

Notes

Key to symbols

- Vineyard precinct boundary
- Existing road
- Proposed detention basin
- Proposed creeks/channel
- Proposed riparian extenet
- Validated Watercourse
- Riparian Zone - 1st Order Stream
- Riparian Zone - 2nd Order Stream
- Riparian Zone - 3rd Order Stream

Basin Volumes	
Basin	Volume (m <sup>3</sup> )
1	15,100
2	22,500
Total	37,600

- (A) Provide realigned riparian creek channel to contain 100YR proposed flows.
- (B) Upstream flows to be converted in road and pipe network.

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P8	31.10.17	RH	Issued For Post-Exhibition	GL	CJA
P7	19.10.2016	MMc	Issued For Exhibition	GL	CJA
P6	14.10.16	MMc	Issued For Exhibition	GL	-
P5	17.07.15	JK	Issued For Exhibition	GL	-
P4	01.07.15	MMc	Issued For Exhibition	GL	-

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Client

Planning & Environment

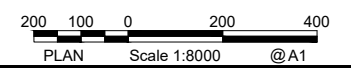
Title  
Vineyard Precinct  
Water Cycle Management Plan

Proposed Creek Re-Alignment  
and Detention Strategy Plan

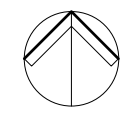
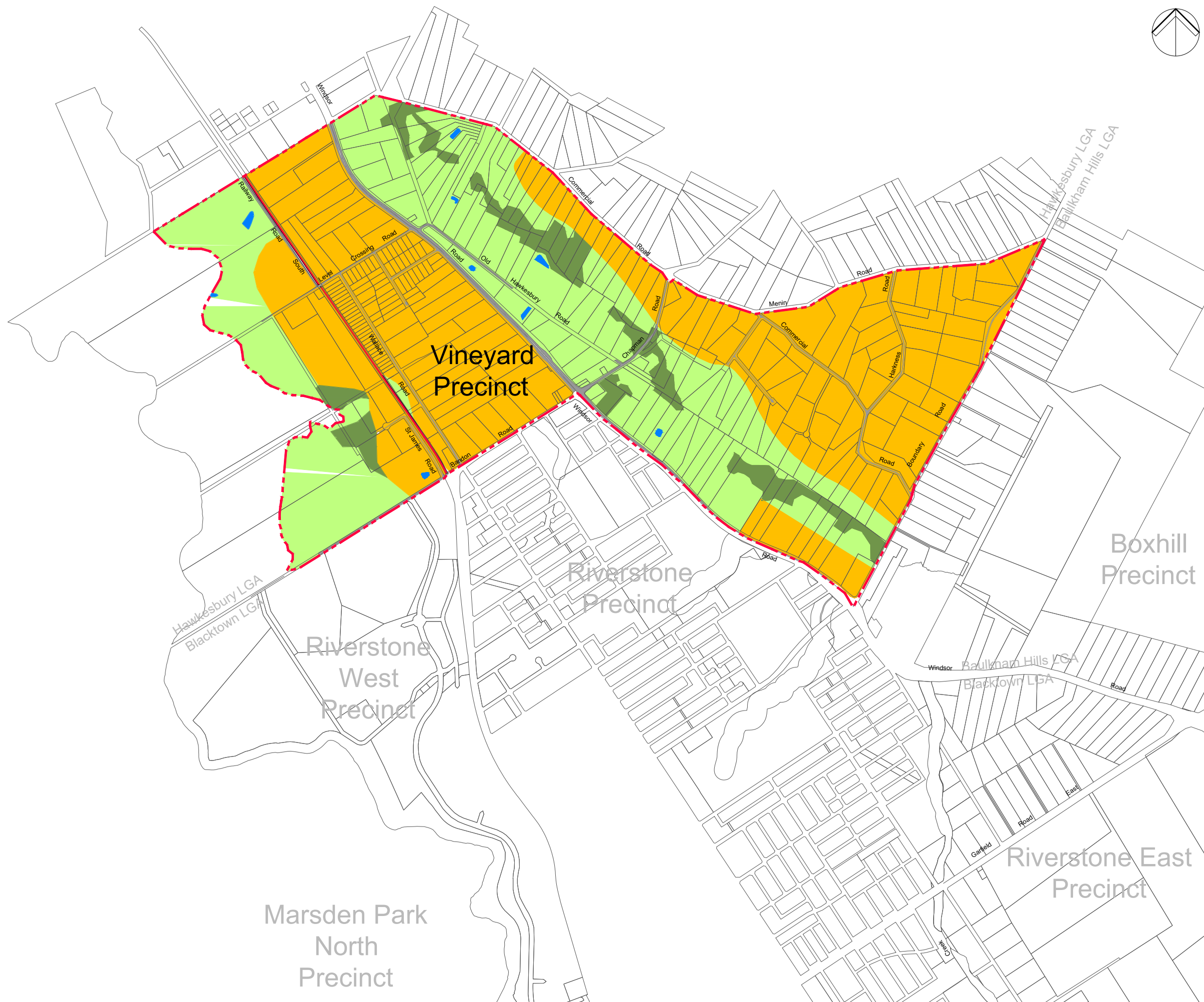
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Drawn	DW	Coordination	GL
Dwg check	GC	Approved	CJA
Scale at A1	1:8000	Status	PRE
		Rev	P8

