500	0 5 10 15 20 25
1:750	0 7.5 15 22.5 30 37.5
1:1000	0 10 20 30 40 50

SURVEYED	GW/MC
DRAWN	GW
DESIGN	GW
DATE	AUG 09
DATUM	AHD

CHECKED

TECHNICAL SERVICES MANAGER

DIRECTOR ENGINEERING SERVICES

[redacted]

PROJECT
BATHURST BICYCLE PARK
VALE ROAD, ORTON PARK

DESCRIPTION
LAYOUT PLAN

JOB No.	DWG No.	SHEET No.	REV.
__/-000	EN9702	2	B.

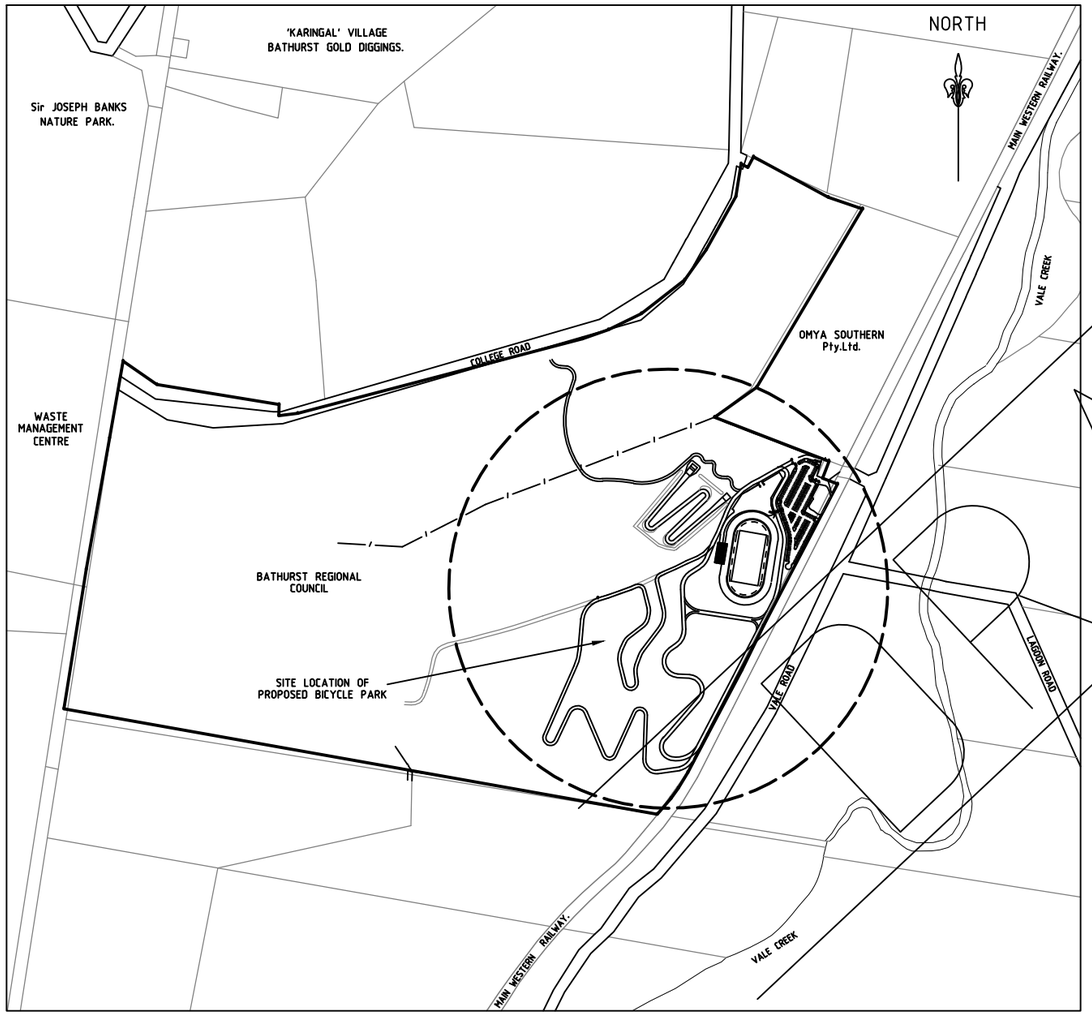
"BATHURST BICYCLE PARK"

ORTON PARK

VALE ROAD, BATHURST.

CONSTRUCTION OF PROPOSED BICYCLE PARK

COVER SHEET



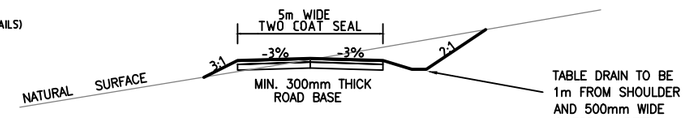
LOCALITY SKETCH
N.T.S.

