

Notes

Key to symbols

- Vineyard precinct boundary
- MUSIC catchment boundary
- M1 MUSIC catchment
- Riparian corridor / Environmental living
- Rural transition
- Urban residential
- Open space

Music sub-catchment	Area (Ha)				Total
	Riparian corridor / Environmental living	Rural transition	Urban residential	Open space	
M1	173.31	-	71.64	1.64	246.59
M2	-	-	6.48	-	6.48
M3	-	14.82	9.00	-	23.82
M4	2.56	28.95	30.56	18.84	80.91
M5	1.48	-	56.31	5.05	62.84
M6	-	-	14.21	1.58	15.79
M7	2.82	-	38.71	-	41.53
M8	9.73	-	49.15	10.95	69.83
M9	2.88	-	39.39	0.92	43.19
Total	192.78	43.77	315.45	38.98	590.98

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P5	19.10.2016	MMc	Issued For Exhibition	GL	-
P4	14.10.16	MMc	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	03.09.14	AMP	Issued for information	GL	-
P1	15.08.14	AMP	Issued for information	GL	-

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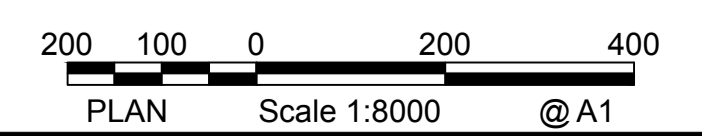
Title
Vineyard Precinct
Water Cycle Management Plan

MUSIC Catchment Plan

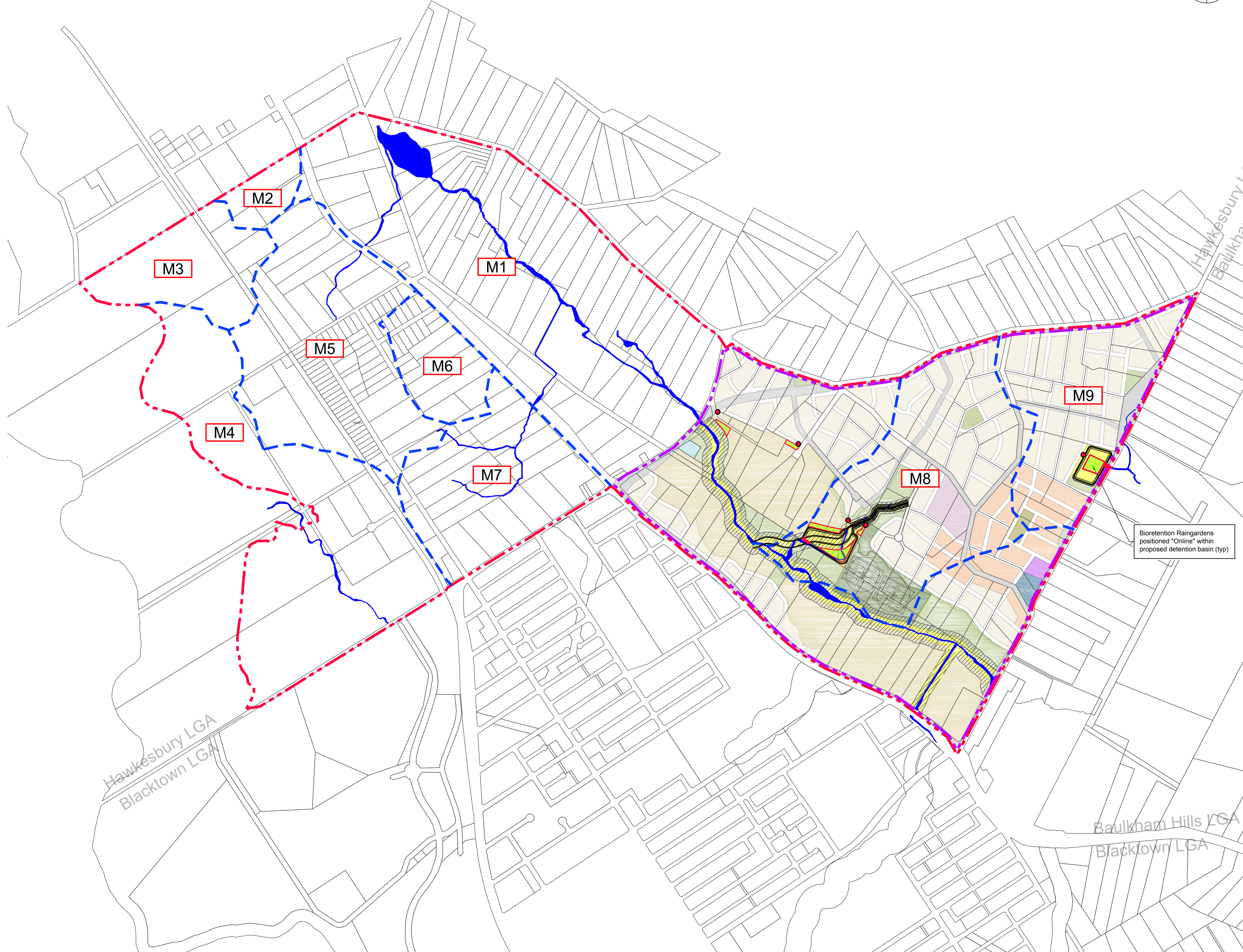
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Scale at A1	1:8000	Status	PRE	Rev P5

Drawing Number
MMD-334311-C-DR-VY-XX-0220

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Notes

Key to symbols

- - - - Vineyard precinct boundary
- - - - Vineyard precinct stage 1 boundary
- - - - Vineyard early activation precinct boundary
- - - - MUSIC catchment boundary
- Detention basin
- M1 MUSIC catchment
- Bioretention
- Gross pollutant trap

Music sub-catchment	Bioretention (m ²)
M1	20000
M2	850
M3	680
M4	-
M5	7500
M6	2000
M7	2500
M8	7000
M9	4300
Total	44830

Bioretention Raingardens positioned "Online" within proposed detention basin (typ)

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P8	19.10.2016	MMc	Issued For Exhibition	GL	-
P7	14.10.16	MMc	Issued For Exhibition	GL	-
P6	20.07.15	JK	Issued For Exhibition	GL	-
P5	10.07.15	MMc	Issued For Exhibition	GL	-
P4	08.07.15	AMP	Issued For Exhibition	GL	-

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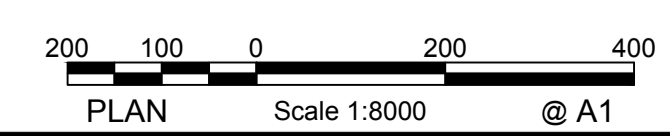
Title
**Vineyard Precinct
Water Cycle Management Plan**

**Proposed Stormwater
Treatment Plan**

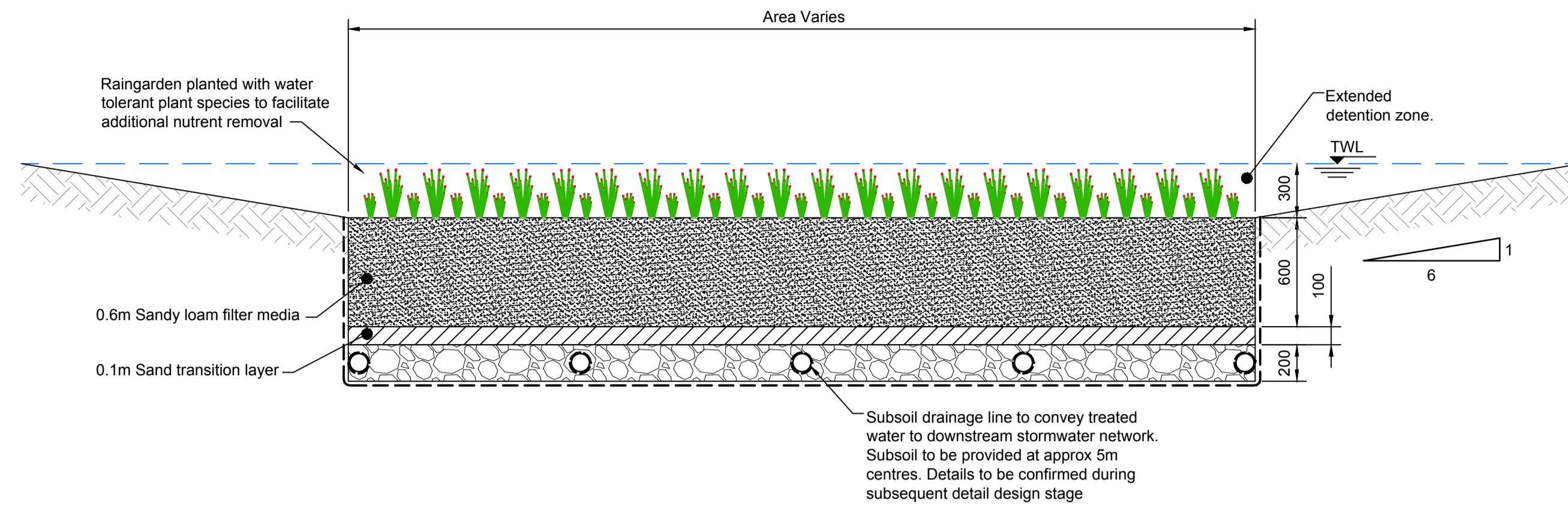
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		Rev	P8

Drawing Number
MMD-334311-C-DR-VY-XX-0221

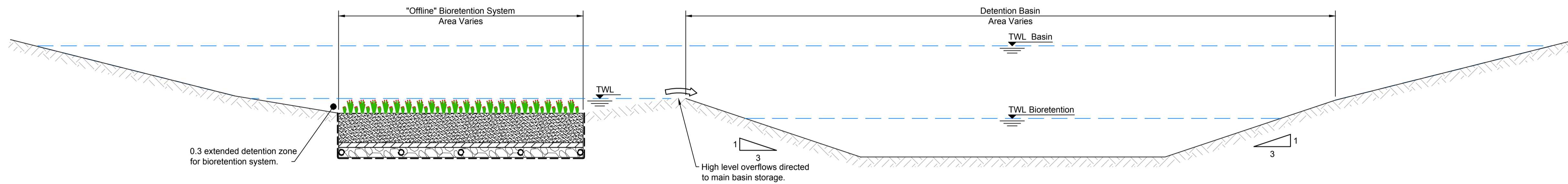
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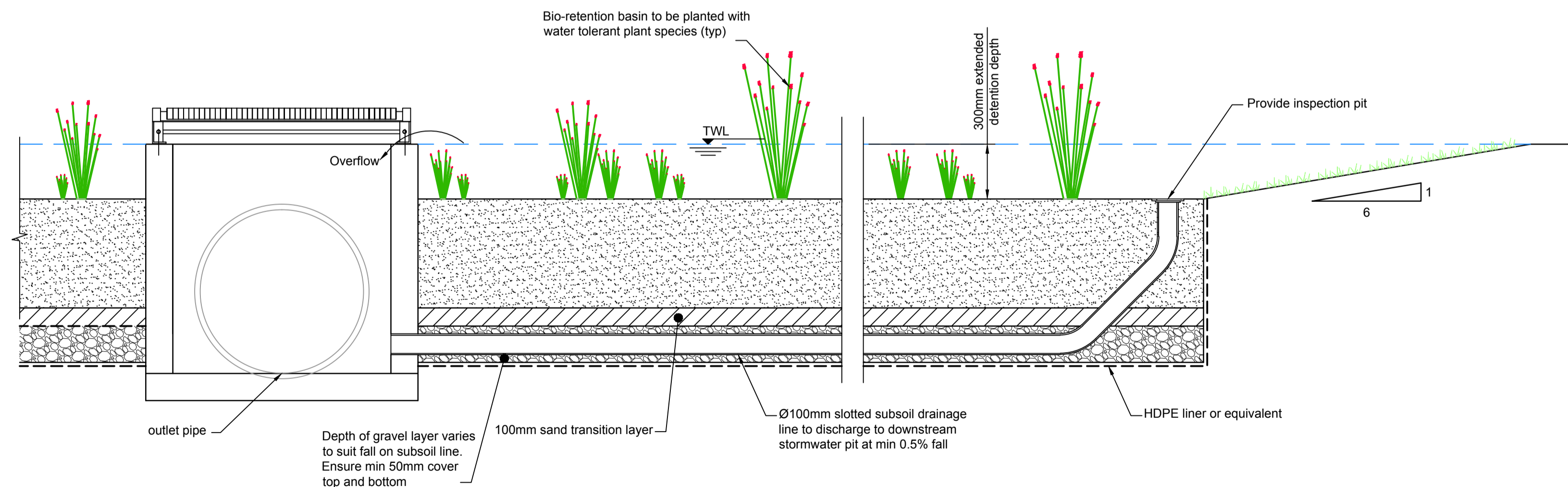
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Typical Bioretention "Raingarden"
Detail
1:25



Typical Combined Detention/Bioretention
Detail
1:50



Typical Bioretention Basin
1:20

Notes

Key to symbols

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	19.10.2016	MMc	Issued For Exhibition	GL	-
P2	14.10.16	MMc	Issued For Exhibition	GL	-
P1	01.07.15	MMc	Issued For Exhibition	GL	-



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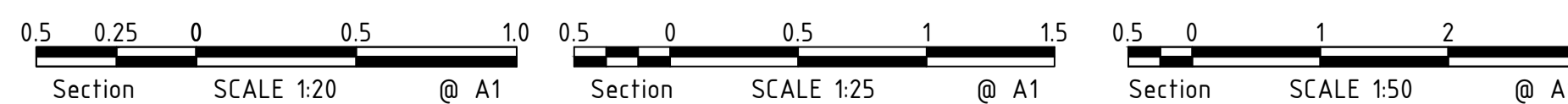
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**Vineyard Precinct
Water Cycle Management Plan**

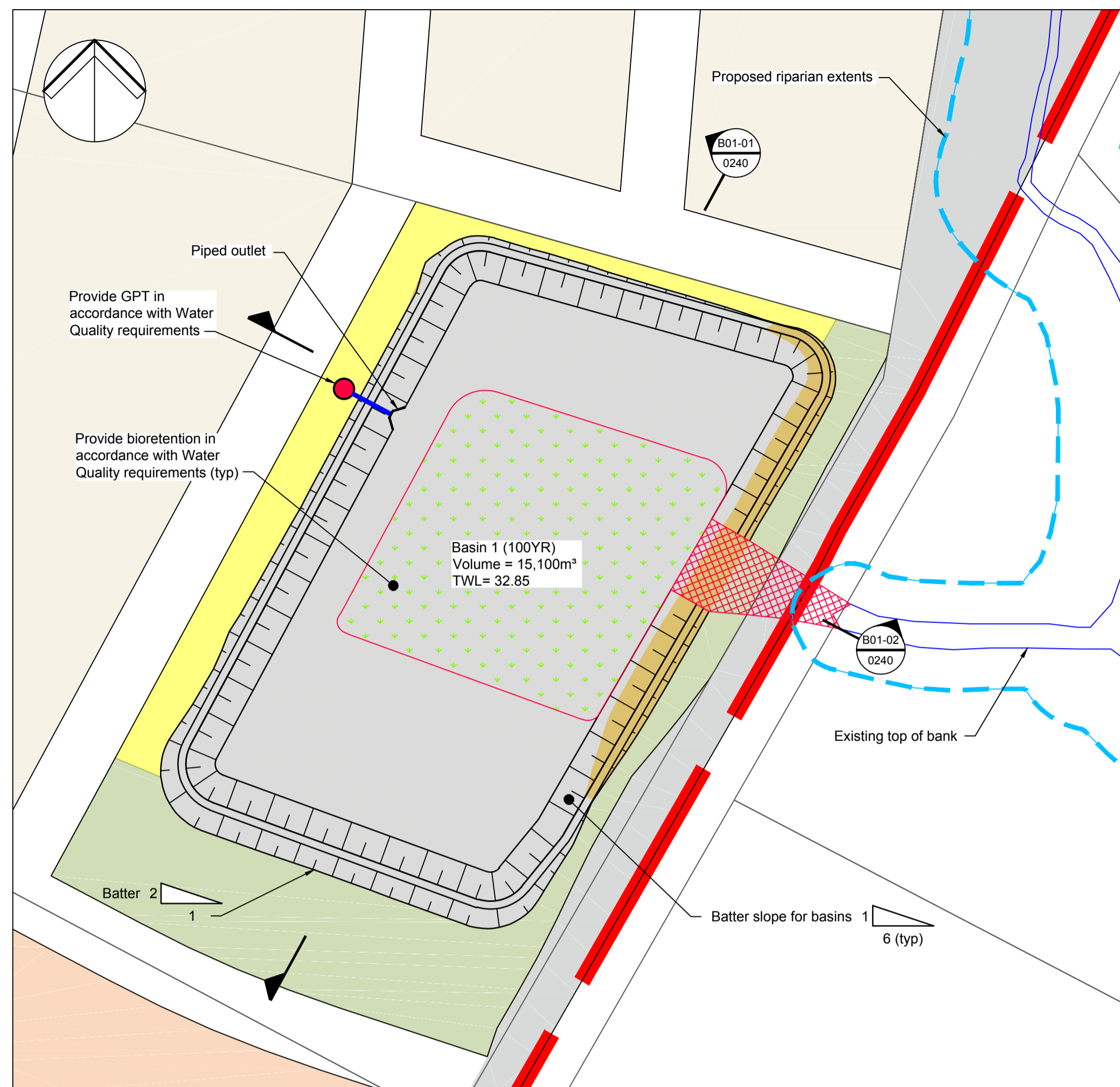
**Sections and Details
Sheet 1**

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Dwg check	GC	Approved	CJA	-
Scale at A1	NTS	Status	PRE	Rev
				P3

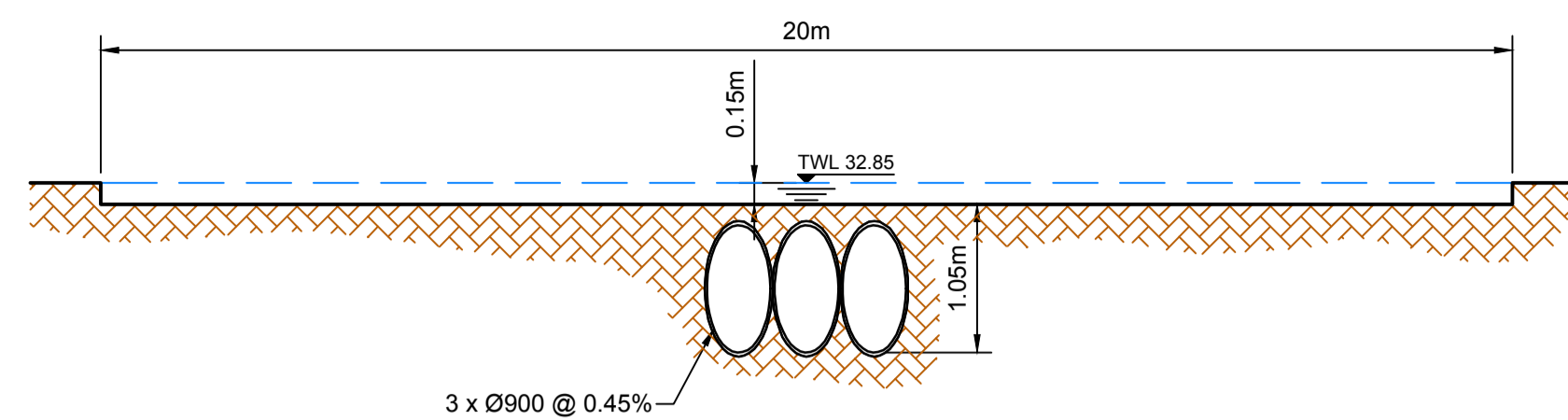
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MMD-334311-C-DR-VY-XX-0230