Drawing Number  
MMD-334311-C-DR-VY-XX-0210

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Notes

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- - - - - Riverstone East precinct boundary
- Existing cadastre
- Dense vegetation - Manning's Value = 0.12
- Light vegetation - Manning's Value = 0.05
- Water surface - Manning's Value = 0.035
- Residential - Manning's Value = 0.125
- Roads - Manning's Value = 0.013
- Train line - Manning's Value = 0.015

Reference drawings

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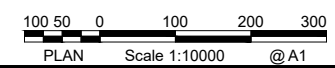
Title  
**Vineyard Precinct  
Water Cycle Management Plan**

**TUFLOW Proposed Land Use  
Plan**

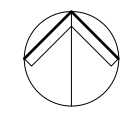
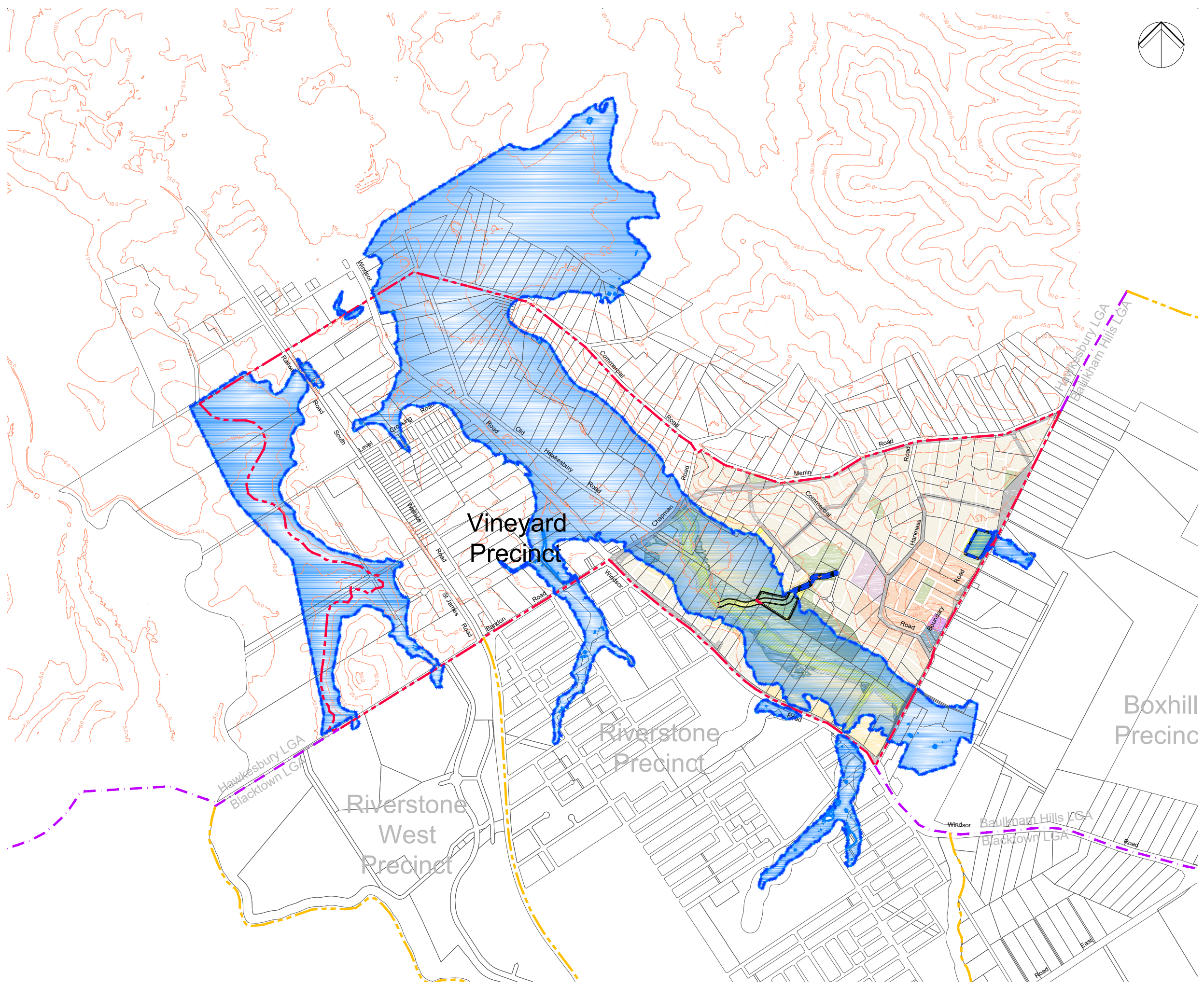
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Dwg check	GC	Approved	CJA	
Scale at A1	1:10000	Status	PRE	Rev P5