CONSTRUCTION NOTES

1. TRAFFIC CONTROL PLAN AND TRAFFIC MANAGEMENT PLAN TO BE PROVIDED BY APPROPRIATELY CERTIFIED PERSONNEL PRIOR TO ANY CONSTRUCTION FOR APPROVAL BY DIRECTOR OF ENGINEERING.
2. ALL EXISTING UTILITIES ARE TO BE LOCATED AND DEPTHED ON SITE PRIOR TO ANY CONSTRUCTION.
3. ALL WORKS ARE TO BE CARRIED OUT TO BATHURST REGIONAL COUNCIL CONSTRUCTION SPECIFICATIONS.
4. ALL WORKS TO BE CARRIED OUT WITHIN THE GUIDELINES OF THE OCCUPATIONAL HEALTH AND SAFETY ACT.
5. ALL TRENCHES UNDER ROAD SURFACE TO BE BACKFILLED IN 1 CEMENT : 27 SAND MIX AND COMPACTED BY MECHANICAL MEANS.
6. ALL WET OR UNSUITABLE MATERIAL TO BE REMOVED FROM THE SITE.
7. ALL TOPSOIL STRIPPED FROM THE SITE IS TO BE STOCKPILED FOR USE ON BATTERS AND FOOTPATH AREAS AT COMPLETION OF JOB.
8. SOIL EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO CONSTRUCTION.
9. ALL TABLE DRAINS TO BE STABILIZED TO PREVENT SCOURING AND EROSION PROBLEMS.
10. PAVEMENT DETAILS:
    A. SUBGRADE - AS EXISTS OR SELECTED FILL COMPACTED TO 100 PERCENT STANDARD COMPACTION.
    B. BASECOURSE - 180mm LEANMIX CONCRETE 7MPa.
    C. WEARING SURFACE - 50mm AC14 PMB A15E, 125mm AC20. (REFER DWG SHEET 2 FOR PAVEMENT DETAILS)
11. ALL TREES ON SITE TO BE PROTECTED FROM DAMAGE.
12. GRAVEL FOR ROADBASE TO BE APPROVED BY THE ENGINEER. (REFER SHEET 2 FOR DETAILS)
13. SIGNAGE AS PER AS1742.3 TO BE IN PLACE AT ALL TIMES OF CONSTRUCTION.
14. SIGNS AND ROAD FURNITURE TO BE PLACED AS PER THE ROADS AND TRAFFIC AUTHORITY INTERIM GUIDE TO SIGNS AND MARKINGS.
15. DRAWING IS NOT TO BE USED FOR SCALING DISTANCES.
16. IF IN DOUBT.....PLEASE ASK,

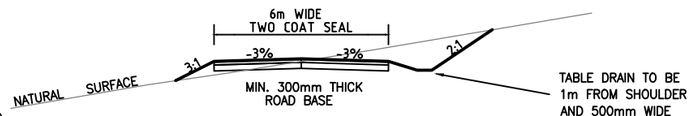
EROSION & SEDIMENT CONTROL MEASURES

1. EROSION CONTROL MEASURES TO BE IN PLACE PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION WORK. MEASURES ARE APPLIED TO PROTECT ADJOINING PROPERTIES FROM EROSION AND SILT DAMAGE.
2. BARRIER AND SILT FENCES (DWG SD 6-8) SHALL BE LOCATED AS CLOSE AS PRACTICAL TO ANY ESSENTIAL CONSTRUCTION ACTIVITY AS SHOWN.
3. SITE SHOULD NOT BE DISTURBED BEYOND 5 METRES FROM THE EDGE OF WORKS.
4. STOCKPILES SHALL BE CONFINED TO ONE CENTRAL AREA WHERE POSSIBLE.
5. SEDIMENT FENCES AND STRAW BALE SEDIMENT FILTERS TO BE ERECTED ON SITE AT DISCRETION OF DEVELOPER
6. PLACE GRAVEL FILLED GEOTEXTILE FILTERS (DWG SD 6-11) ALONG KERB AT ADEQUATE SPACINGS UPSTREAM OF STORMWATER PITS DURING AND AFTER EXCAVATION
7. PIPED DRAINAGE NETWORKS SHOULD BE INSTALLED AND CONNECTED AS EARLY AS POSSIBLE.
8. EROSION CONTROL MEASURES NOT TO BE REMOVED UNTIL CONSTRUCTION IS COMPLETED AND SITE HAS BEEN REHABILITATED.
9. REHABILITATION INCLUDES COMPLETION OF ALL CONSTRUCTION WORK AND LANDSCAPING, SEEDING OR TURFING OF ALL BATTERS AND FILL AREAS.
10. THIS PLAN HAS BEEN DEVELOPED IN ACCORDANCE WITH THE NSW LANDCOM "BLUE BOOK" SOILS AND CONSTRUCTION AND ALL DETAILS RELATE TO THIS TEXT.