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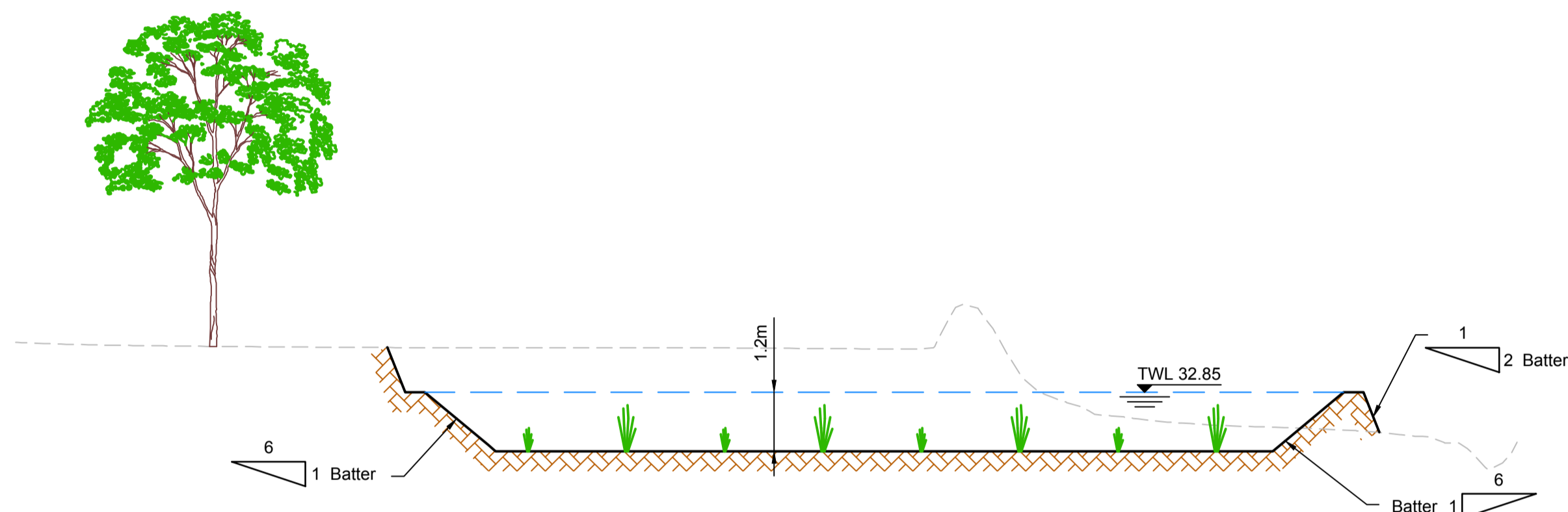




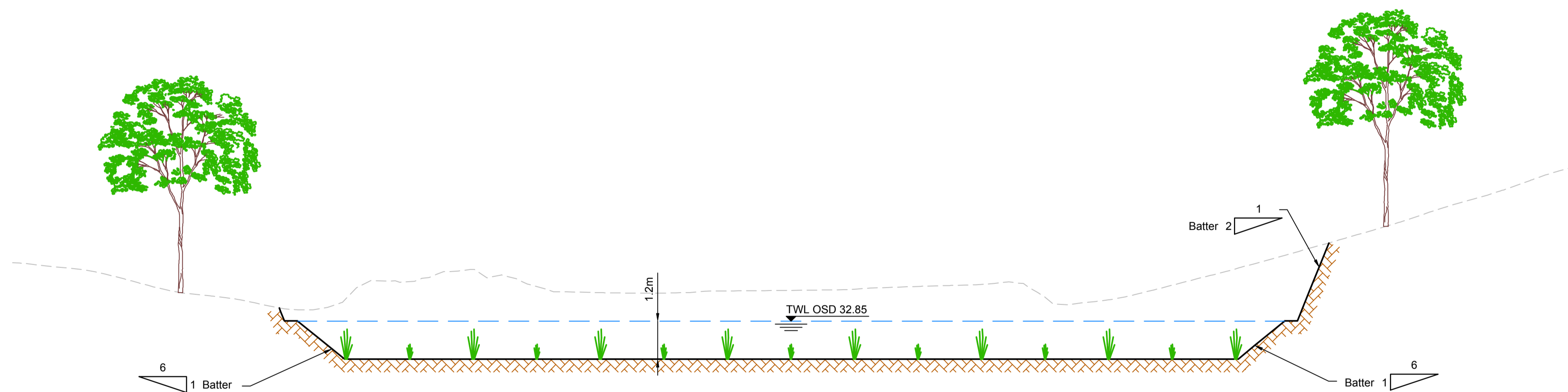
Basin 1
1:1000



Basin 1 Outlet Weir Detail
NTS



Section B01-02
1:500(H)
100(V)



Section B01-01
1:500(H)
100(V)

Notes

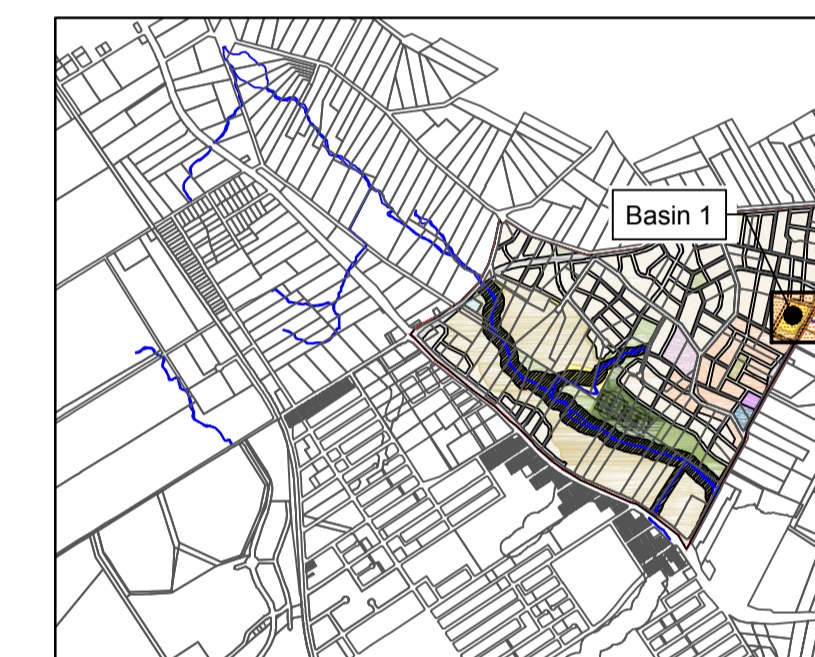
Earthworks Volume

Total cut -26,370m³
Total fill +444m³
Total balance -25,926m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final siting during detailed design

Key to symbols

- Existing riparian extents
- Proposed riparian extents
- Existing top of creek bank
- Provide GPT (in accordance with water quality requirements)
- Provide Piped outlet
- On-site detention
- Extent of cut
- Extent of fill
- Outlet weir
- Bioretention



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	19.10.2016	MMc	Issued For Exhibition	GL	-
P6	14.10.16	MMc	Issued For Exhibition	GL	-
P5	20.07.15	JK	Issued For Exhibition	GL	-
P4	10.07.15	MMc	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-



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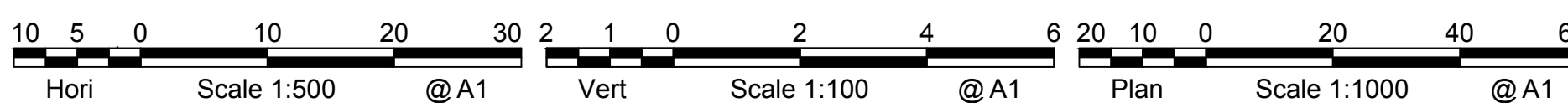
Title
**Vineyard Precinct
Water Cycle Management Plan**

**Basin 1
Plan and Section Sheet**

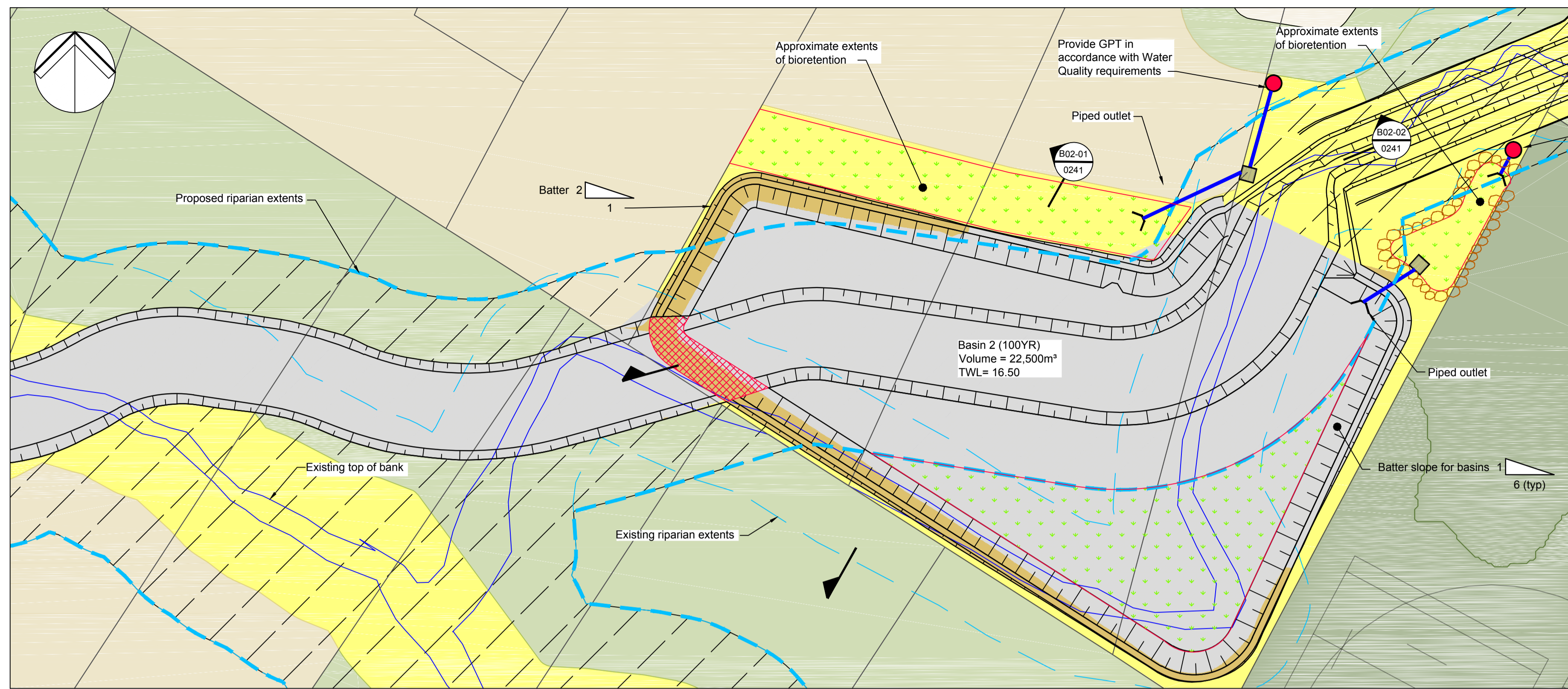
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Scale at A1	Status	Rev		
As Shown	PRE	P7		

Drawing Number
MMD-334311-C-DR-VY-XX-0240

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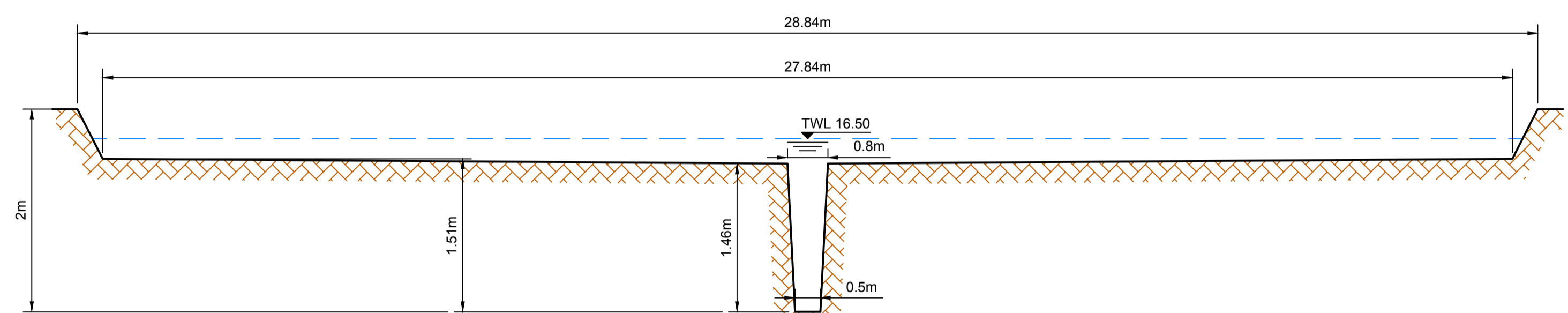


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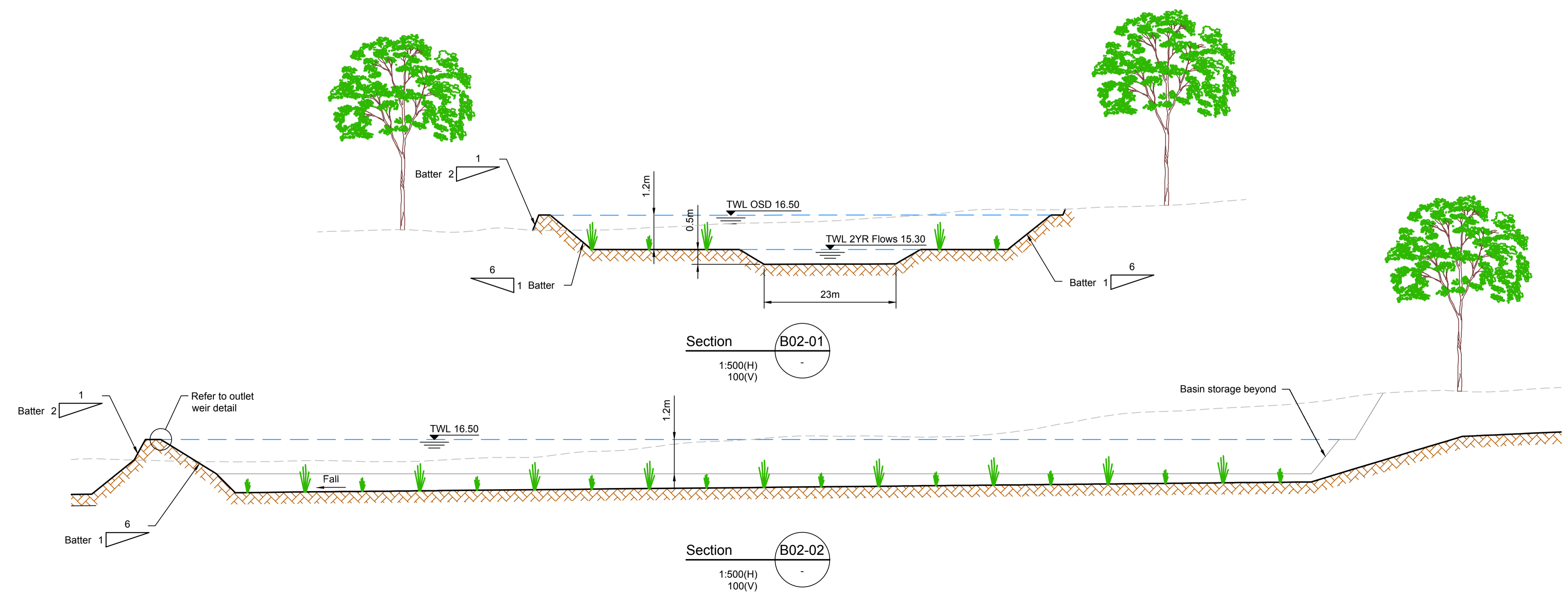


Provide GPT in accordance with Water Quality requirements

Basin 2
1:1000

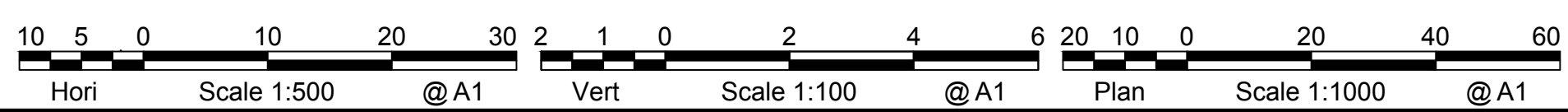


Basin 2 Outlet Weir Detail
NTS



Section **(B02-01)**
1:500(H)
100(V)

Section **(B02-02)**
1:500(H)
100(V)



Notes

Earthworks Volume

Total cut	-30,163m³
Total fill	+858m³
Total balance	-29,305m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final siting during detailed design

Key to symbols

- Existing riparian extents
- Proposed riparian extents
- Existing top of creek bank
- Provide GPT (in accordance with water quality requirements)
- Provide piped outlet
- On-site detention
- Extent of cut
- Extent of fill
- Outlet weir
- Bioretention

Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	19.10.2016	MMc	Issued For Exhibition	GL	-
P6	14.10.16	MMc	Issued For Exhibition	GL	-
P5	20.07.15	JK	Issued For Exhibition	GL	-
P4	10.07.15	MMc	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-

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Title
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Water Cycle Management Plan**