Drawing Number  
**MMD-334311-C-DR-VY-XX-0211**

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Notes

Key to symbols

- - - - - Vineyard precinct boundary
- - - - - Surrounding precinct boundary
- - - - - LGA boundary
- — — — — Existing cadastre
- — — — — 100yr Regional flood extents
- 100yr Regional flood area
- Proposed detention basin

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	31.10.2017	RH	Issued For Post-Exhibition	GL	CJA
P5	19.10.2016	MMc	Issued For Exhibition	GL	CJA
P4	14.10.16	MMc	Issued For Exhibition	GL	-
P3	20.07.15	JK	Issued For Exhibition	GL	-
P2	01.07.15	MMc	Issued For Exhibition	GL	-



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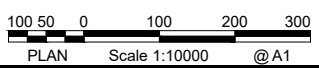
Title  
**Vineyard Precinct  
Water Cycle Management Plan**

**Proposed Regional Flood Extents  
Plan With Detention**

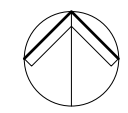
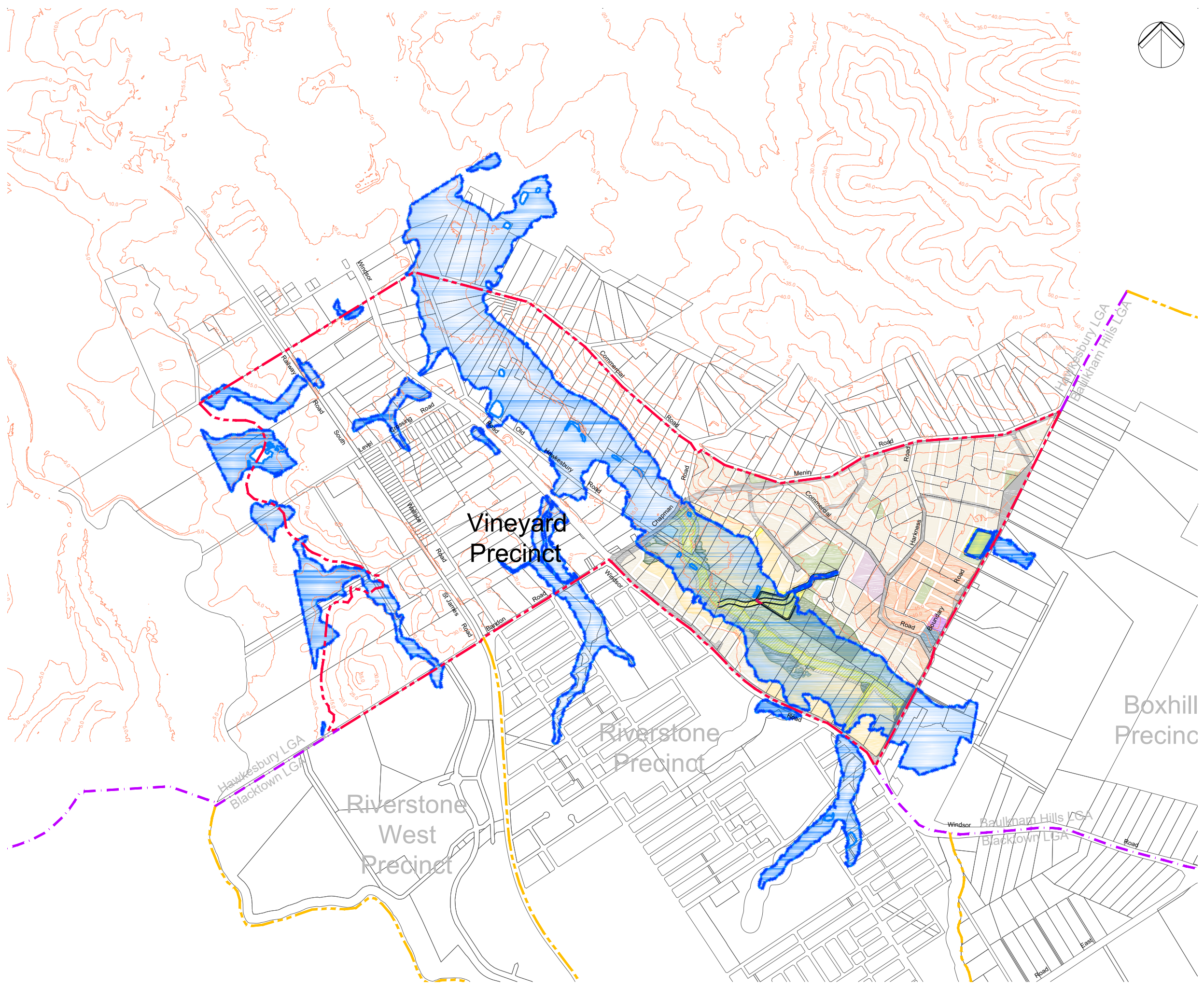
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Drawn	DW	Coordination	GL	-
Dwg check	GC	Approved	CJA	-
Scale at A1	1:10000	Status	PRE	Rev
				P6