TYPICAL CROSS SECTION
N.T.S

DRAWING LIST



TYPICAL CROSS SECTION
N.T.S

CONSULTANT		REV	DESCRIPTION	INITIALS	DATE
		A	ISSUED FOR APPROVAL	GW	15-08-09
		B	ISSUED FOR APPROVAL	GW	19-10-10
CHECKED	APPROVED				

SCALES (A1)

1:10	0 0.1 0.2 0.3 0.4 0.5 Metres	1:200 0 2 4 6 8 10 Metres
1:20	0 0.2 0.4 0.6 0.8 1.0	1:500 0 5 10 15 20 25
1:50	0 0.5 1.0 1.5 2.0 2.5	1:750 0 7.5 15 22.5 30 37.5
1:100	0 1 2 3 4 5	1:1000 0 10 20 30 40 50

SURVEYED	GW/MC
DRAWN	GW
DESIGN	GW
DATE	AUG 09
DATUM	AHD

CHECKED

TECHNICAL SERVICES MANAGER

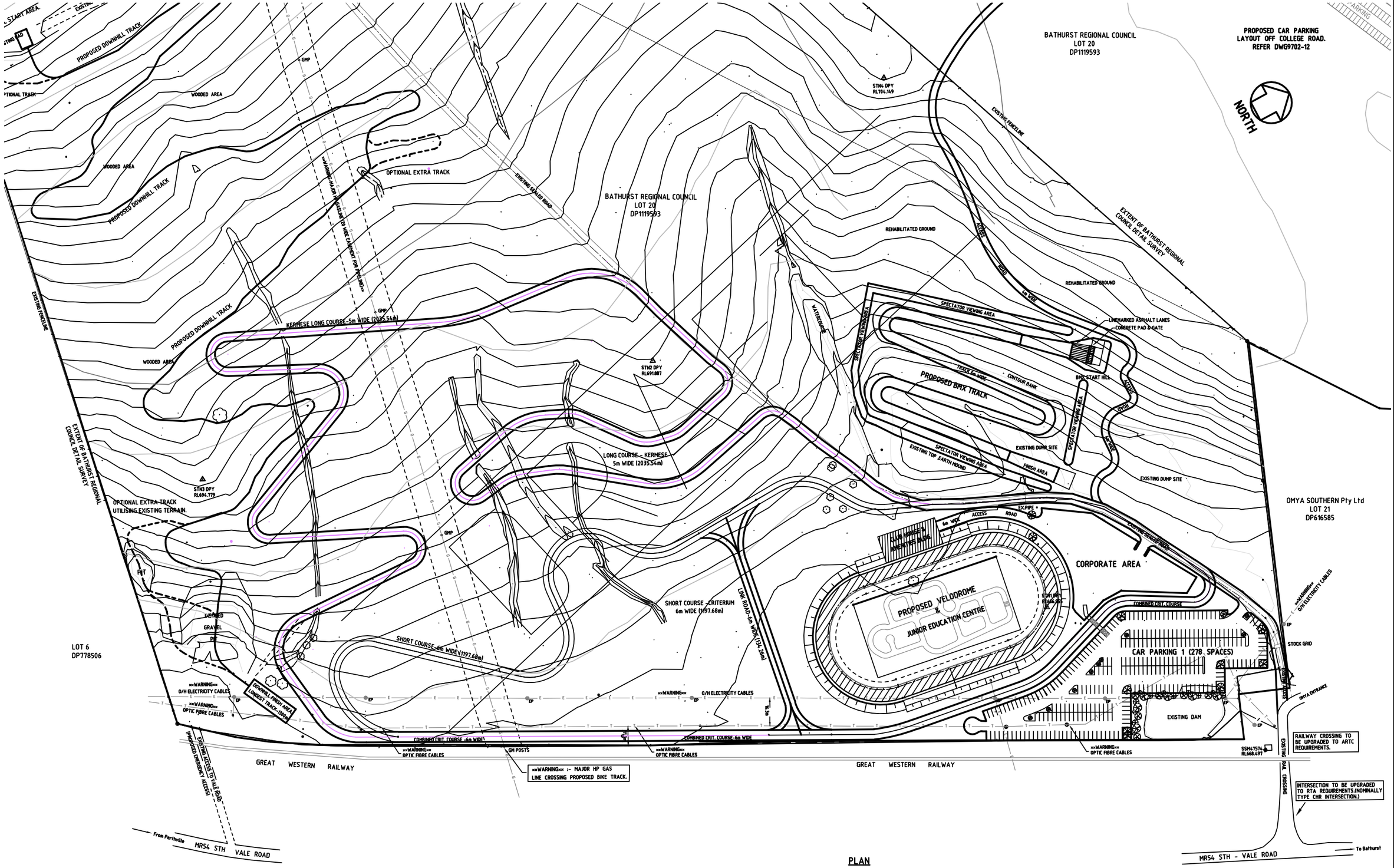
DIRECTOR ENGINEERING SERVICES

BATHURST REGIONAL COUNCIL

PROJECT
BATHURST BICYCLE PARK
VALE ROAD, ORTON PARK

DESCRIPTION
COVER SHEET

JOB No.	DWG No.	SHEET No.	REV.
__/-000	EN9702	1	B.