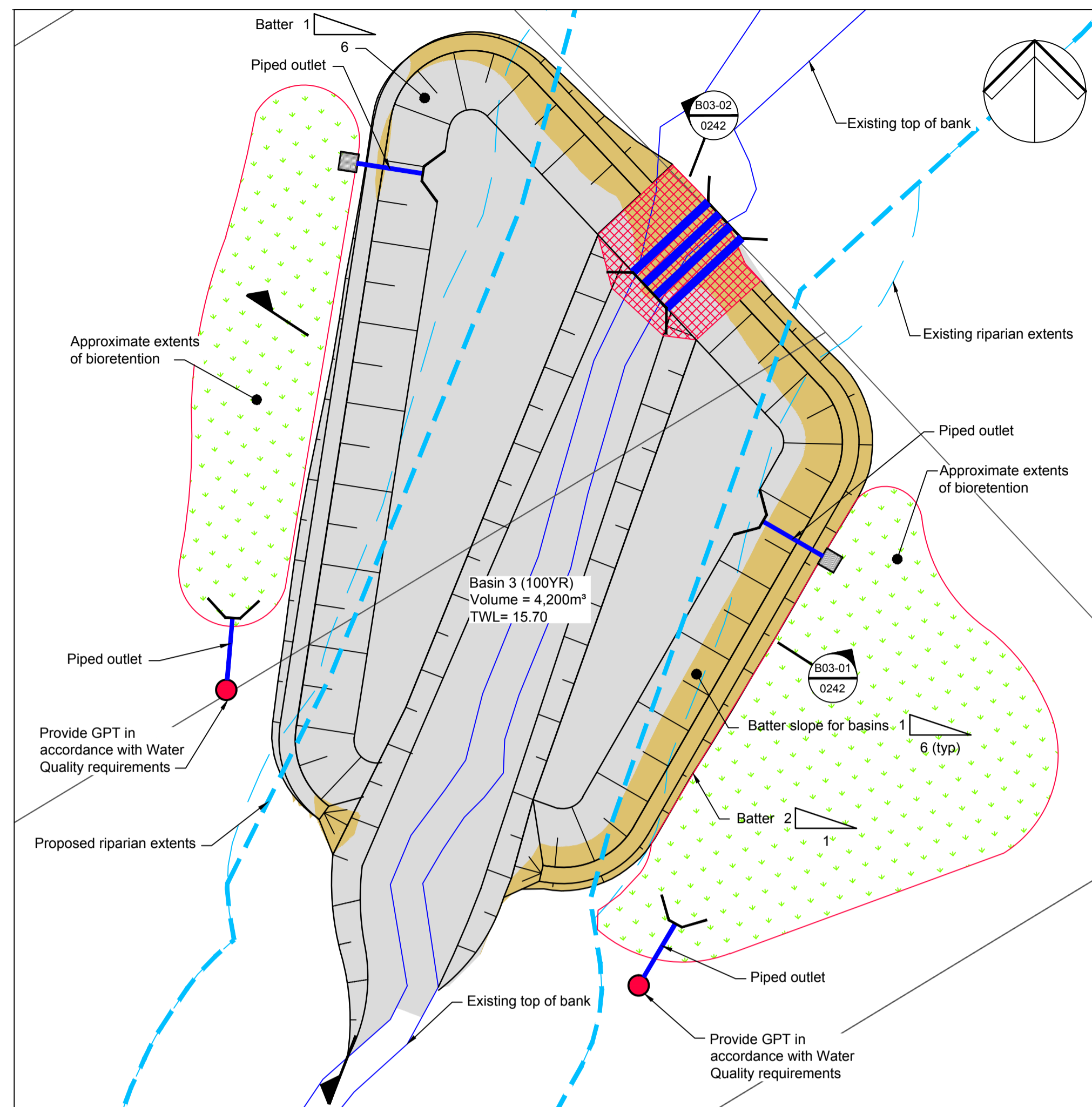
**Basin 2
Plan and Section Sheet**

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Drawn	DW	Coordination	GL
Dwg check	GC	Approved	CJA
Scale at A1	As Shown	Status	PRE
		Rev	P7

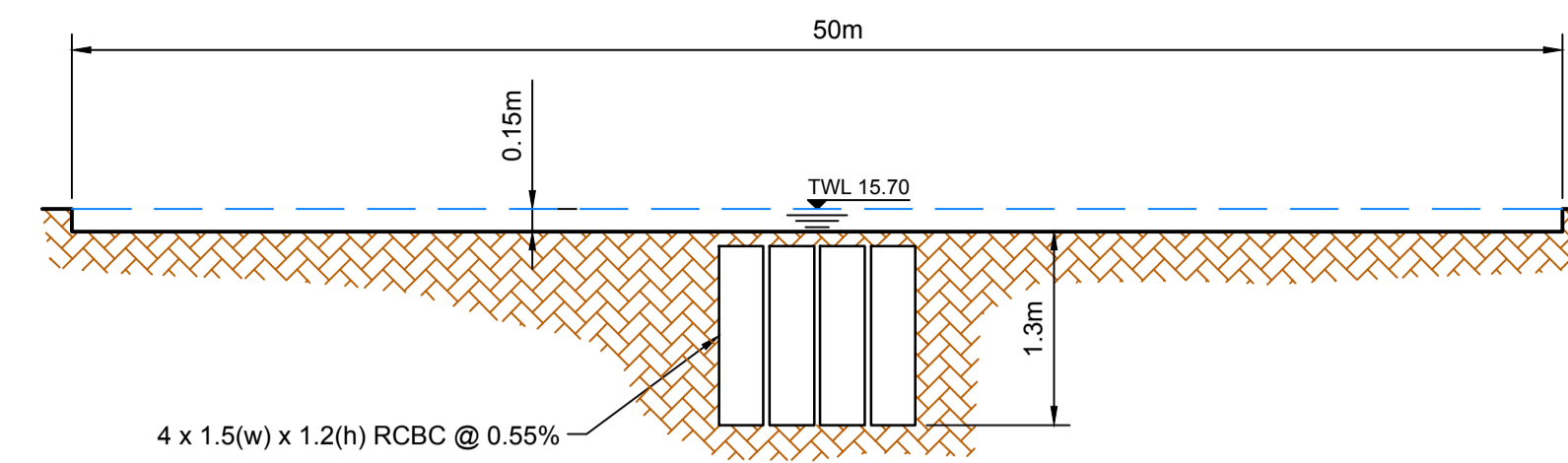
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MMD-334311-C-DR-VY-XX-0241

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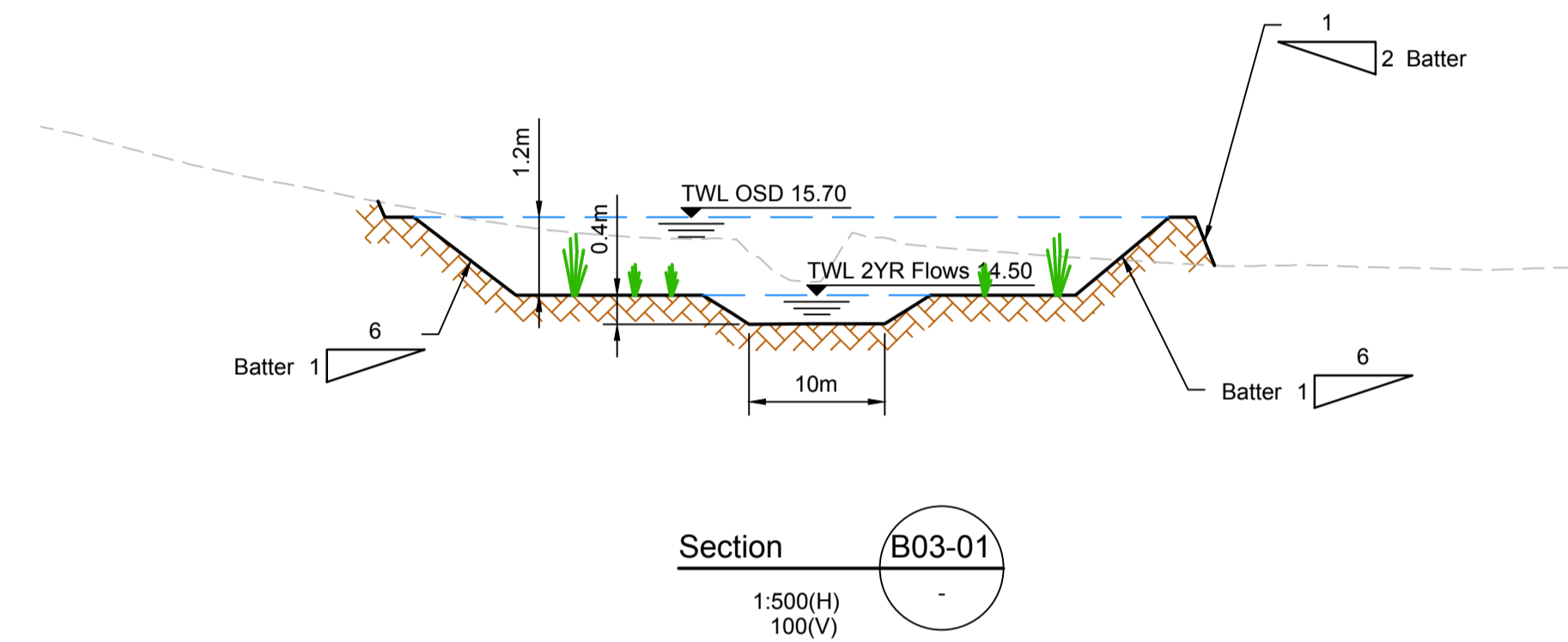
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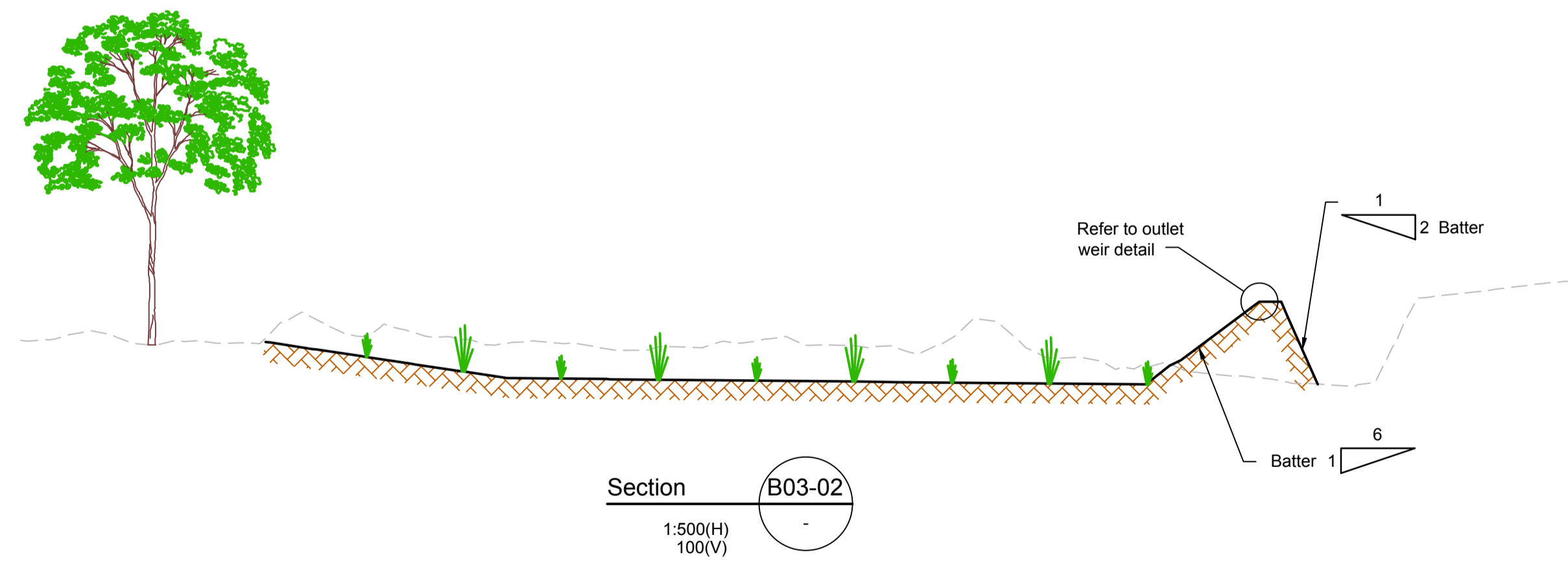
Basin 3
1:500



Basin 3 Outlet Weir Detail
NTS



Section B03-01
1:500(H)
100(V)



Section B03-02
1:500(H)
100(V)

Notes

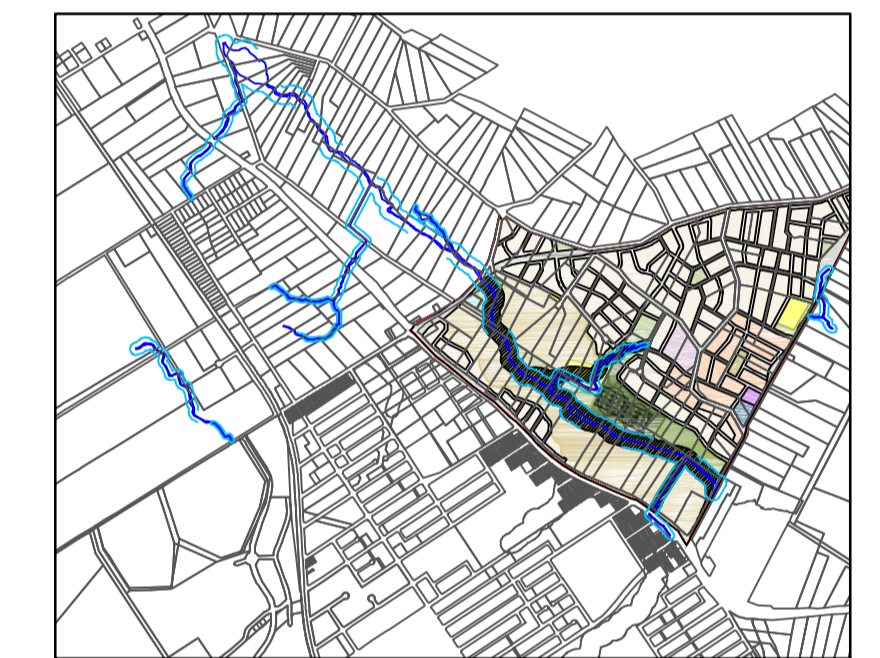
Earthworks Volume

Total cut -3,461m³
Total fill +469m³
Total balance -2,992m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final siting during detailed design

Key to symbols

- Existing riparian extents
- Proposed riparian extents
- Existing top of creek bank
- Provide GPT (in accordance with water quality requirements)
- Provide Piped outlet
- On-site detention
- Extent of cut
- Extent of fill
- Outlet weir
- Bioretention



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	19.10.2016	MMc	Issued For Exhibition	GL	-
P5	14.10.16	MMc	Issued For Exhibition	GL	-
P4	20.07.15	JK	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	03.09.14	AMP	Issued for Information	GL	-



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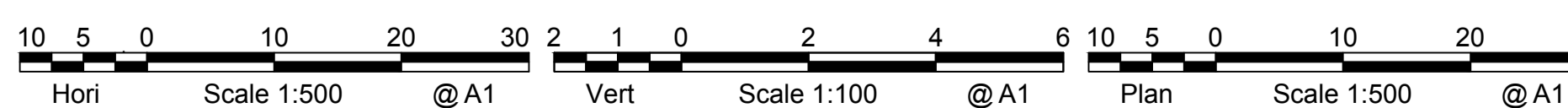
Title
Vineyard Precinct
Water Cycle Management Plan

Basin 3
Plan and Section Sheet

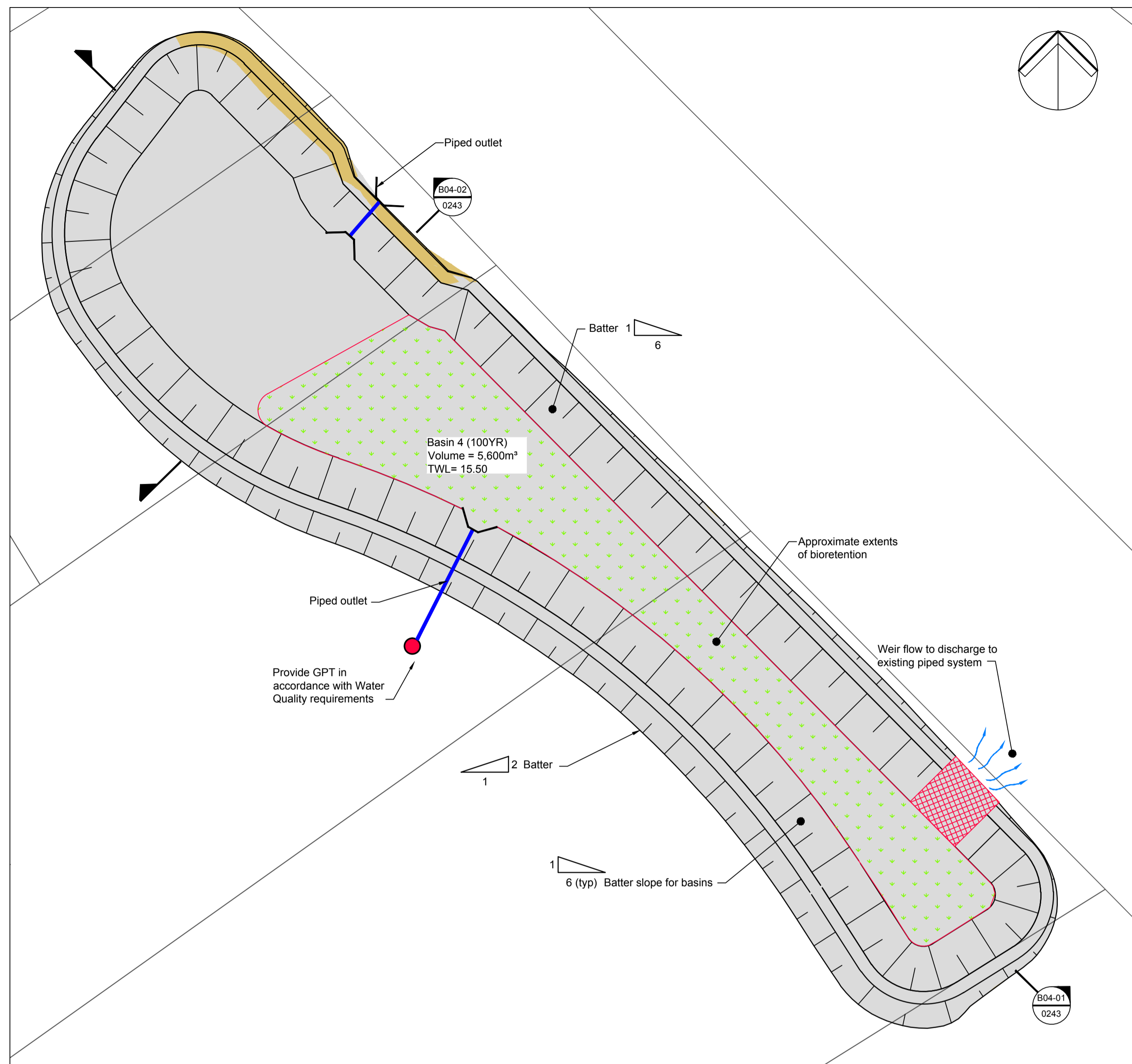
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Dwg check	GC	Approved	CJA	-
Scale at A1	As Shown	Status	PRE	Rev
				P6