Drawing Number  
**MMD-334311-C-DR-VY-XX-0214**

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Notes

Key to symbols

- - - - - Vineyard precinct boundary
- - - - - Surrounding precinct boundary
- - - - - LGA boundary
- Existing cadastral
- - - - - Local flood extents
- Local flood Area
- Proposed detention basin

Reference drawings

Rev	Date	Drawn	Description	GL	App'd
P7	31.10.2017	RH	Issued For Post-Exhibition	GL	CJA
P6	19.10.2016	MMc	Issued For Exhibition	GL	CJA
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	-



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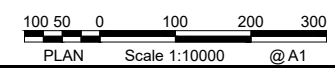

Title  
Vineyard Precinct  
Water Cycle Management Plan

Proposed Local Flood Extents  
With Detention

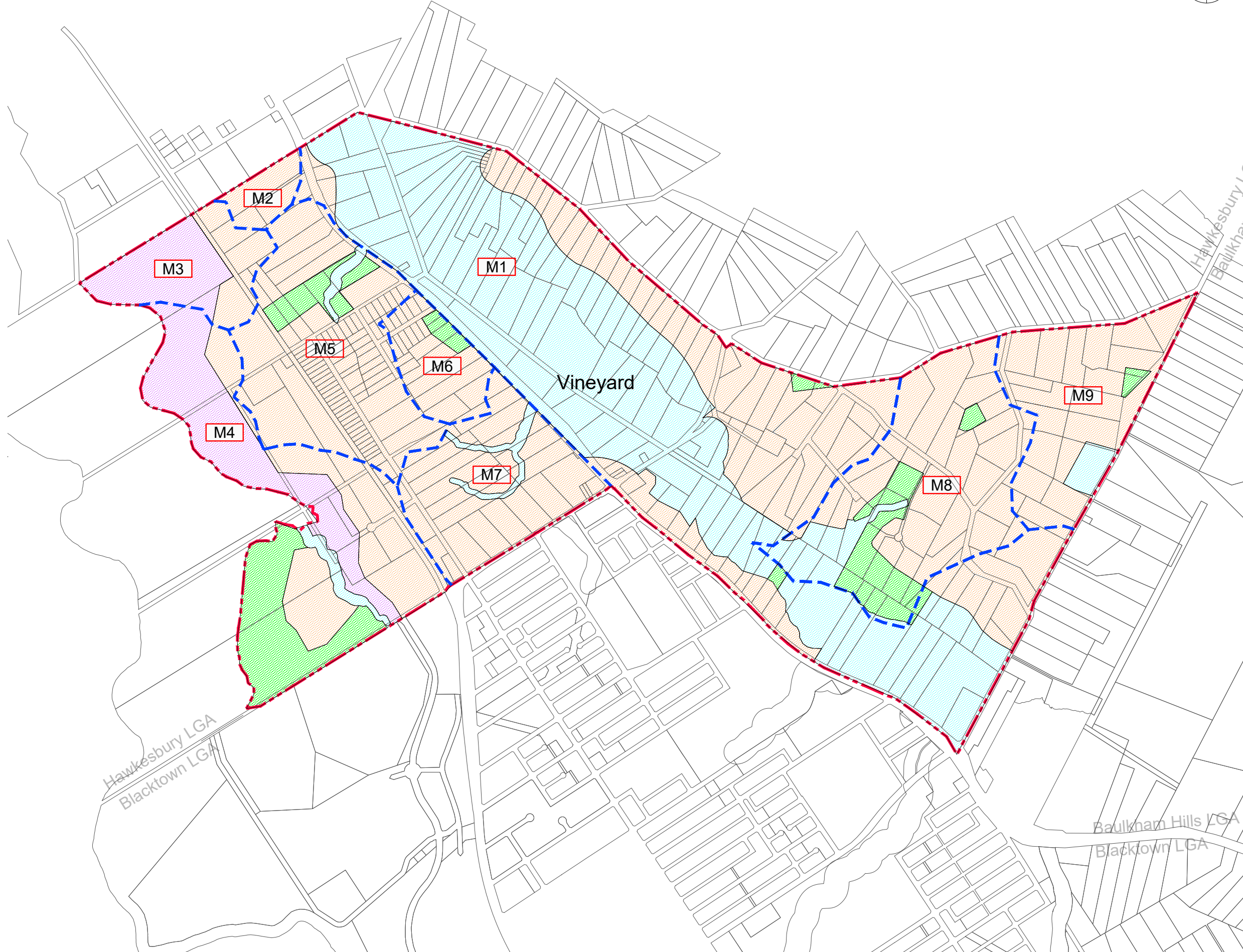
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Scale at A1	1:10000	Status	PRE	Rev P7