PLAN
1:1000

CONSULTANT		REV	DESCRIPTION	INITIALS	DATE
		A	ISSUED FOR APPROVAL	GW	15-08-09
		B	ISSUED FOR APPROVAL	GW	19-10-10
CHECKED	APPROVED				

SCALES (A1)

1:10	0 0.1 0.2 0.3 0.4 0.5 Metres	1:200 0 2 4 6 8 10 Metres
1:20	0 0.2 0.4 0.6 0.8 1.0	1:500 0 5 10 15 20 25
1:50	0 0.5 1.0 1.5 2.0 2.5	1:750 0 7.5 15 22.5 30 37.5
1:100	0 1 2 3 4 5	1:1000 0 10 20 30 40 50

SURVEYED	GW/MC
DRAWN	GW
DESIGN	GW
DATE	AUG 09
DATUM	AHD

CHECKED

TECHNICAL SERVICES MANAGER

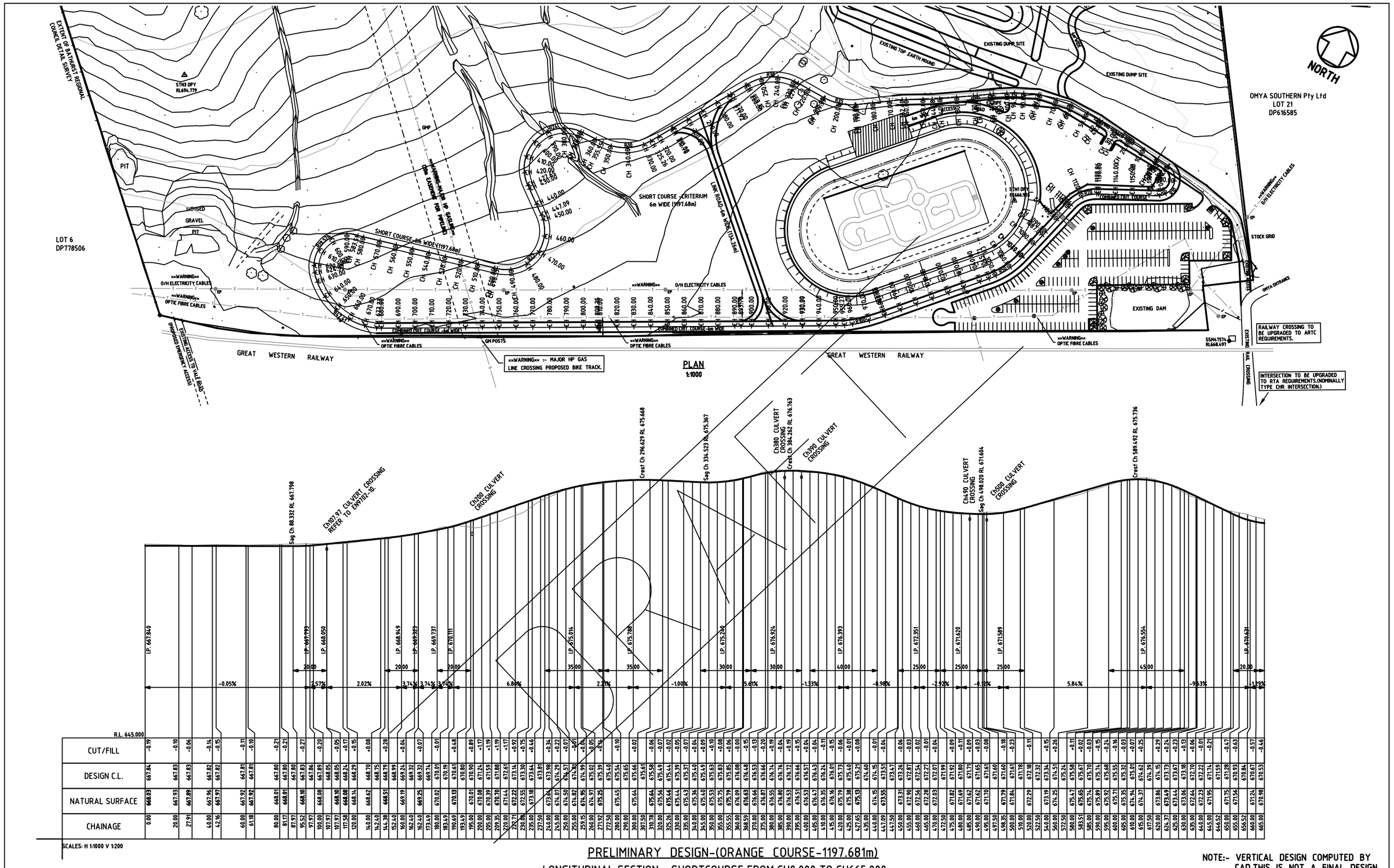
DIRECTOR ENGINEERING SERVICES

BATHURST REGIONAL COUNCIL

PROJECT
BATHURST BICYCLE PARK
VALE ROAD, ORTON PARK

DESCRIPTION
LAYOUT PLAN

JOB No.	DWG No.	SHEET No.	REV.
__/-000	EN9702	2	B.