Drawing Number
MMD-334311-C-DR-VY-XX-0242

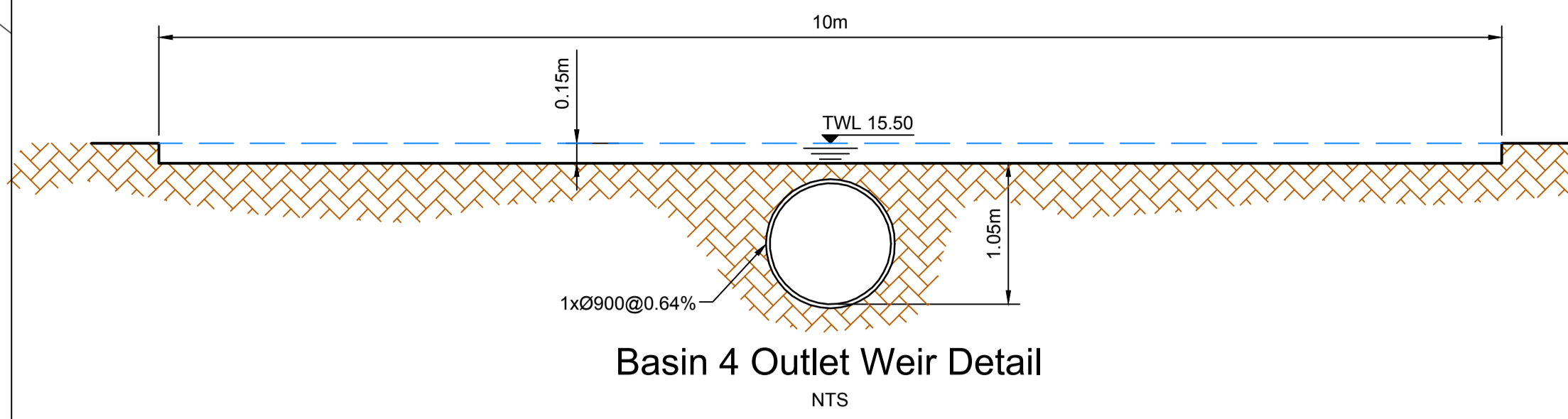
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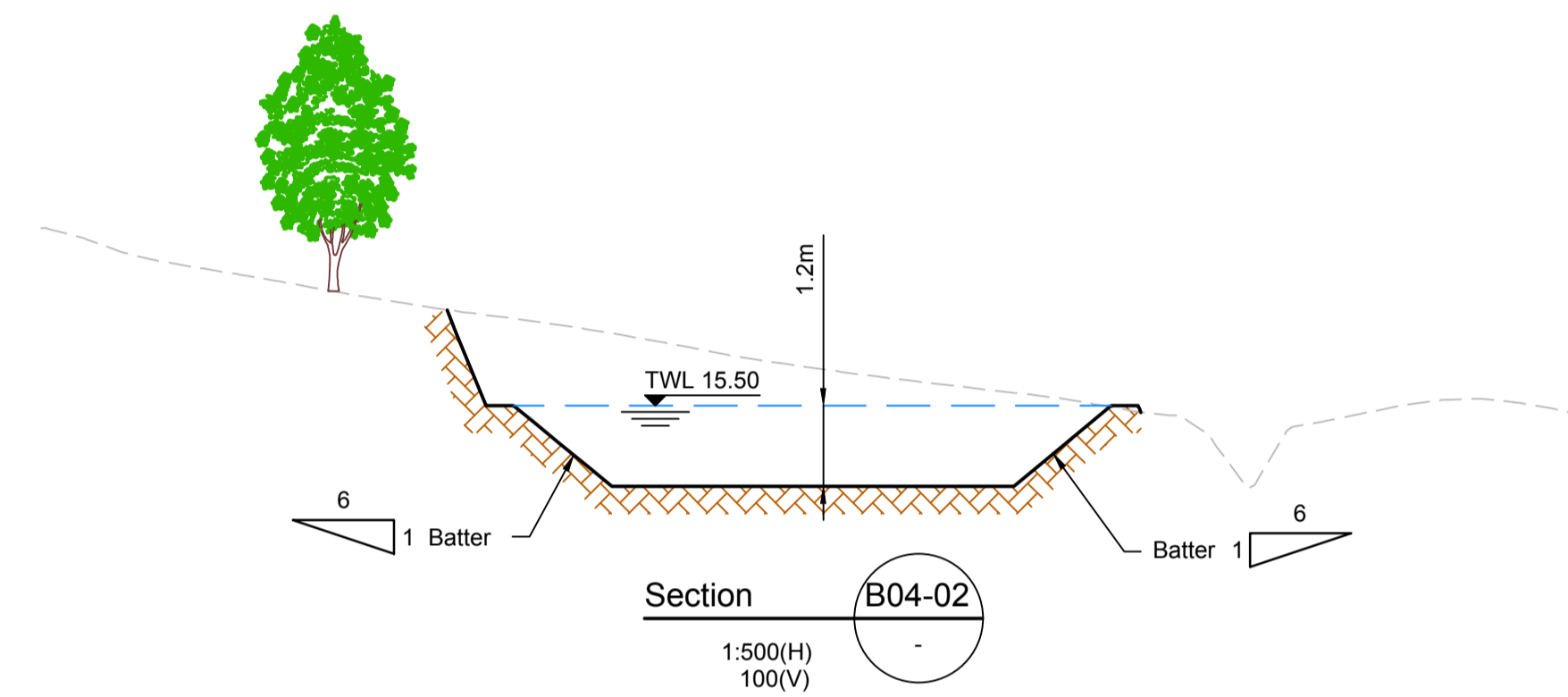
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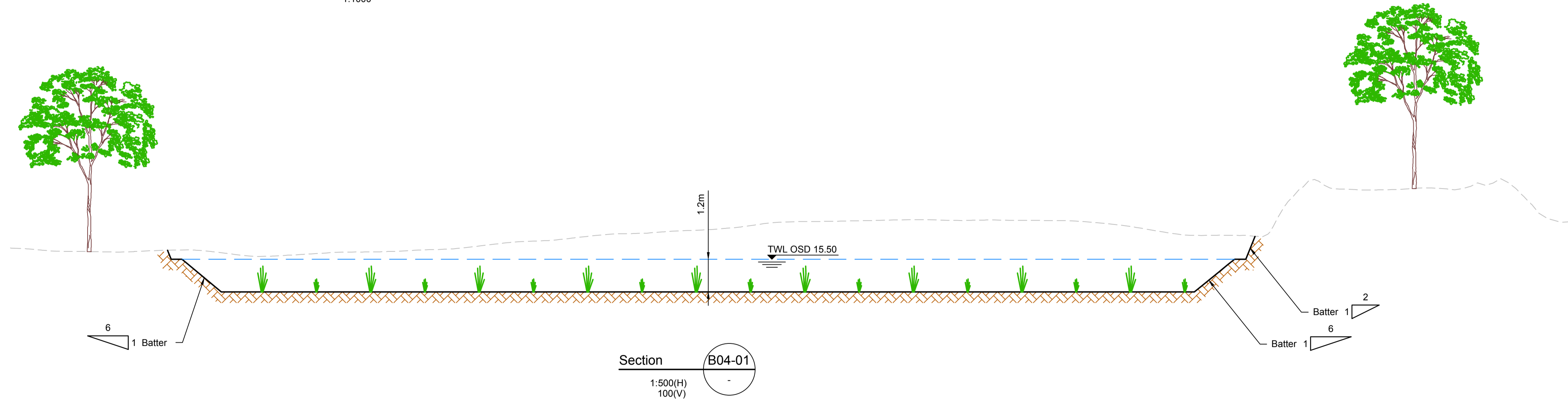
Basin 4
1:1000



Basin 4 Outlet Weir Detail
NTS



Section B04-02
1:500(H)
100(V)



Section B04-01
1:500(H)
100(V)

Notes

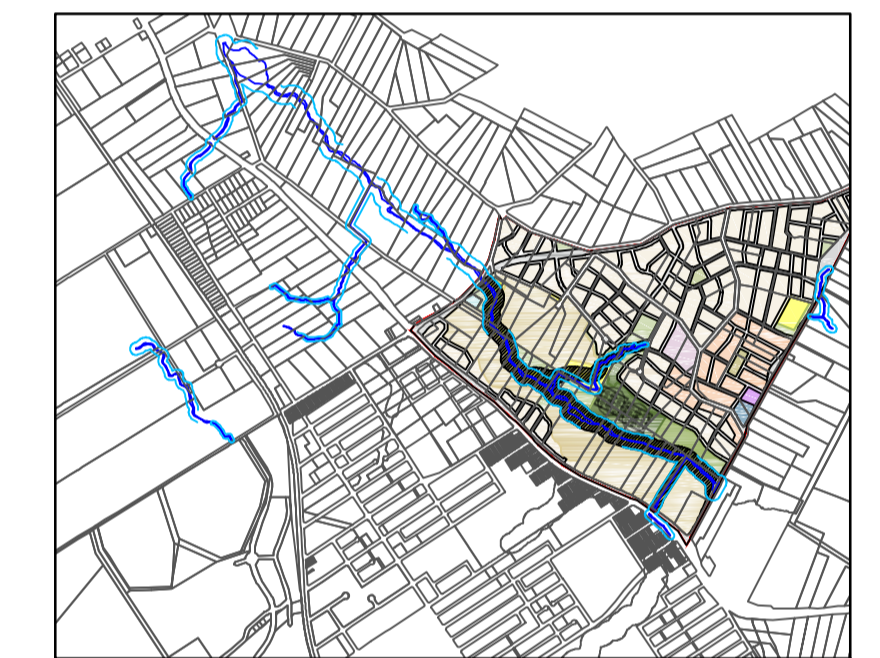
Earthworks Volume

Total cut -12,618m³
Total fill +19m³
Total balance -12,599m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final sitting during detailed design

Key to symbols

- Existing riparian extents
- Proposed riparian extents
- Existing top of creek bank
- Provide GPT (in accordance with water quality requirements)
- Provide Piped outlet
- On-site detention
- Extent of cut
- Extent of fill
- Outlet weir
- Bioretention



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	19.10.2016	MMc	Issued For Exhibition	GL	-
P5	14.10.16	MMc	Issued For Exhibition	GL	-
P4	20.07.15	JK	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	03.09.14	AMP	Issued for Information	GL	-



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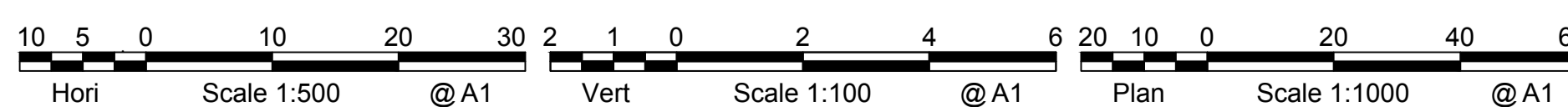
Title
**Vineyard Precinct
Water Cycle Management Plan**

**Basin 4
Plan and Section Sheet**

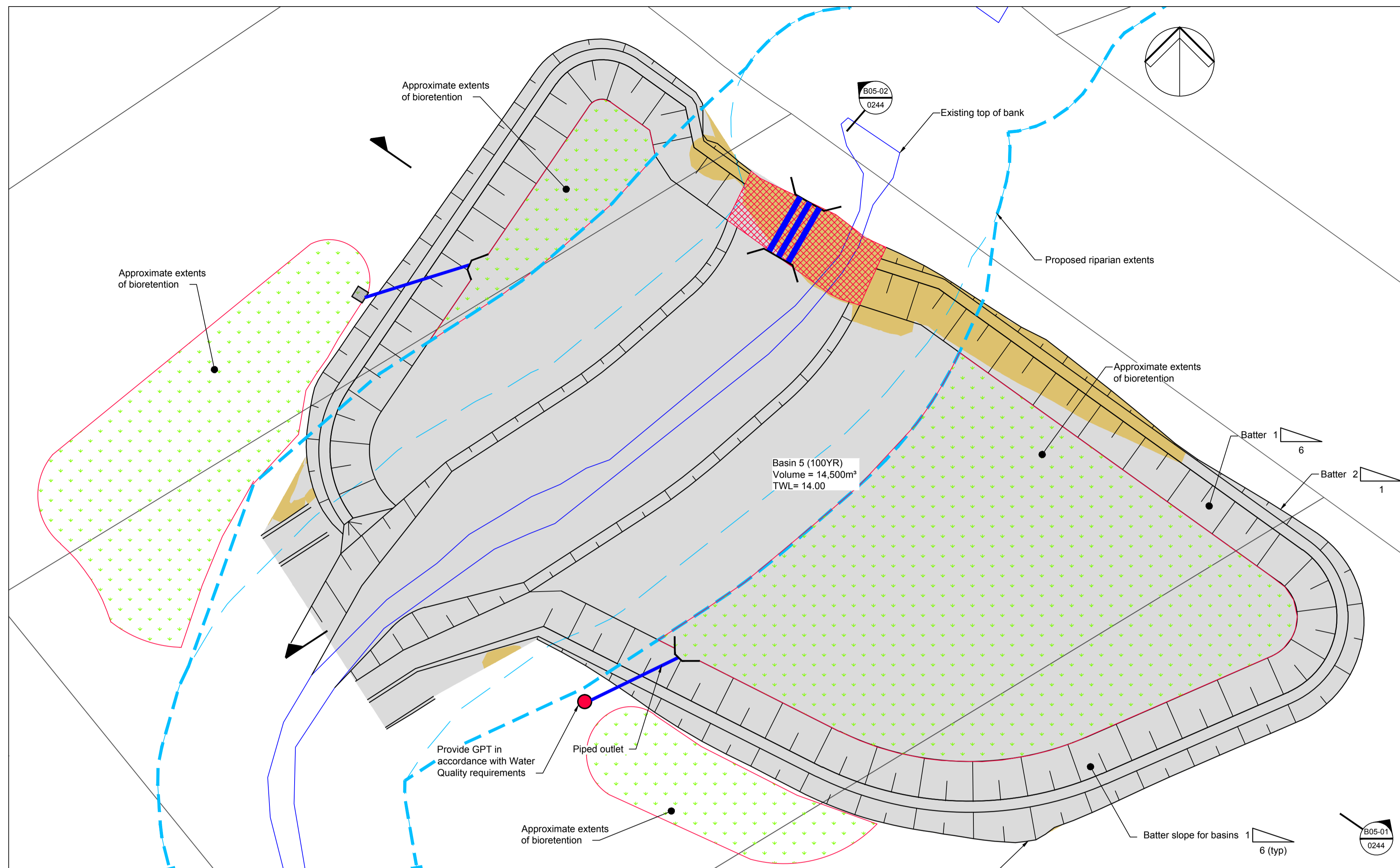
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Dwg check	GC	Approved	CJA	-
Scale at A1	Status	Rev		
As Shown	PRE	P6		

Drawing Number
MMD-334311-C-DR-VY-XX-0243

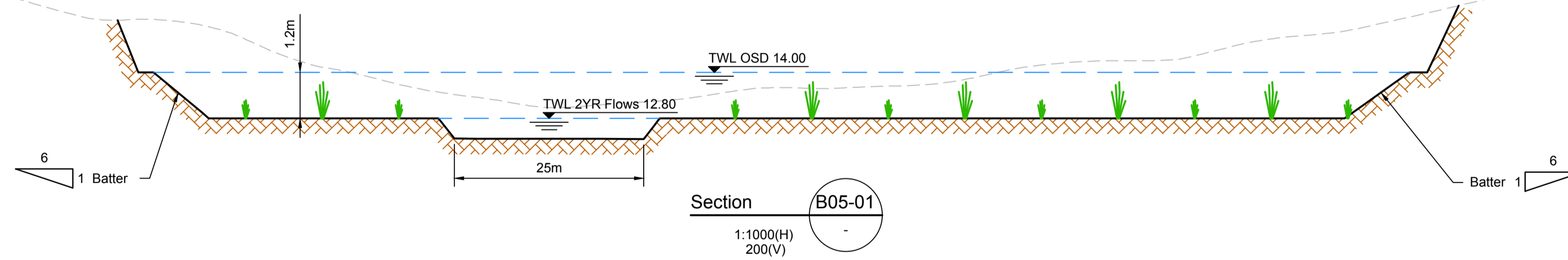
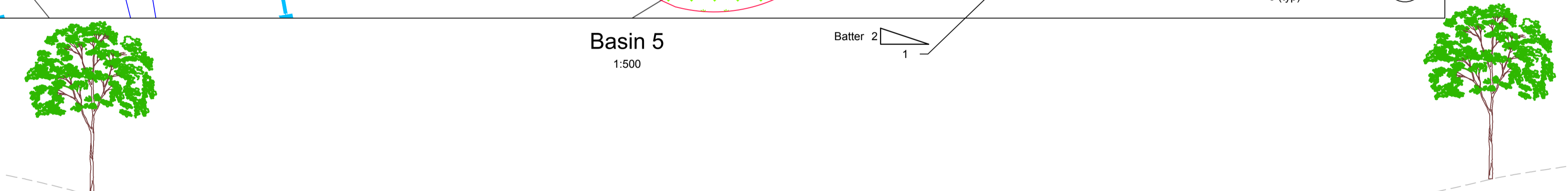
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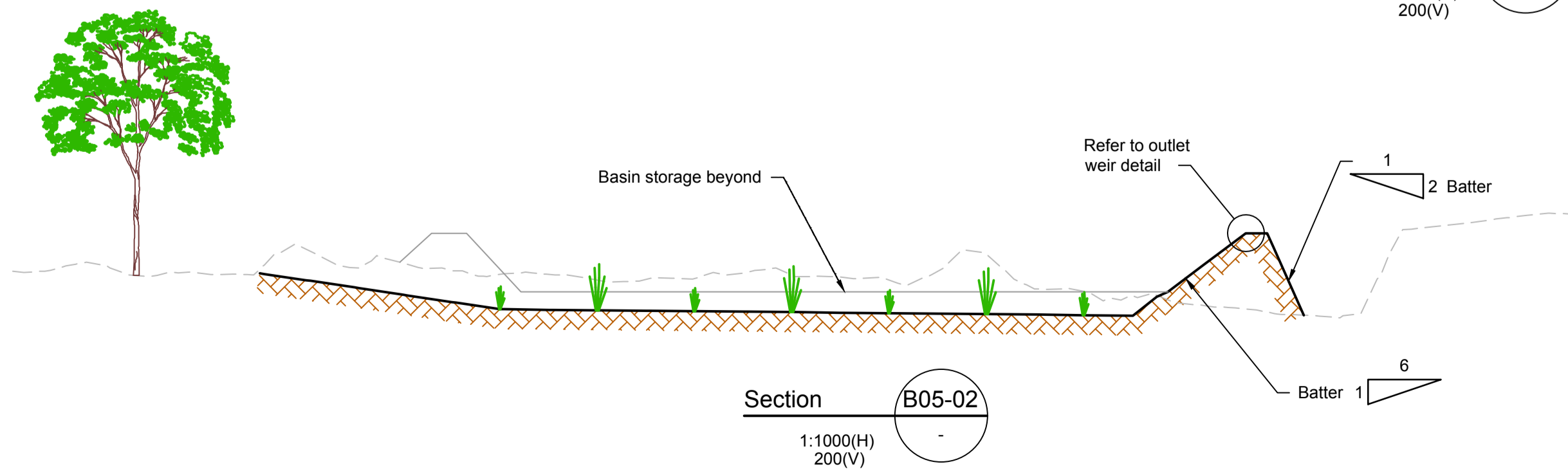
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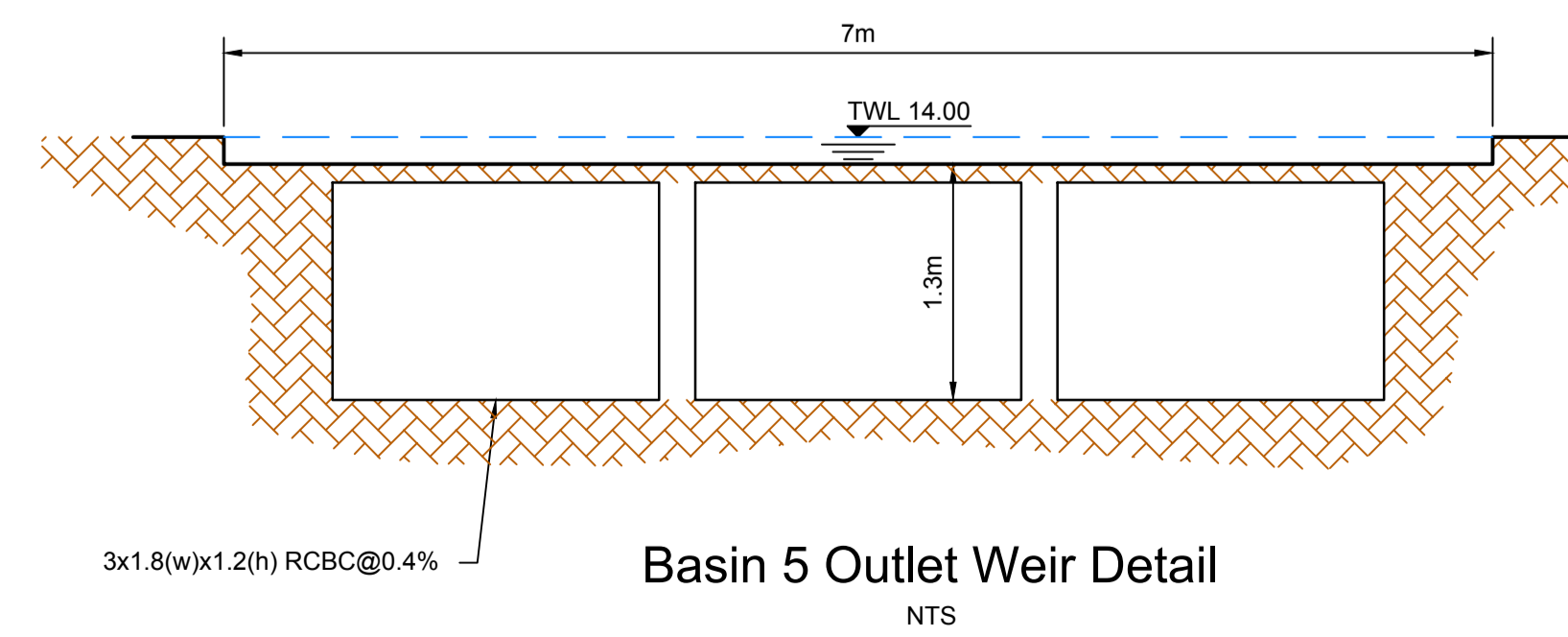
Basin 5
1:500