Drawing Number  
**MMD-334311-C-DR-VY-XX-0216**

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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
	<span style="background-color: #e0f7fa; border: 1px solid black; width: 10px; height: 10px; display: inline-block;"></span>	<span style="background-color: #fce4ec; border: 1px solid black; width: 10px; height: 10px; display: inline-block;"></span>	<span style="background-color: #ffe0b2; border: 1px solid black; width: 10px; height: 10px; display: inline-block;"></span>	<span style="background-color: #e8f5e9; border: 1px solid black; width: 10px; height: 10px; display: inline-block;"></span>	
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
<b>Total</b>	<b>192.78</b>	<b>43.77</b>	<b>315.45</b>	<b>38.98</b>	<b>590.98</b>

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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**Planning & Environment**

Title  
**Vineyard Precinct  
 Water Cycle Management Plan**  
**MUSIC Catchment Plan**

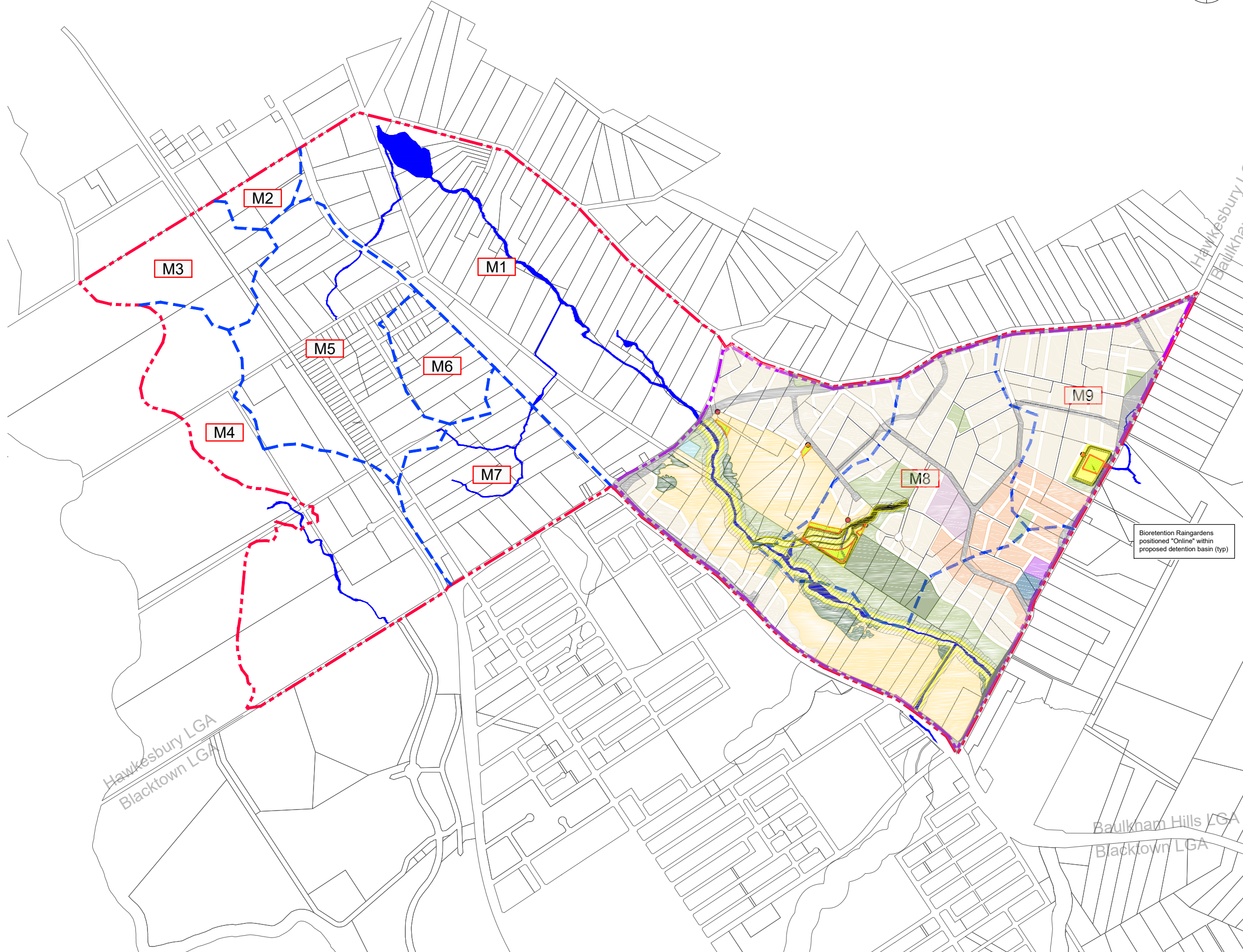
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Drawn	DW	Coordination	GL