SCALES: H 1:1000 V 1:200

PRELIMINARY DESIGN-(ORANGE COURSE-1197.681m)

LONGITUDINAL SECTION - SHORTCOURSE FROM CH0.00 TO CH665.000

NOTE:- VERTICAL DESIGN COMPUTED BY CAD.THIS IS NOT A FINAL DESIGN.

CONSULTANT		REV	DESCRIPTION	INITIALS	DATE
		A	ISSUED FOR APPROVAL	GW	15-08-09
		B	ISSUED FOR APPROVAL	GW	19-10-10
CHECKED	APPROVED				

SCALES (A1)

1:10 0 0.1 0.2 0.3 0.4 0.5 Metres
1:20 0 0.2 0.4 0.6 0.8 1.0
1:50 0 0.5 1.0 1.5 2.0 2.5
1:100 0 1 2 3 4 5
1:200 0 2 4 6 8 10 Metres
1:500 0 5 10 15 20 25
1:750 0 7.5 15 22.5 30 37.5
1:1000 0 10 20 30 40 50

SURVEYED	GW/MC
DRAWN	GW
DESIGN	GW
DATE	AUG 09
DATUM	AHD

CHECKED

TECHNICAL SERVICES MANAGER

DIRECTOR ENGINEERING SERVICES

BATHURST REGIONAL COUNCIL

PROJECT: BATHURST BICYCLE PARK
VALE ROAD, ORTON PARK

DESCRIPTION: SHORT COURSE
PLAN & LONGITUDINAL SECTION
CH0.00-CH665.00

JOB No.	DWG No.	SHEET No.	REV.
__/-000	EN9702	3	B.

NOTES

NORTH

WOODED AREA

STN2 DPY RL691.887

STN3 DPY RL694.779

CONTOUR BANK

ACCESS ROAD

EXISTING TOP EARTH MOUND

EXISTING DUMP SITE

EXISTING DUMP SITE

OMYA SOUTHERN Pty Ltd
LOT 21
DP616585

GMP

PIT

CLOSED GRAVEL PIT

LOT 6
DP778506

SHORT COURSE - CRITERIUM 6m WIDE (1197.68m)

LINK ROAD-6m WIDE (134.26m)

SHORT COURSE-6m WIDE(1197.68m)

STN1 DPY RL666.955

CONCRETE KERB COURSE

STOCK GRID

EXISTING ACCESS

EXISTING DAM

SSM43574 RL668.697

EXISTING RURAL CROSSING

»WARNING« O/H ELECTRICITY CABLES

»WARNING« OPTIC FIBRE CABLES

»WARNING« O/H ELECTRICITY CABLES

»WARNING« OPTIC FIBRE CABLES

»WARNING« O/H ELECTRICITY CABLES

»WARNING« OPTIC FIBRE CABLES

CONCRETE KERB COURSE -6m WIDE

CONCRETE KERB COURSE -6m WIDE

EXISTING ACCESS TO VALE ROAD (PROPOSED EMERGENCY ACCESS)

GM POSTS

»WARNING« :- MAJOR HP GAS LINE CROSSING PROPOSED BIKE TRACK.