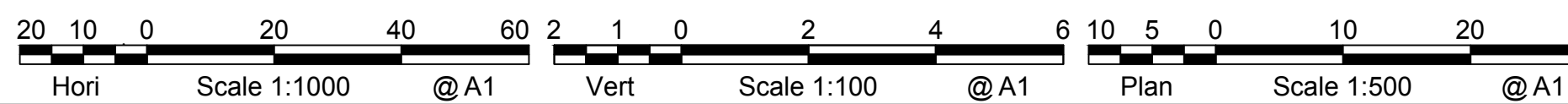
Section B05-01
1:1000(H)
200(V)



Section B05-02
1:1000(H)
200(V)



Basin 5 Outlet Weir Detail
NTS



Notes

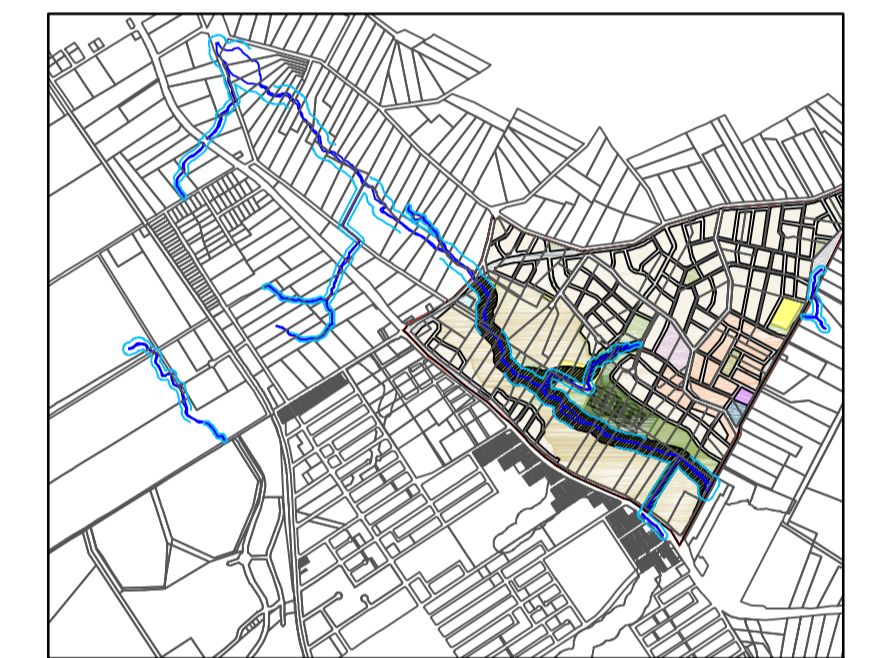
Earthworks Volume

Total cut -20,967m³
Total fill +498m³
Total balance -20,479m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final siting during detailed design

Key to symbols

- Existing riparian extents
- Proposed riparian extents
- Existing top of creek bank
- Provide GPT (in accordance with water quality requirements)
- Provide Piped outlet
- On-site detention
- Extent of cut
- Extent of fill
- Outlet weir
- Bioretention



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	19.10.2016	MMc	Issued For Exhibition	GL	-
P5	14.10.16	MMc	Issued For Exhibition	GL	-
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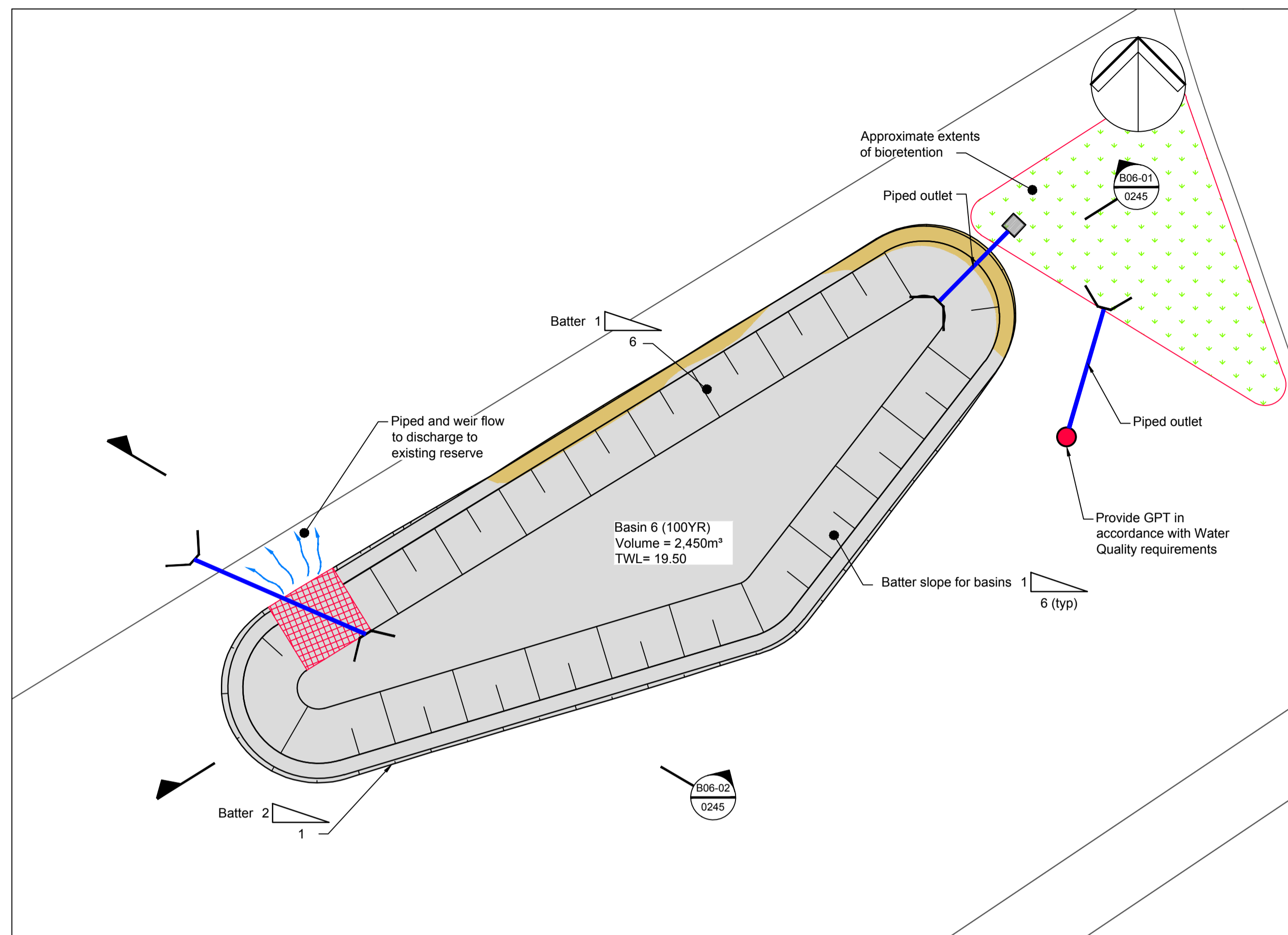
Title
Vineyard Precinct
Water Cycle Management Plan

Basin 5
Plan and Section Sheet

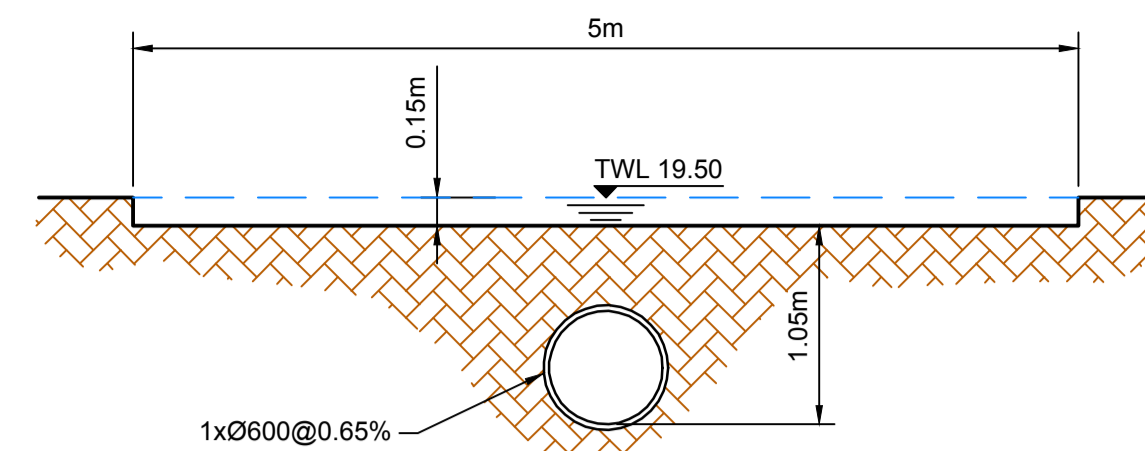
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				P6

Drawing Number
MMD-334311-C-DR-VY-XX-0244

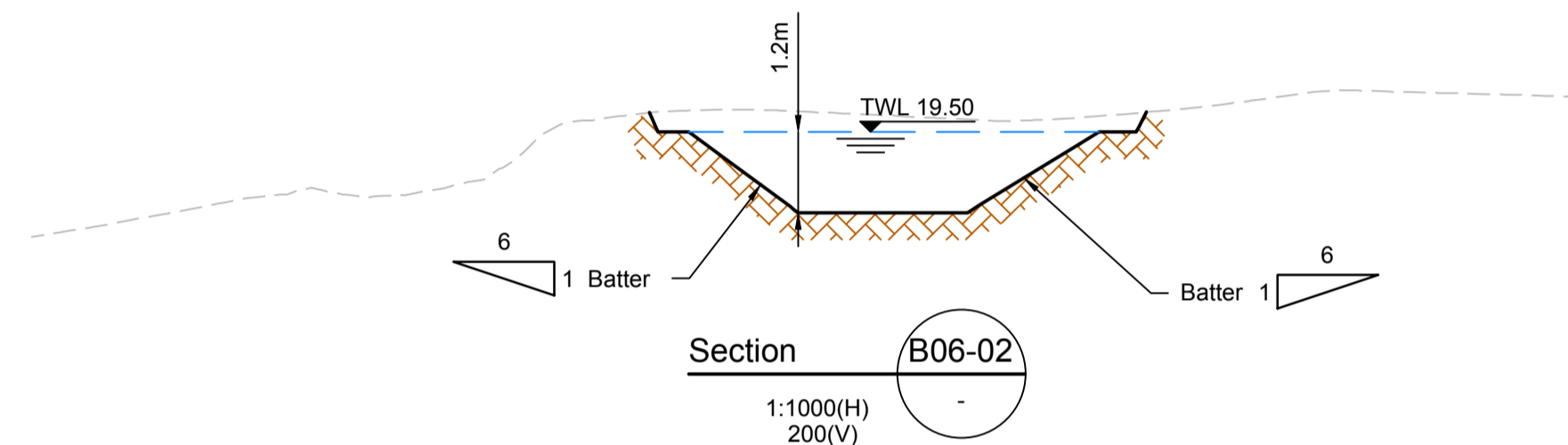
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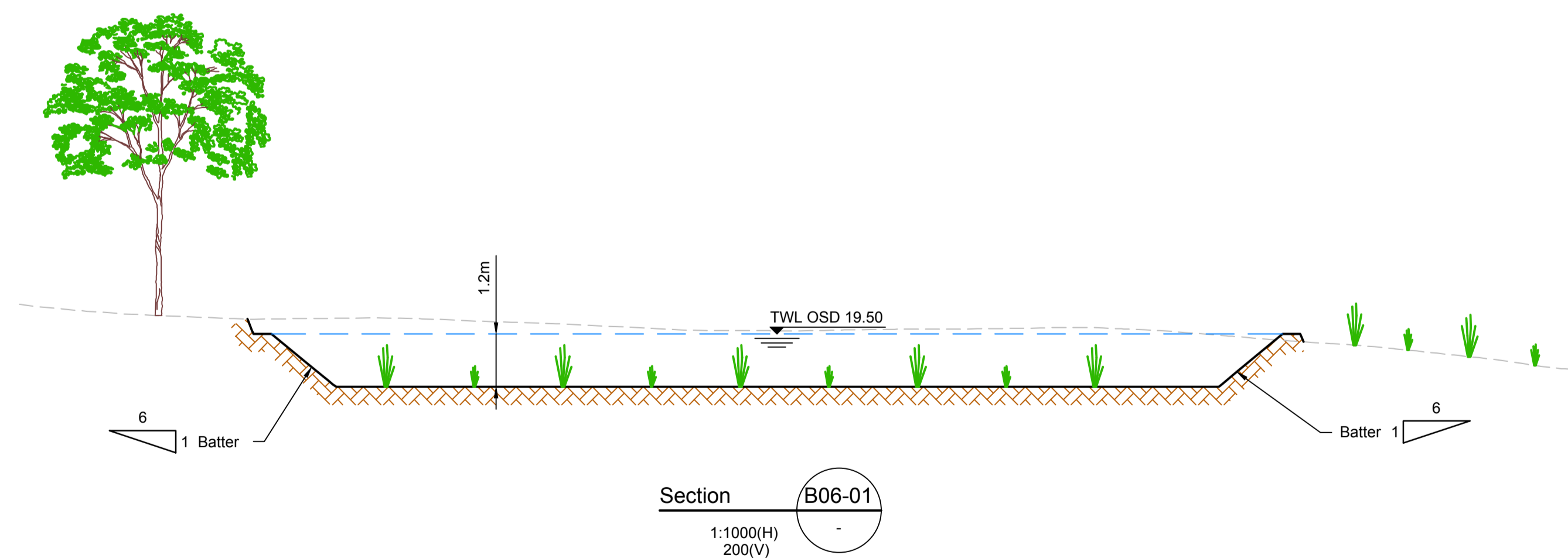
Basin 6
1:500



Basin 6 Outlet Weir Detail
NTS



Section B06-02
1:1000(H)
200(V)



Section B06-01
1:1000(H)
200(V)

Notes

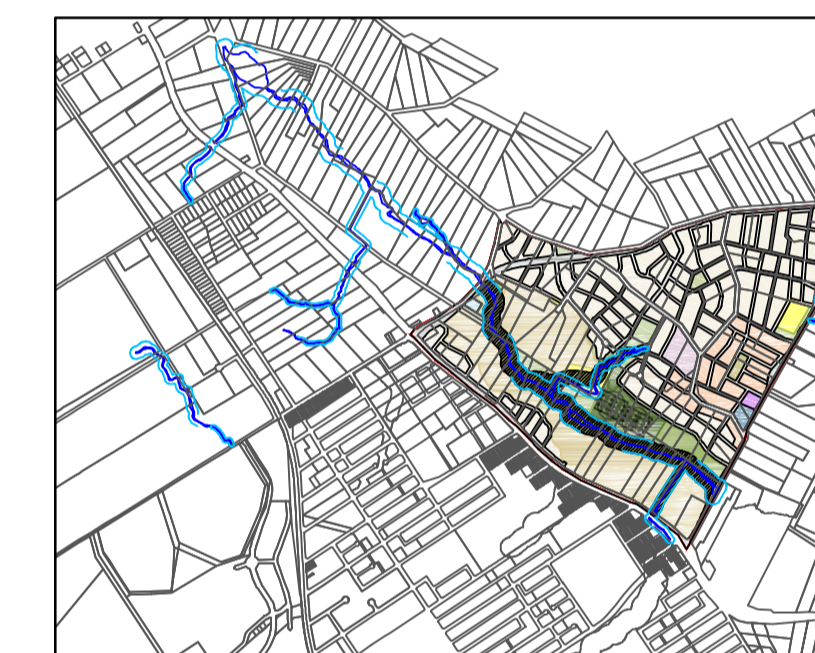
Earthworks Volume

Total cut -3,040m³
Total fill +12m³
Total balance -3,028m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final sitting during detailed design

Key to symbols

- Existing riparian extents
- Proposed riparian extents
- Existing top of creek bank
- Provide GPT (in accordance with water quality requirements)
- Provide Piped outlet
- On-site detention
- Extent of cut
- Extent of fill
- Outlet weir
- Bioretention



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	19.10.2016	MMc	Issued For Exhibition	GL	-
P5	14.10.16	MMc	Issued For Exhibition	GL	-
P4	20.07.15	JK	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	29.08.14	AMP	Issued for Information	GL	-



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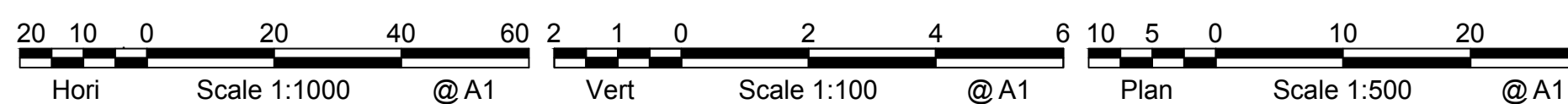