Dwg check	GC	Approved	CJA
Scale at A1	1:8000	Status	PRE
		Rev	P5

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

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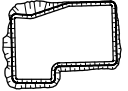
200 100 0 200 400  
 PLAN Scale 1:8000 @ A1

Issued For Exhibition



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 <sup>2</sup> )
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
P9	31.10.17	RH	Issued For Post-Exhibition	GL	-
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	-



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Title  
**Vineyard Precinct  
Water Cycle Management Plan**

**Proposed Stormwater  
Treatment Plan**

Designed	JT	Eng check	GL
Drawn	DW	Coordination	GL
Dwg check	GC	Approved	CJA
Scale at A1	1:10000	Status	PRE
		Rev	P9

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

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200 100 0 200 400  
PLAN Scale 1:8000 @ A1

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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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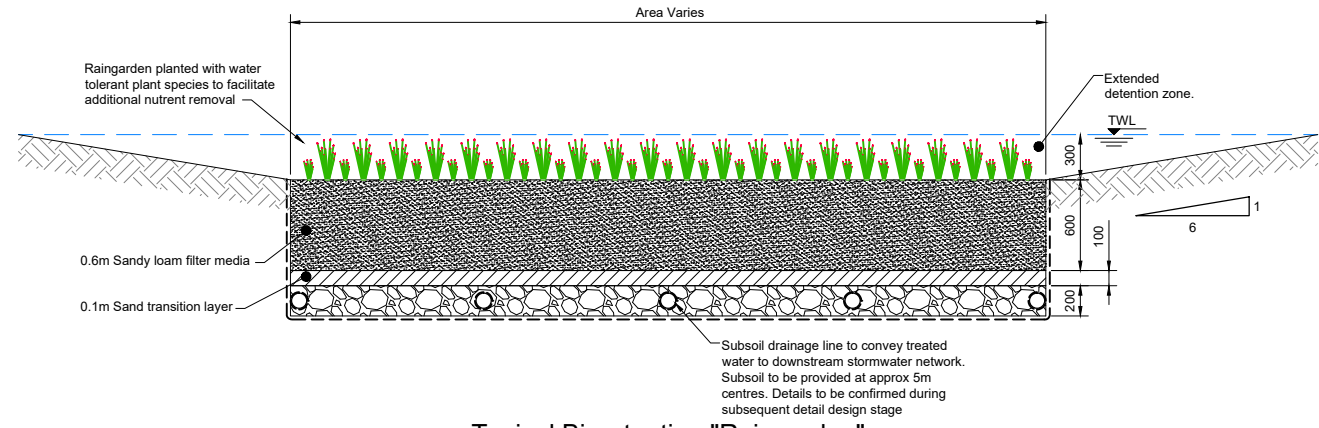