GREAT WESTERN RAILWAY

MR54 STH - VALE ROAD
From Perthville

GREAT WESTERN RAILWAY

MR54 STH - VALE ROAD
To Bathurst

PLAN
1:1000

Ch745 CULVERT CROSSING

Ch845 CULVERT CROSSING

Ch1022 CULVERT CROSSING

Sag Ch 1037.903 RL 666.787

I.P. 668.670

I.P. 668.543

I.P. 667.530

I.P. 666.782

I.P. 666.849

20.00

20.00

32.97

20.00

37.68

-1.29%

-1.29%

-2.43%

-0.44%

0.05%

0.67%

R.L. 650.700

CHAINAGE	CUT/FILL	DESIGN C.L.	NATURAL SURFACE
665.00	-0.46	670.53	670.98
666.52		670.50	
670.00	-0.31	670.46	670.76
675.00	-0.19	670.39	670.58
677.23	-0.15	670.36	670.51
680.00	-0.12	670.33	670.45
700.00	+0.09	670.07	669.98
720.00	-0.02	669.81	669.83
740.00	-0.02	669.55	669.57
760.00	-0.48	669.29	669.78
780.00	-0.47	669.04	669.51
800.00	+0.01	668.78	668.77
808.35	+0.08	668.67	668.59
818.35		668.51	
820.00	+0.06	668.48	668.42
828.36		668.30	
840.00	-0.13	668.04	668.25
843.51		667.95	
860.00	+0.04	667.61	667.57
876.49		667.46	667.51
880.00	-0.07	667.44	667.42
893.70	-0.04	667.38	667.37
900.00	-0.02	667.35	667.37
920.00	+0.21	667.27	667.06
930.37	+0.09	667.22	667.13
940.00	+0.00	667.18	667.18
955.27	-0.03	667.11	667.15
960.00	-0.08	667.09	667.17
965.00	-0.12	667.07	667.19
970.00	-0.15	667.05	667.19
975.00	-0.19	667.02	667.21
979.51	-0.24	667.00	667.24
980.00	-0.24	667.00	667.24
1000.00	+0.07	666.91	666.84
1020.00	+0.07	666.83	666.76
1030.00		666.79	
1040.00	+0.03	666.79	666.76
1045.71	+0.03	666.79	666.76
1050.00	+0.03	666.79	666.77
1055.00	+0.02	666.79	666.77
1060.00	+0.02	666.80	666.78
1065.00	+0.02	666.80	666.78
1069.60	+0.02	666.80	666.79
1080.00	+0.01	666.81	666.79
1087.99	+0.01	666.81	666.80
1100.00	0.00	666.82	666.82
1112.06	-0.01	666.82	666.84
1115.00	-0.02	666.83	666.84
1120.00	-0.02	666.83	666.84
1125.00	-0.02	666.83	666.85
1128.96	-0.02	666.83	666.85
1140.00	-0.03	666.84	666.87
1141.16		666.84	
1160.00	+0.04	667.02	666.98
1166.34	+0.12	667.16	667.04
1170.00	+0.13	667.25	667.12
1175.00	+0.05	667.41	667.36
1178.84		667.54	
1180.00	-0.10	667.58	667.73
1185.00	-0.11	667.71	667.94
1190.00	-0.09	667.95	668.04
1190.45	-0.07	667.97	668.04
1197.68	+0.20	668.23	668.03

SCALES: H 1:1000 V 1:200

PRELIMINARY DESIGN-(ORANGE COURSE-1197.681m))

LONGITUDINAL SECTION - SHORTCOURSE FROM CH665.000 TO CH1197.681

NOTE:- VERTICAL DESIGN COMPUTED BY CAD.THIS IS NOT A FINAL DESIGN.

CONSULTANT		REV	DESCRIPTION	INITIALS	DATE
		A	ISSUED FOR APPROVAL	GW	15-08-09
		B	ISSUED FOR APPROVAL	GW	19-10-10
CHECKED	APPROVED				

SCALES (A1)

1:10 0 0.1 0.2 0.3 0.4 0.5 Metres
1:20 0 0.2 0.4 0.6 0.8 1.0
1:50 0 0.5 1.0 1.5 2.0 2.5
1:100 0 1 2 3 4 5
1:200 0 2 4 6 8 10 Metres
1:500 0 5 10 15 20 25
1:750 0 7.5 15 22.5 30 37.5
1:1000 0 10 20 30 40 50