Title
Vineyard Precinct
Water Cycle Management Plan

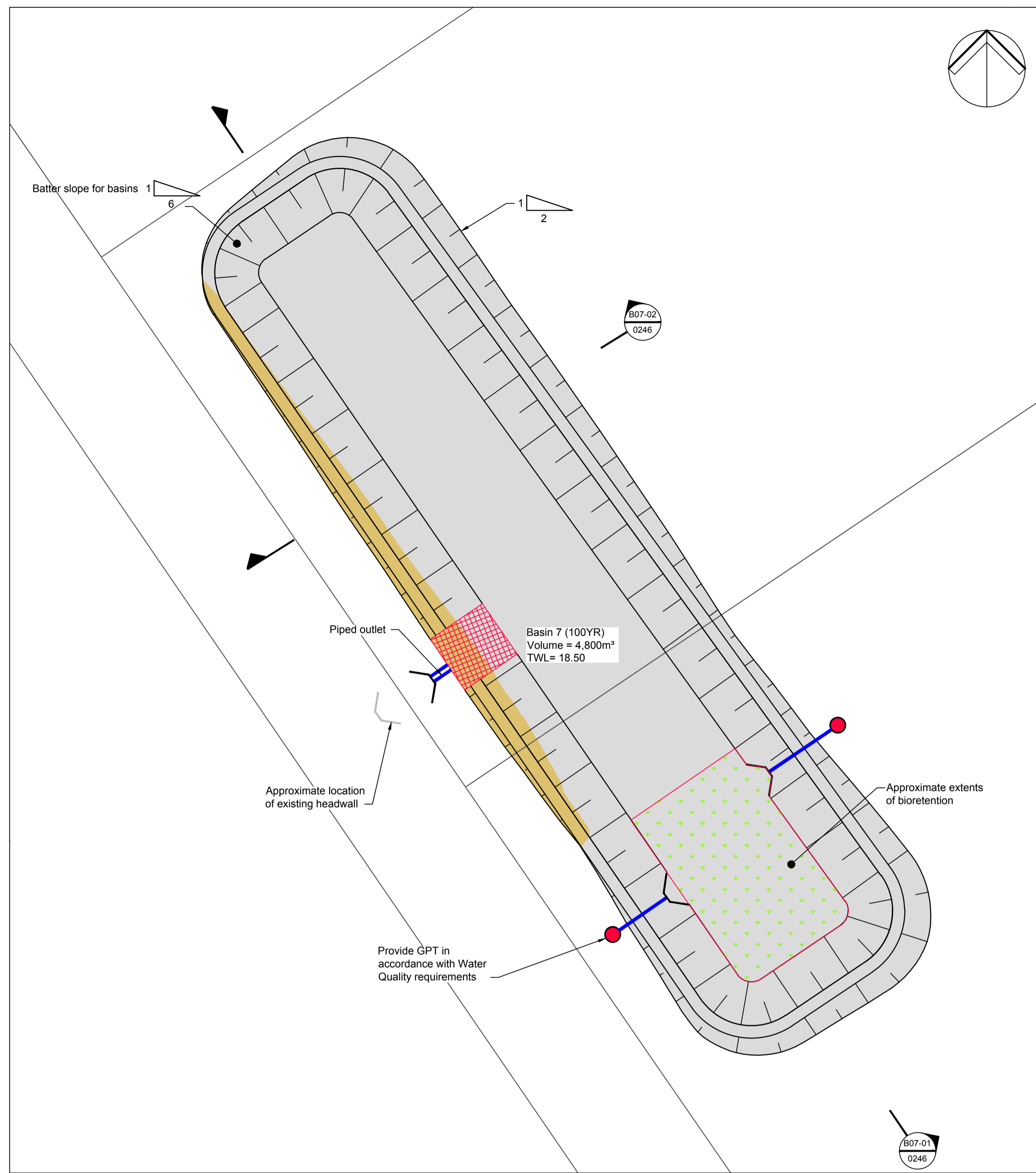
Basin 6
Plan and Section Sheet

Designed	JT	Eng check	GL	-
Drawn	DW	Coordination	GL	-
Dwg check	GC	Approved	CJA	-
Scale at A1	As Shown	Status	PRE	Rev
				P6

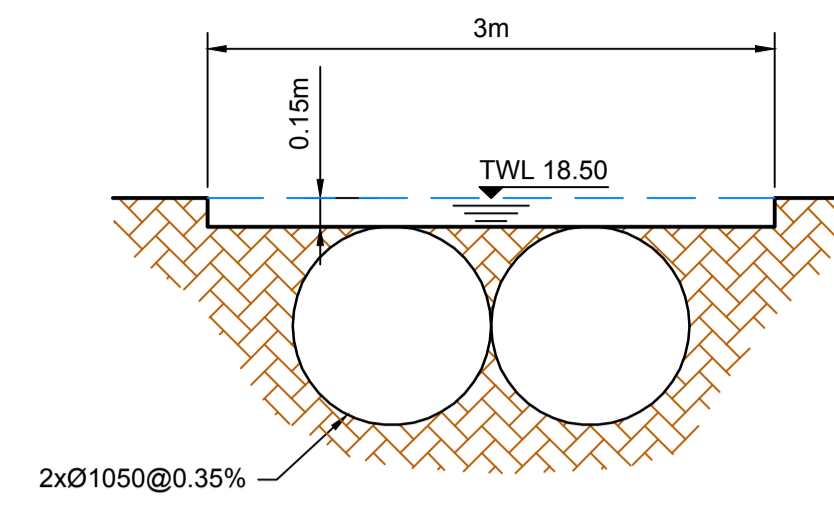
Drawing Number
MMD-334311-C-DR-VY-XX-0245



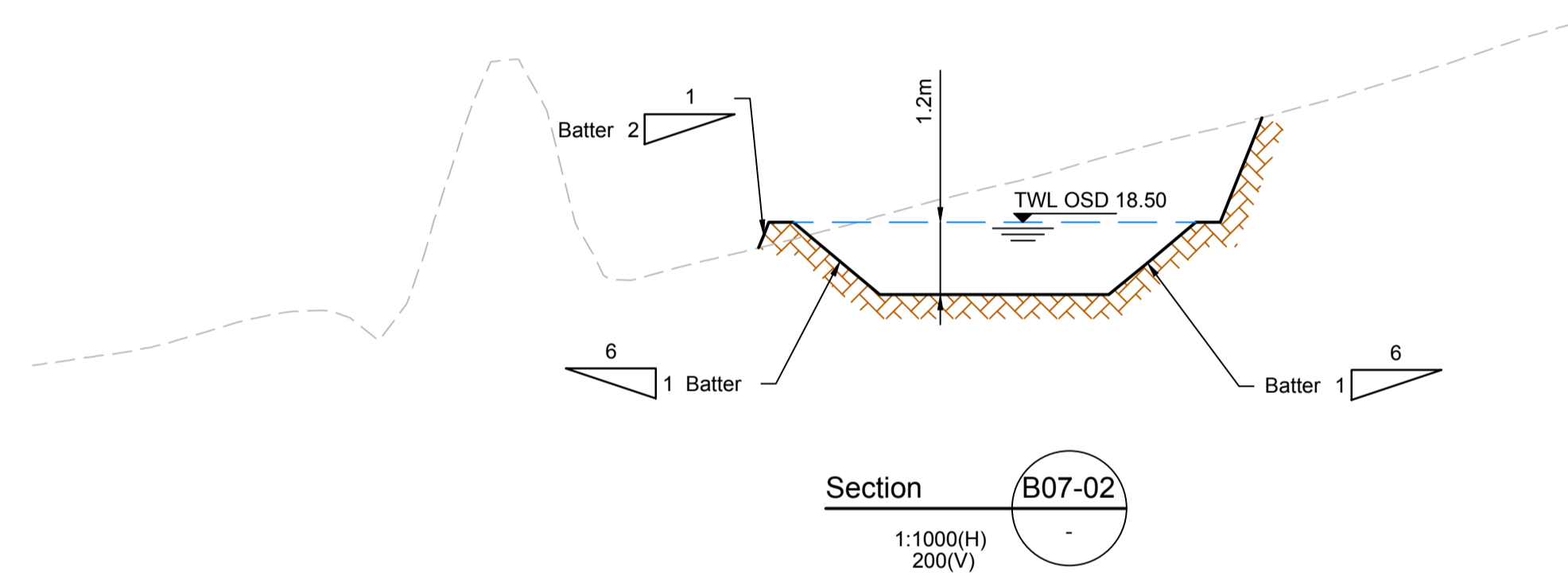
Issued For Exhibition



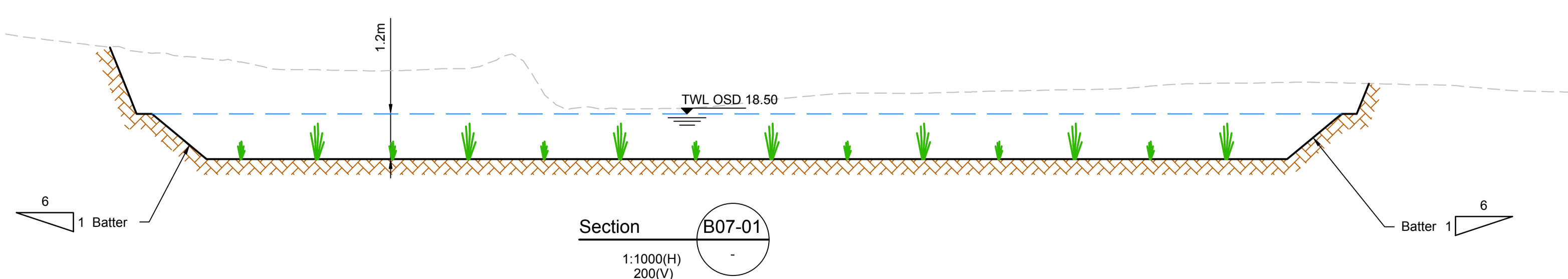
Basin 7
1:500



Basin 6 Outlet Weir Detail
NTS



Section B07-02
1:1000(H)
200(V)



Section B07-01
1:1000(H)
200(V)

Notes

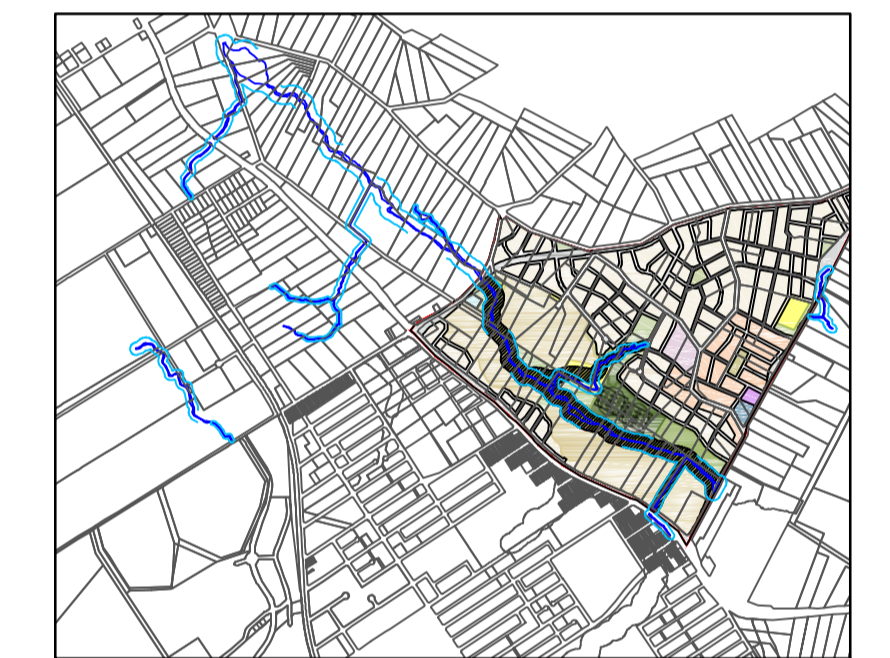
Earthworks Volume

Total cut -10,085m³
Total fill +103m³
Total balance -9,982m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final siting during detailed design

Key to symbols

- Existing riparian extents
- Proposed riparian extents
- Existing top of creek bank
- Provide GPT (in accordance with water quality requirements)
- Provide Piped outlet
- On-site detention
- Extent of cut
- Extent of fill
- Outlet weir
- Bioretention



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	19.10.2016	MMc	Issued For Exhibition	GL	-
P5	14.10.16	MMc	Issued For Exhibition	GL	-
P4	20.07.15	JK	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	03.09.14	AMP	Issued for Information	GL	-



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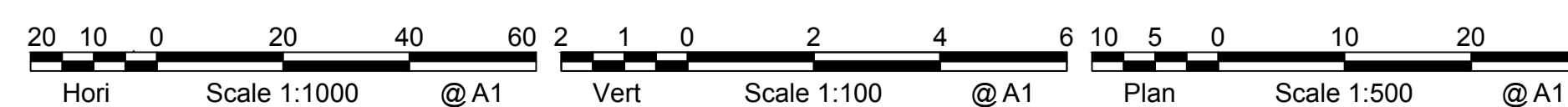
Title
Vineyard Precinct
Water Cycle Management Plan

Basin 7
Plan and Section Sheet

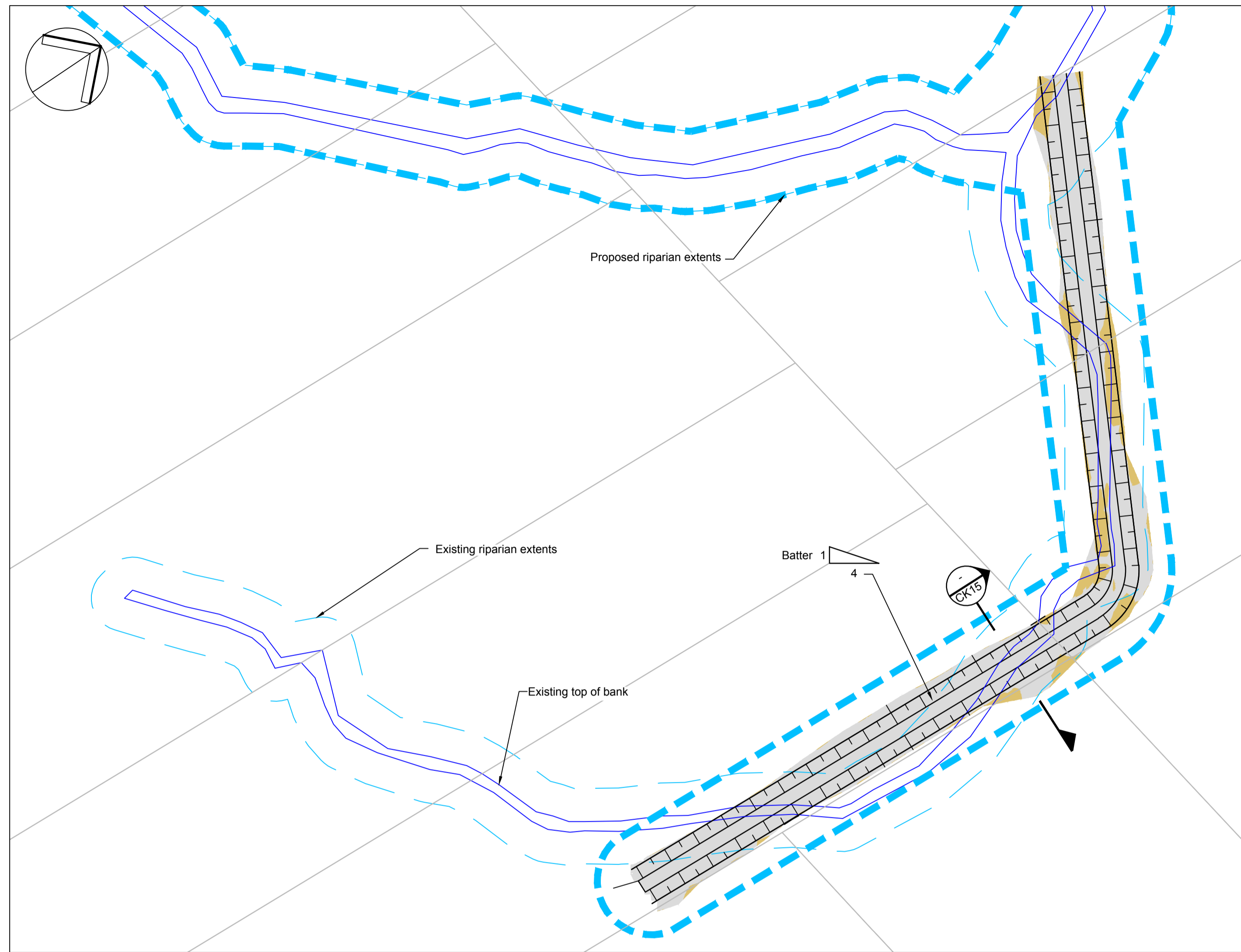
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Drawn	DW	Coordination	GL	-
Dwg check	GC	Approved	CJA	-
Scale at A1	As Shown	Status	PRE	Rev
				P6

Drawing Number
MMD-334311-C-DR-VY-XX-0246

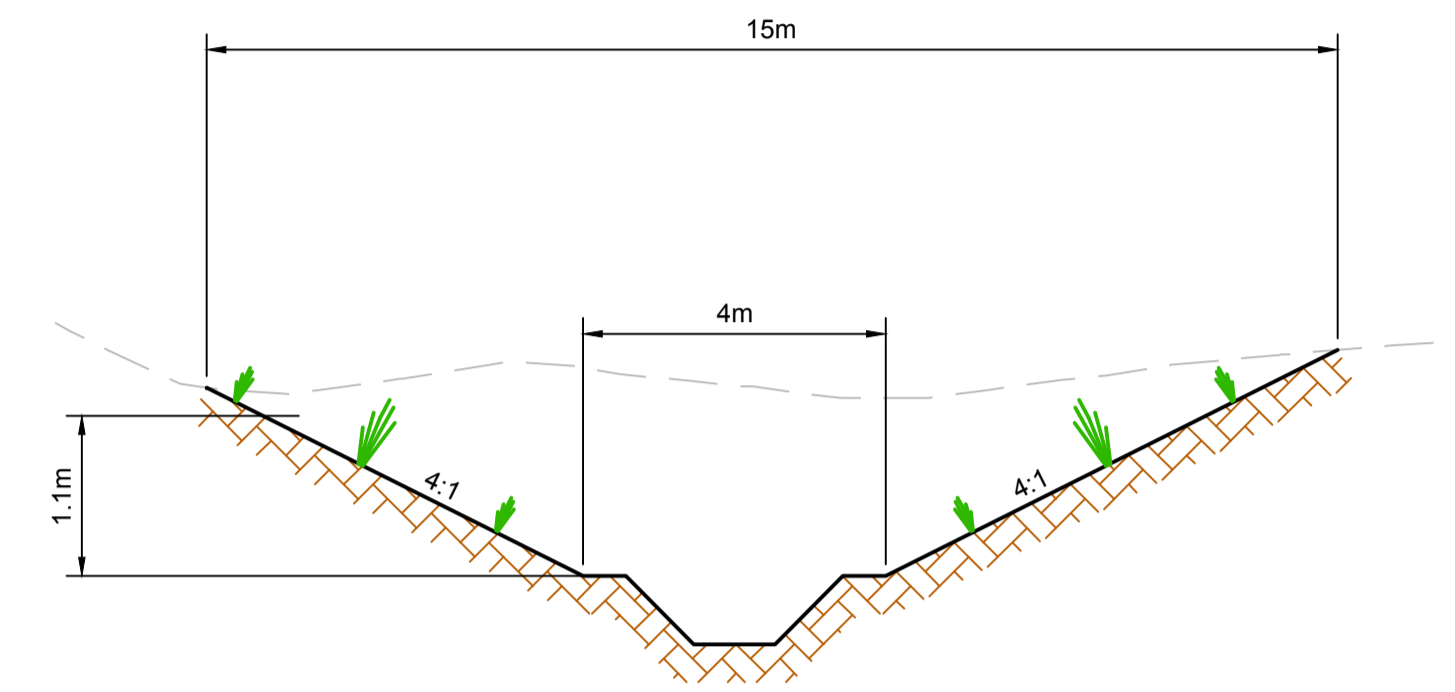
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Channel CK15
1:1000