Title  
**Vineyard Precinct  
 Water Cycle Management Plan**  
 Sections and Details  
 Sheet 1

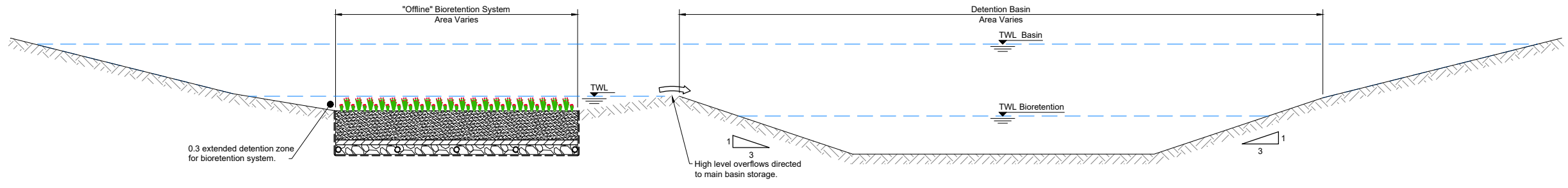
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Dwg check	GC		Approved	CJA	

Scale at A1	NTS	Status	PRE	Rev	P3
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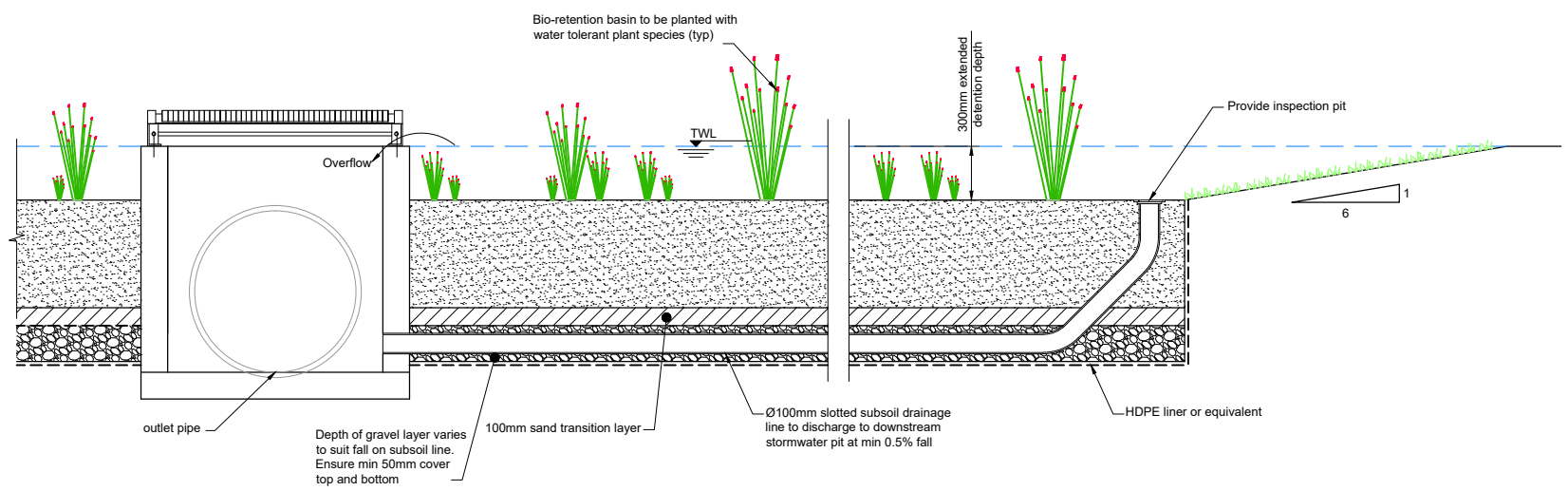
Drawing Number  
**MMD-334311-C-DR-VY-XX-0230**