SURVEYED	GW/MC
DRAWN	GW
DESIGN	GW
DATE	AUG 09
DATUM	AHD

CHECKED

TECHNICAL SERVICES MANAGER

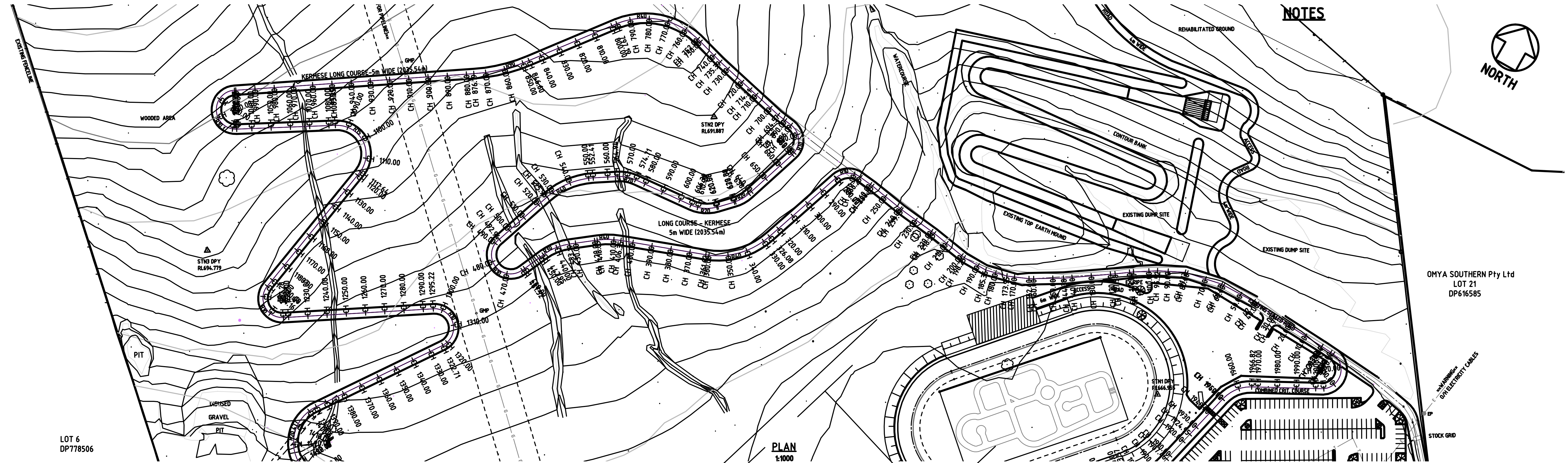
DIRECTOR ENGINEERING SERVICES

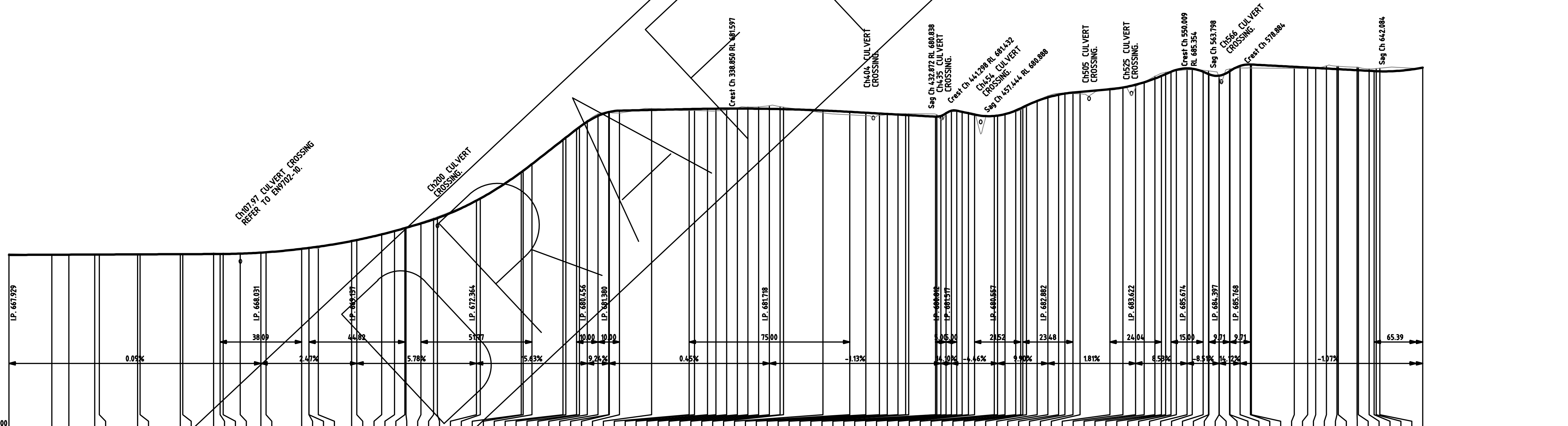
BATHURST REGIONAL COUNCIL

PROJECT: BATHURST BICYCLE PARK
VALE ROAD, ORTON PARK

DESCRIPTION: SHORT COURSE
PLAN & LONGITUDINAL SECTION (cont)
CH665.00-CH1197.68

JOB No.	DWG No.	SHEET No.	REV.
__/-000	EN9702	4	B.