Channel CK15
Section

Section CK15
1:100(H)
50(V)

Notes

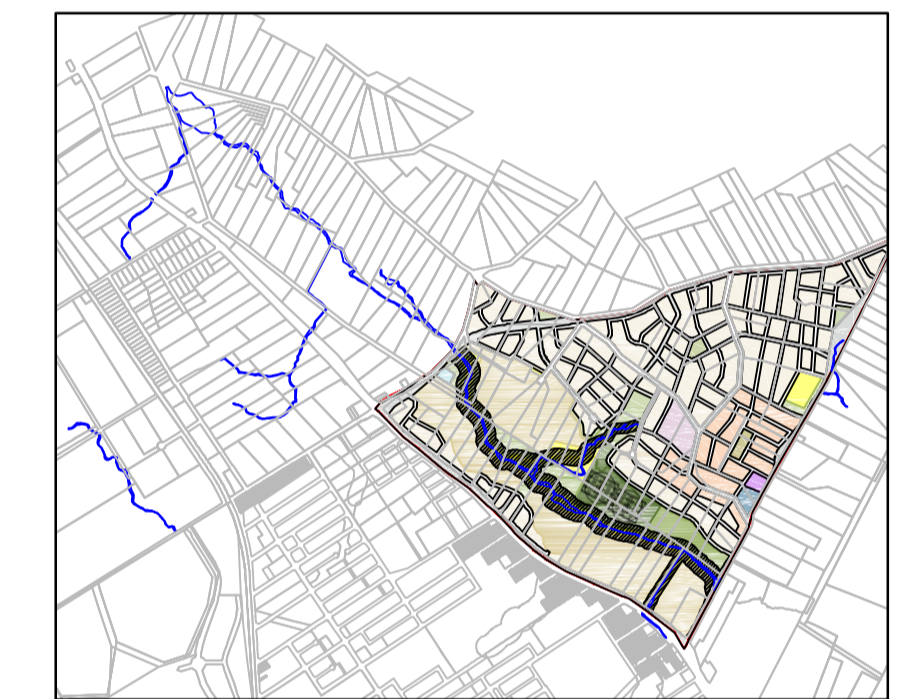
Earthworks Volume - Channel CK15

Total cut -4,766m³
Total fill +152m³
Total balance -4,614m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final sitting during detailed design

Key to symbols

- Existing Riparian extents
- Proposed Riparian extents
- Existing Top of Creek Bank
- Proposed Channel
- Extent of Cut
- Extent of Fill



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	19.10.2016	MMc	Issued For Exhibition	GL	-
P5	14.10.16	MMc	Issued For Exhibition	GL	-
P4	20.07.15	JK	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	03.09.14	AMP	Issued for Information	GL	-



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Title
Vineyard Precinct
Water Cycle Management Plan

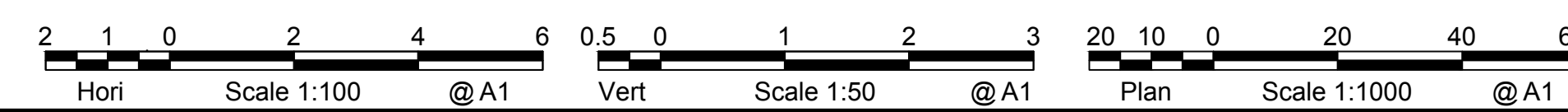
Proposed Channel CK15
Plan

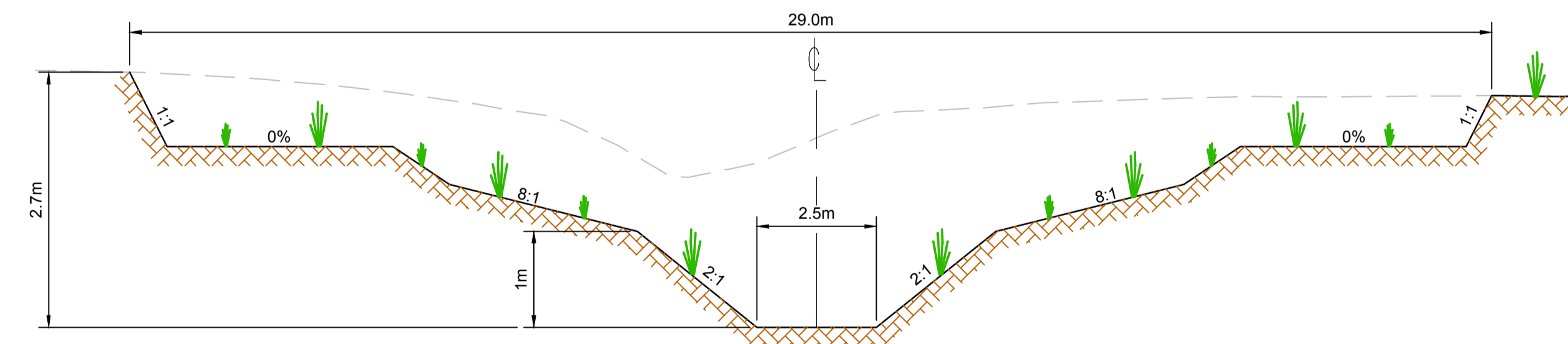
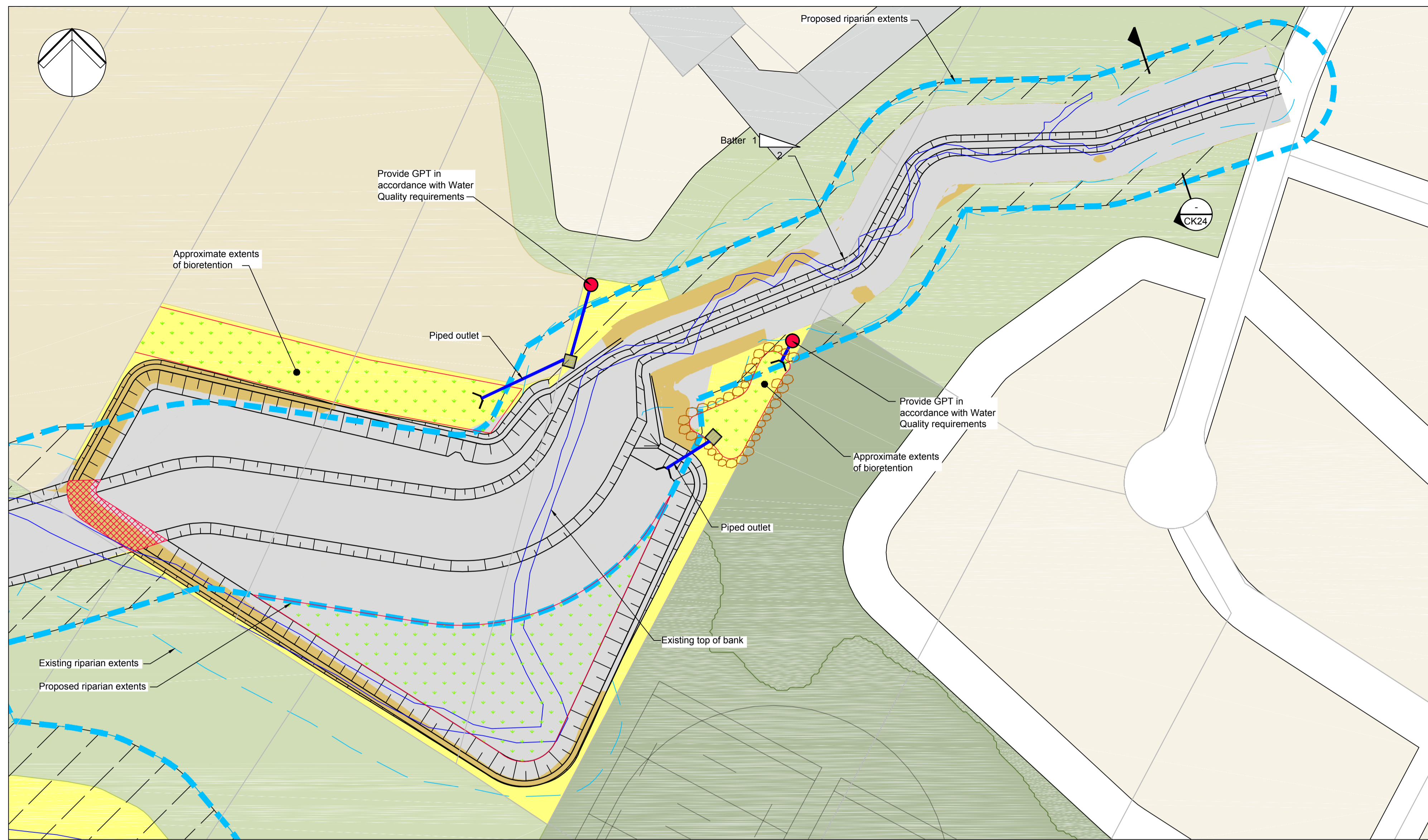
Designed	JT	Eng check	GL	-
Drawn	DW	Coordination	GL	-
Dwg check	GC	Approved	CJA	-
Scale at A1	1:10000	Status	PRE	Rev
				P6

Drawing Number
MMD-334311-C-DR-VY-XX-0250

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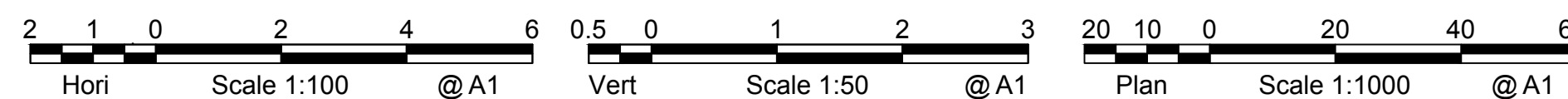
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Channel CK24
Section

Section
1:100(H)
50(V)



Notes

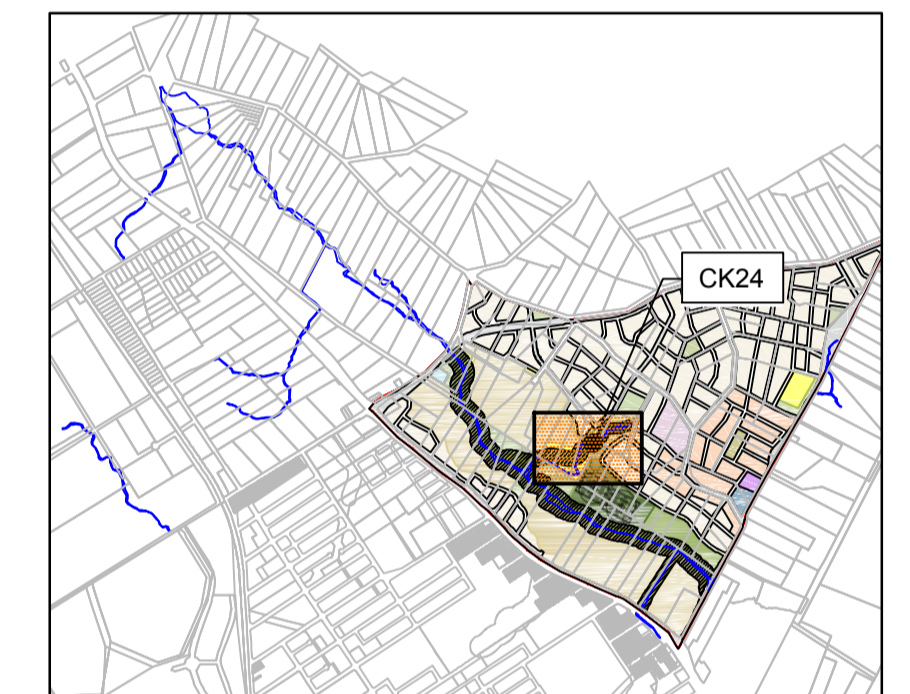
Earthworks Volume - Channel CK24

Total cut -7,124m³
Total fill +161m³
Total balance -6,963m³

- For basin storage volume refer drawing 0210
- GPT locations are indicative and subject to final siting during detailed design

Key to symbols

- Existing Riparian Extents
- Proposed Riparian Extents
- Existing Top of Creek Bank
- Proposed Channel
- Extent of Cut
- Extent of Fill
- Provide GPT (in accordance with water quality requirements)
- Provide Piped outlet



Key Plan
NTS

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	19.10.2016	MMc	Issued For Exhibition	GL	-
P5	14.10.16	MMc	Issued For Exhibition	GL	-
P4	20.07.15	JK	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	03.09.14	AMP	Issued for Information	GL	-



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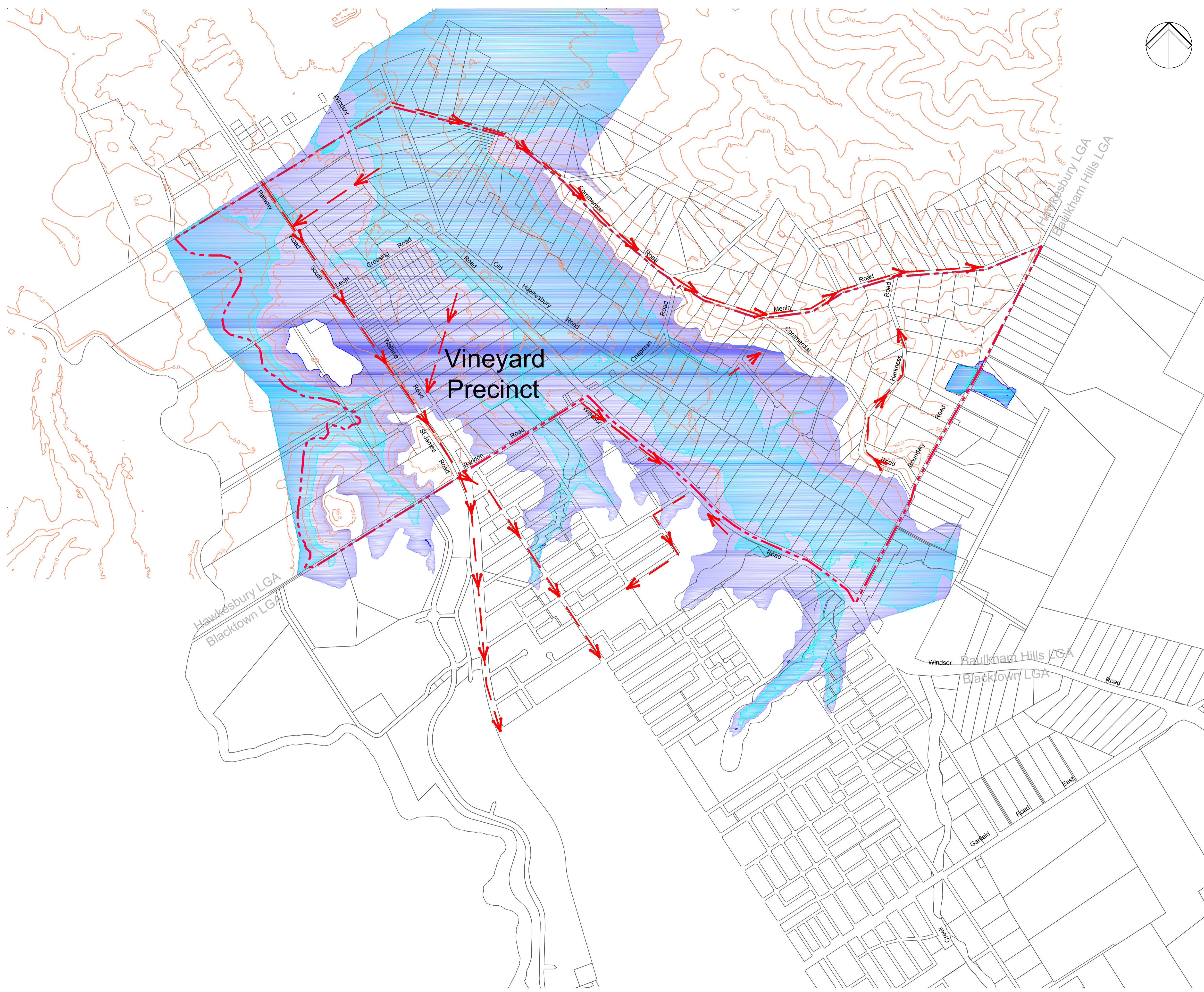
Title
Vineyard Precinct
Water Cycle Management Plan

Proposed Channel CK24
Plan

Designed	JT	Eng check	GL	-
Drawn	DW	Coordination	GL	-
Dwg check	GC	Approved	CJA	-
Scale at A1	1:10000	Status	PRE	Rev
				P6

Drawing Number
MMD-334311-C-DR-VY-XX-0251

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Notes

Key to symbols

- - - Vineyard precinct boundary
- Existing cadastre
- 100yr Flood extent
- Evacuation route
- 100yr Flood area
- PMF Flood area

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P5	19.10.2016	MMc	Issued For Exhibition	GL	-
P4	14.10.16	MMc	Issued For Exhibition	GL	-
P3	01.07.15	MMc	Issued For Exhibition	GL	-
P2	03.09.14	AMP	Issued for information	GL	-
P1	29.08.14	AMP	Issued for information	GL	-



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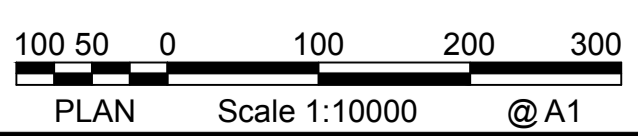
Planning & Environment

Title
**Vineyard Precinct
 Water Cycle Management Plan
 Flood Response Plan**

Designed	JT	Eng check	GL
Drawn	DW	Coordination	GL
Dwg check	GC	Approved	CJA
Scale at A1	1:10000	Status	PRE
		Rev	P5

Drawing Number
MMD-334311-C-DR-VY-XX-0260

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Appendix B. XP-RAFTS Model Data