CHAINAGE	CUT/FILL	DESIGN C.L.	NATURAL SURFACE
0.00	-0.10	667.93	668.03
20.00	+0.02	667.95	667.93
27.91	+0.06	667.95	667.89
40.00	+0.00	667.96	667.96
42.16	-0.01	667.97	667.97
60.00	+0.06	667.98	667.92
61.18	+0.07	667.98	667.92
80.00	-0.01	668.00	668.01
81.17	-0.01	668.00	668.01
95.52	-0.09	668.01	668.10
98.54		668.01	
100.00	-0.07	668.02	668.08
107.97	-0.05	668.05	668.10
117.58	+0.07	668.14	668.08
120.00	+0.04	668.18	668.14
136.63		668.50	
139.99		668.58	
140.00	-0.04	668.58	668.62
144.38	+0.19	668.70	668.51
160.00	+0.03	669.23	669.19
162.40	+0.07	669.32	669.25
173.95	-0.01	669.85	669.85
180.00	-0.03	670.16	670.19
184.80		670.43	
185.36	-0.03	670.46	670.49
192.34		670.87	
198.25	-0.11	671.24	671.35
200.00	-0.12	671.37	671.49
218.23	+0.08	673.00	672.92
220.00	+0.05	673.19	673.14
239.13	+0.10	675.65	675.55
240.00	+0.10	675.78	675.69
244.11		676.41	
258.65	+0.06	678.68	678.62
260.00	+0.05	678.89	678.85
265.00		679.67	
266.26	-0.04	679.87	679.91
270.00	-0.11	680.38	680.49
275.00	-0.18	680.92	681.10
280.00	-0.01	681.27	681.28
280.22	+0.01	681.28	681.28
285.00		681.40	
300.00	-0.13	681.47	681.60
317.50		681.55	
320.00	+0.13	681.56	681.43
326.08	+0.20	681.58	681.38
330.00	+0.21	681.59	681.38
335.00	+0.13	681.60	681.47
340.00	-0.06	681.60	681.66
345.00	-0.15	681.59	681.74
350.00	-0.17	681.58	681.76
355.00	-0.30	681.57	681.87
360.00	-0.22	681.55	681.77
361.62	-0.18	681.54	681.72
380.00	+0.21	681.42	681.21
392.50		681.29	
400.00	+0.27	681.21	680.94
406.35	+0.18	681.14	680.95
410.00	+0.06	681.10	681.04
415.00	-0.07	681.04	681.11
418.63	-0.12	681.00	681.12
420.00	-0.14	680.98	681.12
432.50		680.84	
433.19	-0.19	680.84	681.03
435.00	+0.31	680.91	680.60
437.50		681.16	
440.00	+0.09	681.40	681.31
442.50		681.41	
445.00	-0.01	681.29	681.30
447.95	-0.08	681.16	681.24
450.76		681.04	
460.00	-0.03	680.91	680.94
461.52	-0.02	680.94	680.96
465.00	+0.03	681.08	681.04
470.00	+0.10	681.41	681.31
472.28		681.62	
473.26		681.72	
475.00	+0.12	681.89	681.77
480.00	-0.02	682.31	682.33
485.00	-0.14	682.64	682.78
490.00	-0.12	682.89	683.02
492.94	-0.02	683.00	683.02
496.74		683.09	
500.00	+0.18	683.15	682.97
513.93		683.40	
520.00	-0.05	683.57	683.61
525.96	+0.24	683.82	683.58
530.00	-0.05	684.06	684.11
535.00	-0.21	684.41	684.62
537.98		684.65	
540.00	-0.16	684.82	684.98
542.50		685.03	
545.00	+0.07	685.21	685.14
550.00	+0.14	685.35	685.22
552.41	+0.09	685.32	685.23
557.50		685.04	
560.00	-0.30	684.82	685.12
560.14		684.81	
564.94	+0.13	684.67	684.54
565.00	+0.16	684.67	684.51
569.86		685.08	
570.00	-0.20	685.10	685.31
574.71	+0.19	685.58	685.39
579.57		685.72	
580.00	+0.32	685.71	685.39
600.00	+0.14	685.50	685.36
606.30	+0.08	685.43	685.35
610.00	+0.02	685.39	685.37
615.00	-0.25	685.34	685.59
620.00	-0.26	685.28	685.55
620.58	-0.26	685.28	685.54
629.38	-0.28	685.18	685.46
630.00	-0.27	685.18	685.44
635.00	-0.18	685.12	685.30
637.30		685.10	
638.31	-0.24	685.09	685.33
640.00	-0.29	685.08	685.37
660.00	+0.10	685.43	685.33

SCALES: H 1:1000 V 1:200

PRELIMINARY DESIGN-(GREEN COURSE-2035.54m)

LONGITUDINAL SECTION - LONGCOURSE FROM CH0.000 TO CH660.000

NOTE:- VERTICAL DESIGN COMPUTED BY CAD.THIS IS NOT A FINAL DESIGN.

CONSULTANT

CHECKED | APPROVED

REV	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR APPROVAL	GW	15-08-09
B	ISSUED FOR APPROVAL	GW	19-10-10

SCALES (A1)

1:10 — 0 0.1 0.2 0.3 0.4 0.5 Metres
1:20 — 0 0.2 0.4 0.6 0.8 1.0
1:50 — 0 0.5 1.0 1.5 2.0 2.5
1:100 — 0 1 2 3 4 5
1:200 — 0 2 4 6 8 10 Metres
1:500 — 0 5 10 15 20 25
1:750 — 0 7.5 15 22.5 30 37.5
1:1000 — 0 10 20 30 40 50

SURVEYED	GW/MC
DRAWN	GW
DESIGN	GW
DATE	AUG 09
DATUM	AHD

CHECKED

TECHNICAL SERVICES MANAGER

DIRECTOR ENGINEERING SERVICES

BATHURST REGIONAL COUNCIL

PROJECT: BATHURST BICYCLE PARK, VALE ROAD, ORTON PARK

DESCRIPTION: KERMESE LONG COURSE PLAN & LONGITUDINAL SECTION CH0.00-CH660.00

JOB No.	DWG No.	SHEET No.	REV.
__/-000	EN9702	5	B.