Vineyard Precinct

Existing Catchment Data

Catchment	Total Area (ha)	Percentage impervious	Impervious Area (ha)	Pervious Area (ha)	Slope (%)	Pervious Manning's 'n'	Impervious Manning's 'n'
CE01	23.822	5%	1.191	22.631	1.50%	0.04	0.025
CE02	11.222	5%	0.561	10.660	3.70%	0.04	0.025
CE03	7.248	5%	0.362	6.885	4.70%	0.04	0.025
CE04A	4.396	5%	0.220	4.176	6.40%	0.04	0.025
CE04B	5.212	5%	0.261	4.952	12.60%	0.04	0.025
CE05	18.415	5%	0.921	17.494	3.20%	0.04	0.025
CE06	28.703	5%	1.435	27.268	4.60%	0.04	0.025
CE07	41.653	10%	4.165	37.488	1.90%	0.04	0.025
CE08	6.855	5%	0.343	6.512	4.70%	0.04	0.025
CK01	6.736	5%	0.337	6.399	4.50%	0.04	0.025
CK03	8.313	10%	0.831	7.482	2.40%	0.04	0.025
CK04	6.473	15%	0.971	5.502	0.90%	0.04	0.025
CK05	17.877	5%	0.894	16.983	1.10%	0.04	0.025
CK06	17.087	5%	0.854	16.233	0.80%	0.04	0.025
CK07	15.203	5%	0.760	14.442	2.00%	0.04	0.025
CK08	13.034	5%	0.652	12.382	5.40%	0.04	0.025
CK09	8.698	5%	0.435	8.263	1.90%	0.04	0.025
CK10	15.914	5%	0.796	15.118	2.10%	0.04	0.025
CK11	30.479	40%	12.192	18.288	1.30%	0.04	0.025
CK12	15.668	5%	0.783	14.884	6.50%	0.04	0.025
CK13	23.938	10%	2.394	21.544	1.00%	0.04	0.025
CK14	38.102	5%	1.905	36.197	0.90%	0.04	0.025
CK15	21.698	5%	1.085	20.613	1.70%	0.04	0.025
CK16	20.470	30%	6.141	14.329	6.00%	0.04	0.025
CK17	19.417	20%	3.884	15.534	2.00%	0.04	0.025
CK18	29.863	5%	1.493	28.370	2.30%	0.04	0.025
CK19	14.561	5%	0.728	13.833	2.70%	0.04	0.025
CK20	31.172	5%	1.559	29.614	3.10%	0.04	0.025
CK21	20.350	5%	1.018	19.332	3.00%	0.04	0.025
CK22	33.139	5%	1.657	31.482	6.00%	0.04	0.025
CK23	26.236	5%	1.312	24.925	1.50%	0.04	0.025
CK24	43.588	5%	2.179	41.409	3.70%	0.04	0.025
CK25	43.060	5%	2.153	40.907	2.90%	0.04	0.025
CK26	21.829	5%	1.092	20.738	5.80%	0.04	0.025
CK27	36.160	5%	1.808	34.352	3.00%	0.04	0.025
CK28	65.464	5%	3.273	62.191	2.30%	0.04	0.025
CK29	40.082	5%	2.004	38.078	0.90%	0.04	0.025
CK30	59.801	5%	2.990	56.811	1.20%	0.04	0.025
CK31	15.654	5%	0.783	14.871	3.80%	0.04	0.025
CK33	7.520	5%	0.376	7.144	2.00%	0.04	0.025
CK34	15.848	5%	0.792	15.056	2.10%	0.04	0.025
	930.956		69.588	861.368			

Appendix B - RAFTS Model Data

Vineyard Precinct

Proposed Catchment Data

Catchment	Total Area (ha)	Percentage impervious	Impervious Area (ha)	Pervious Area (ha)	Slope (%)	Pervious Manning's 'n'	Impervious Manning's 'n'
CE01	23.8221	25%	5.926	17.8961	1.50%	0.035	0.015
CE02	11.2215	5%	0.5611	10.6604	3.70%	0.04	0.025
CE03	7.2478	5%	0.3624	6.8854	4.70%	0.04	0.025
CE04A	4.3955	5%	0.2198	4.1757	6.40%	0.04	0.025
CE04B	5.2121	5%	0.2606	4.9515	12.60%	0.04	0.025
CE05	18.4145	5%	0.9207	17.4938	3.20%	0.04	0.025
CE06	28.7028	5%	1.4351	27.2677	4.60%	0.04	0.025
CE07	41.6529	10%	4.1653	37.4876	1.90%	0.04	0.025
CE08	6.8548	5%	0.3427	6.5121	4.70%	0.04	0.025
CK01	6.7362	5%	0.3368	6.3994	4.50%	0.04	0.025
CK03	8.3128	14%	1.1708	7.142	2.40%	0.04	0.025
CK04	6.4725	85%	5.5016	0.9709	0.90%	0.035	0.015
CK05	17.8771	9%	1.5543	16.3228	1.10%	0.04	0.025
CK06	17.087	85%	14.524	2.563	0.80%	0.035	0.015
CK07	15.2025	35%	5.3875	9.815	2.00%	0.035	0.015
CK08	13.0336	28%	3.5847	9.4489	5.40%	0.035	0.015
CK09	8.6979	5%	0.4349	8.263	1.90%	0.04	0.025
CK10	15.9136	5%	0.7956	15.118	2.10%	0.04	0.025
CK11	30.4794	76%	23.1527	7.3267	1.30%	0.035	0.015
CK12	15.6676	41%	6.4155	9.2521	6.50%	0.035	0.015
CK13	23.938	10%	2.3938	21.5442	1.00%	0.04	0.025
CK14	38.1016	41%	15.8084	22.2932	0.90%	0.035	0.015
CK15	21.6976	71%	15.4136	6.284	1.70%	0.035	0.015
CK16	20.4699	62%	12.7487	7.7212	6.00%	0.035	0.015
CK17	19.4173	20%	3.8835	15.5338	2.00%	0.04	0.025
CK18	29.8631	5%	1.4932	28.3699	2.30%	0.04	0.025
CK19	14.5608	5%	0.728	13.8328	2.70%	0.04	0.025
CK20	31.1722	5%	1.5586	29.6136	3.10%	0.04	0.025
CK21	20.3499	5%	1.0175	19.3324	3.00%	0.04	0.025
CK22	33.1387	50%	16.4363	16.7024	6.00%	0.035	0.015
CK23	26.2363	39%	10.1757	16.0606	1.50%	0.035	0.015
CK24	43.5884	85%	37.0501	6.5383	3.70%	0.035	0.015
CK25	43.0602	85%	36.6012	6.459	2.90%	0.035	0.015
CK26	21.8293	63%	13.7739	8.0554	5.80%	0.035	0.015
CK27	36.16	5%	1.808	34.352	3.00%	0.04	0.025
CK28	65.4638	5%	3.2732	62.1906	2.30%	0.04	0.025
CK29	40.0817	5%	2.0041	38.0776	0.90%	0.04	0.025
CK30	59.8013	5%	2.9901	56.8112	1.20%	0.04	0.025
CK31	15.6535	5%	0.7827	14.8708	3.80%	0.04	0.025
CK33	7.5199	71%	5.3318	2.1881	2.00%	0.035	0.015
CK34	15.8486	85%	13.4716	2.377	2.10%	0.035	0.015
	930.9563		275.7961	655.1602			

Appendix B - RAFTS model data

Appendix C. Peak Flows from XP-RAFTS

Vineyard Precinct

Peak Total Flows (m³/s) - Existing Scenario

	Average Recurrence Interval (ARI)							PMF
	2	5	10	20	50	100	500	
CE01	1.086	1.492	1.746	2.149	2.486	2.83	3.903	22.143
CE02	0.691	0.927	1.118	1.419	1.775	2.175	3.01	13.888
CE03	0.476	0.675	0.883	1.163	1.433	1.7	2.38	9.722
CE04A	0.303	0.55	0.692	0.895	1.1	1.288	1.751	6.705
CE04B	0.458	0.841	1.079	1.355	1.588	1.821	2.369	9.238
CE05	4.175	5.733	6.627	8.087	10.001	11.857	16.098	73.45
CE06	3.236	4.465	5.177	6.17	7.565	9.026	12.33	58.588
CE07	1.95	2.704	3.116	3.721	4.334	4.939	6.873	38.543
CE08	0.45	0.649	0.842	1.115	1.372	1.623	2.285	9.241
CK01	0.44	0.63	0.8	1.083	1.329	1.571	2.219	9.028
CK03	0.806	1.099	1.272	1.514	1.801	2.094	2.954	15.322
CK04	0.315	0.433	0.508	0.616	0.695	0.812	1.14	6.118
CK05	3.805	5.535	6.619	8.196	9.6	11.196	15.076	68.264
CK06	3.488	4.896	5.796	7.108	8.168	9.441	12.552	56.085
CK07	0.798	1.096	1.261	1.515	1.889	2.197	2.973	15.969
CK08	0.841	1.165	1.472	1.961	2.427	2.886	3.955	17.127
CK09	0.478	0.653	0.752	0.936	1.135	1.327	1.806	9.529
CK10	1.554	2.203	2.612	3.133	3.779	4.483	6.115	31.31
CK11	3.166	4.195	4.823	5.651	6.26	7.096	9.124	30.353
CK12	1.03	1.455	1.897	2.484	3.041	3.587	5.049	20.934
CK13	6.118	8.996	10.736	13.169	15.306	17.922	24.598	111.035
CK14	5.333	7.647	9.103	11.153	13.284	15.565	21.317	101.069
CK15	1.043	1.428	1.673	2.036	2.345	2.762	3.819	20.88
CK16	1.794	2.683	3.246	4.028	4.798	5.558	7.459	26.811
CK17	1.106	1.573	1.916	2.345	2.721	3.152	4.323	20.026
CK18	1.49	2.078	2.395	2.866	3.418	4.071	5.529	29.795
CK19	0.825	1.121	1.288	1.607	1.962	2.303	3.151	16.223
CK20	2.616	3.713	4.367	5.273	6.54	7.687	10.468	52.063
CK21	1.145	1.544	1.787	2.22	2.715	3.182	4.321	22.555
CK22	2.053	2.721	3.303	4.15	5.195	6.308	8.956	40.968
CK23	3.316	4.556	5.41	6.595	8.082	9.434	12.831	64.45
CK24	2.375	3.182	3.675	4.561	5.591	6.48	8.821	47.036
CK25	2.219	2.982	3.486	4.177	5.151	6.004	8.116	43.907
CK26	1.376	1.853	2.318	2.949	3.687	4.427	6.275	27.848
CK27	1.911	2.591	2.983	3.585	4.487	5.236	7.033	38.069
CK28	2.891	4.01	4.702	5.809	6.762	7.736	10.68	59.794
CK29	4.022	5.661	6.589	7.896	9.355	10.837	14.38	75.503
CK30	2.086	2.998	3.512	4.22	4.928	5.812	7.934	44.756
CK31	0.945	1.269	1.506	1.893	2.358	2.804	3.946	18.793
CK33	5.549	7.977	9.495	11.638	13.763	16.13	22.076	103.465
CK34	0.838	1.148	1.322	1.592	1.994	2.305	3.12	16.757
DummyNode5	3.316	4.556	5.41	6.595	8.082	9.434	12.831	64.45
node12	1.777	2.42	2.816	3.357	3.846	4.431	6.041	33.472
node13	7.431	10.1	11.683	13.781	16.72	19.43	26.296	125.923
node14	5.178	7.047	8.143	9.75	11.949	14.065	18.801	86.266
node15	4.877	6.649	7.689	9.318	11.443	13.49	18.1	82.765
node16	0.817	1.427	1.83	2.369	2.868	3.381	4.598	17.115
node17	0.45	0.649	0.842	1.115	1.372	1.623	2.285	9.241
node2	7.431	10.1	11.683	13.781	16.72	19.43	26.296	125.923
node3	2.219	2.982	3.486	4.177	5.151	6.004	8.116	43.907
node4	5.549	7.977	9.495	11.638	13.763	16.13	22.076	103.465
node6	3.488	4.896	5.796	7.108	8.168	9.441	12.552	56.085
node7	1.086	1.492	1.746	2.149	2.486	2.83	3.903	22.143
nodeK05	21.276	30.923	36.716	44.503	52.27	59.615	77.055	335.846
nodeK07	3.368	4.517	5.294	6.425	7.273	8.334	10.953	43.239
nodeK08	19.352	28.223	33.528	40.804	47.821	54.573	70.685	312.15
nodeK10	18.943	27.655	32.866	40.035	46.877	53.505	69.349	309.385
nodeK12	18.263	26.721	31.757	38.716	45.303	51.709	67.76	301.031
nodeK13	18.148	26.321	31.293	38.164	44.623	50.941	67.139	299.534
nodeK15	4.233	5.991	7.083	8.644	10.563	12.375	16.894	80.093
nodeK16	12.785	18.411	21.892	26.418	30.86	35.34	47.289	204.791
nodeK17	12.654	17.85	21.256	25.678	29.952	34.458	46.325	203.097
nodeK18	12.315	17.17	20.476	24.786	28.906	33.362	44.961	200.849
nodeK19	3.404	4.761	5.596	6.813	8.394	9.837	13.471	66.308
nodeK23	10.734	15.046	17.543	21.365	24.986	28.553	38.96	185.625
nodeK26	4.461	6.339	7.371	8.74	10.481	12.188	16.272	83.148
nodeK27	7.715	10.734	12.763	15.519	18.244	20.751	27.274	127.333
nodeK30	2.849	4.008	4.668	5.554	6.388	7.305	9.746	54.791
Out	25.26	36.776	43.484	52.422	62.066	70.601	91.083	383.9
Out 1	2.219	2.982	3.486	4.177	5.151	6.004	8.116	43.907
Out E	7.431	10.1	11.683	13.781	16.72	19.43	26.296	125.923
Out K	21.631	31.477	37.366	45.263	53.218	60.675	78.388	337.246

Vineyard Precinct

Peak Total Flows (m³/s) - Proposed Scenario

	Average Recurrence Interval (ARI)							
	2	5	10	20	50	100	500	PMF
Basin1	9.769	12.569	14.222	16.554	18.086	20.158	25.219	90.677
Basin2	10.195	13.572	15.551	18.23	20.404	23.047	29.127	107.486
Basin3	7.338	9.742	11.081	12.876	14.433	16.272	20.64	95.026
Basin4	2.195	2.964	3.413	4.01	4.556	5.245	6.93	27.386
Basin5	8.254	10.798	12.29	14.276	16.012	18.015	22.82	83.028
Basin6	1.471	1.883	2.14	2.469	2.697	3.012	3.767	13.276
Basin7	1.608	2.214	2.642	3.202	3.662	4.216	5.673	24.026
CE01	1.608	2.214	2.642	3.202	3.662	4.216	5.673	24.026
CE02	0.691	0.927	1.118	1.419	1.775	2.175	3.01	14.389
CE03	0.476	0.675	0.883	1.163	1.433	1.7	2.38	10.875
CE04A	0.303	0.55	0.692	0.895	1.1	1.288	1.751	7.489
CE04B	0.458	0.841	1.079	1.355	1.588	1.821	2.369	9.522
CE05	4.175	5.733	6.627	8.087	10.001	11.857	16.098	73.45
CE06	3.236	4.465	5.177	6.17	7.565	9.026	12.33	58.588
CE07	1.95	2.704	3.116	3.721	4.334	4.939	6.873	38.543
CE08	0.45	0.667	0.864	1.139	1.393	1.646	2.333	10.484
CK01	0.44	0.63	0.8	1.083	1.329	1.571	2.219	10.084
CK03	0.812	1.02	1.221	1.485	1.765	2.144	3.593	19.224
CK04	1.471	1.883	2.14	2.469	2.697	3.012	3.767	13.276
CK05	3.701	5.16	6.082	7.338	8.818	10.59	16.471	79.486
CK06	8.254	10.798	12.29	14.276	16.012	18.015	22.82	83.028
CK07	1.459	1.999	2.352	2.841	3.241	3.749	4.905	18.021
CK08	1.111	1.747	2.159	2.703	3.221	3.825	5.15	20.806
CK09	0.478	0.653	0.752	0.936	1.135	1.327	1.806	9.906
CK10	1.454	2.034	2.282	2.532	3.486	4.544	7.034	40.867
CK11	6.139	7.929	9.005	10.431	11.359	12.657	15.823	56.137
CK12	1.854	2.74	3.293	4.034	4.716	5.465	7.148	25.721
CK13	6.144	8.563	10.52	12.84	14.938	17.25	23.142	104.781
CK14	6.338	8.403	9.568	11.119	12.733	14.759	19.848	91.906
CK15	4.09	5.303	6.023	6.981	7.603	8.458	10.679	37.73
CK16	3.413	4.632	5.404	6.451	7.262	8.321	10.672	36.542
CK17	1.106	1.573	1.916	2.345	2.721	3.152	4.323	20.526
CK18	1.49	2.078	2.395	2.866	3.418	4.071	5.529	29.745
CK19	0.825	1.121	1.288	1.607	1.962	2.303	3.151	17.04
CK20	2.616	3.713	4.367	5.273	6.54	7.687	10.468	52.636
CK21	1.145	1.544	1.787	2.22	2.715	3.182	4.321	23.53
CK22	4.43	6.211	7.291	8.825	9.97	11.405	15.063	51.576
CK23	10.195	13.572	15.551	18.23	20.404	23.047	29.127	107.486
CK24	9.993	12.763	14.448	16.812	18.317	20.373	25.501	93
CK25	9.769	12.569	14.222	16.554	18.086	20.158	25.219	90.677
CK26	3.674	4.958	5.782	6.894	7.748	8.856	11.343	38.794
CK27	1.911	2.591	2.983	3.585	4.487	5.236	7.033	38.798
CK28	2.891	4.01	4.702	5.809	6.762	7.736	10.68	59.794
CK29	4.022	5.661	6.589	7.896	9.355	10.837	14.38	75.503
CK30	2.086	2.998	3.512	4.22	4.928	5.812	7.934	44.756
CK31	0.945	1.269	1.506	1.893	2.358	2.804	3.946	19.368
CK33	7.338	9.742	11.081	12.876	14.433	16.272	20.64	95.026
CK34	2.195	2.964	3.413	4.01	4.556	5.245	6.93	27.386
node1	3.413	4.632	5.404	6.451	7.262	8.321	10.672	36.542
node12	1.671	2.296	2.651	3.093	3.49	4.005	5.917	34.384
node13	7.323	9.976	11.518	13.517	16.388	19.072	25.844	127.796
node14	5.178	7.047	8.143	9.757	11.956	14.072	18.808	87.756
node15	4.883	6.649	7.693	9.325	11.439	13.497	18.107	83.862
node16	0.817	1.452	1.852	2.395	2.891	3.391	4.611	19.429
node17	0.45	0.667	0.864	1.139	1.393	1.646	2.333	10.484
node2	7.323	9.976	11.518	13.517	16.388	19.072	25.844	127.796
node3	2.033	2.426	2.621	3.707	4.759	6.594	12.149	65.849
node7	1.002	1.394	1.628	1.954	2.151	2.649	3.964	22.469
nodeK05	20.75	29.343	34.625	42.324	51.001	59.739	81.41	337.252
nodeK07	7.561	9.784	11.129	12.98	14.016	15.766	19.931	66.972
nodeK08	18.367	26.277	31.211	38.321	47.025	55.401	75.95	310.067
nodeK10	17.927	25.694	30.566	37.55	46.627	54.97	75.4	307.464
nodeK12	17.008	24.491	29.155	36.119	45.248	53.488	73.639	298.769
nodeK13	16.697	24.07	28.684	35.562	44.983	53.195	73.192	296.311
nodeK15	4.09	5.711	6.897	8.486	10.232	11.978	16.206	73.986
nodeK16	11.53	16.596	20.232	24.951	30.737	36.88	51.68	209.931
nodeK17	11.289	16.037	19.593	24.208	29.992	36.056	50.664	209.859
nodeK18	10.937	15.456	18.907	23.373	28.626	34.552	48.854	207.852
nodeK19	3.404	4.761	5.596	6.813	8.394	9.837	13.471	67.432
nodeK23	9.799	13.379	16.54	20.452	24.363	28.756	41.581	196.528
nodeK26	4.275	6.096	7.104	8.634	10.378	12.062	15.985	81.204
nodeK27	7.928	11.122	12.981	15.475	18.183	20.679	28.151	128.5
nodeK30	2.849	4.008	4.668	5.554	6.388	7.305	9.746	54.791
Out	25.566	36.228	42.75	51.174	60.554	69.202	90.77	384.162
Out 1	2.033	2.426	2.621	3.707	4.759	6.594	12.149	65.849
Out E	7.323	9.976	11.518	13.517	16.388	19.072	25.844	127.796
Out K	21.205	29.984	35.365	43.152	51.546	60.21	81.958	338.997