**Typical Bioretention "Raingarden"**  
 Detail  
 1:25

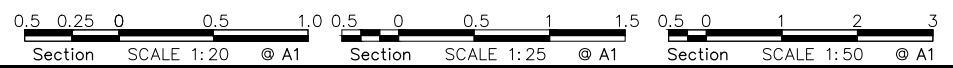


**Typical Combined Detention/Bioretention**  
 Detail  
 1:50

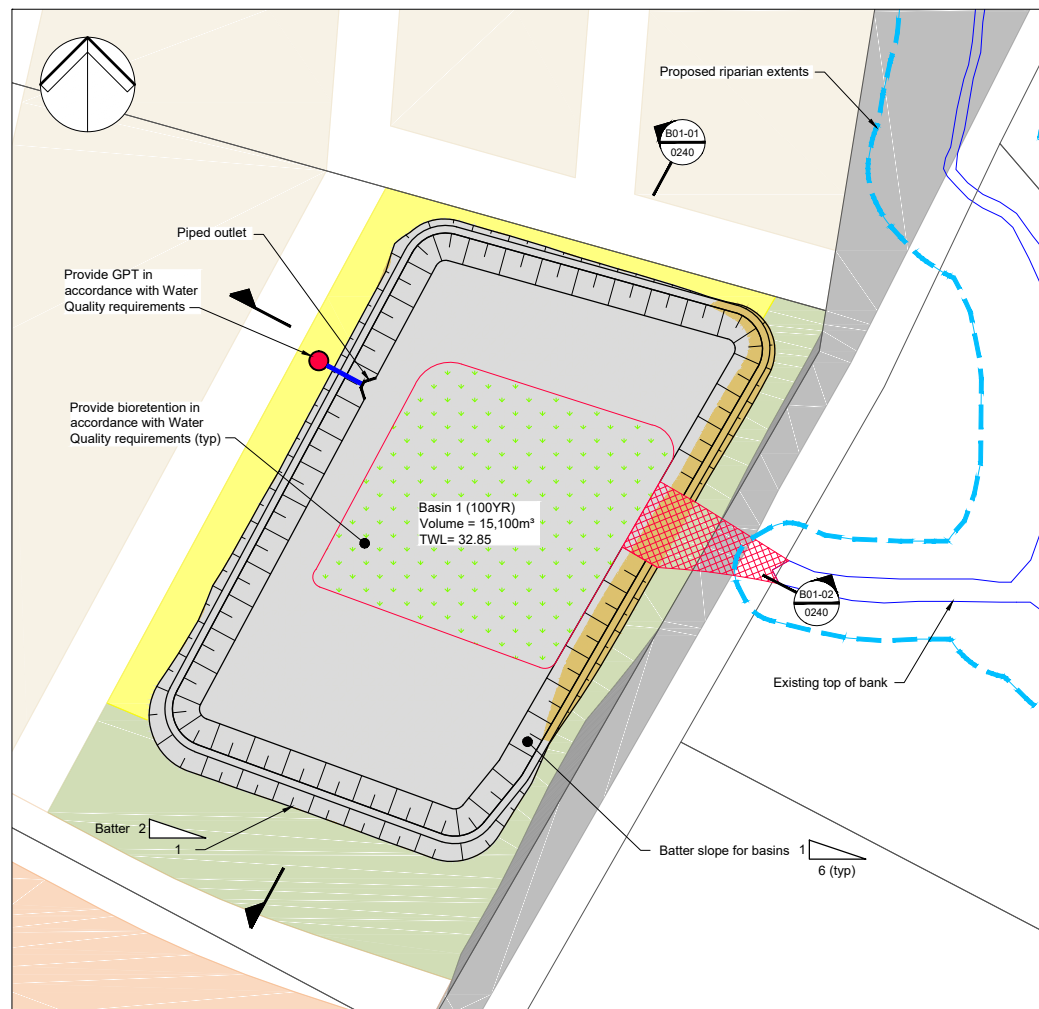


**Typical Bioretention Basin**  
 1:20

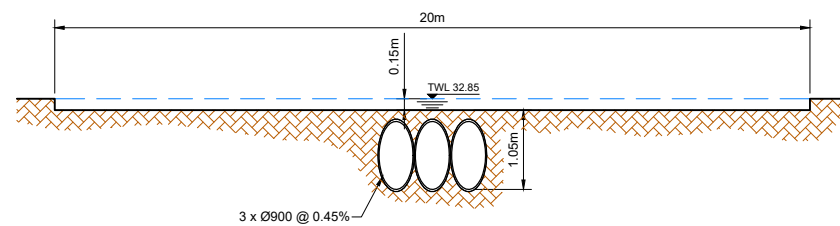
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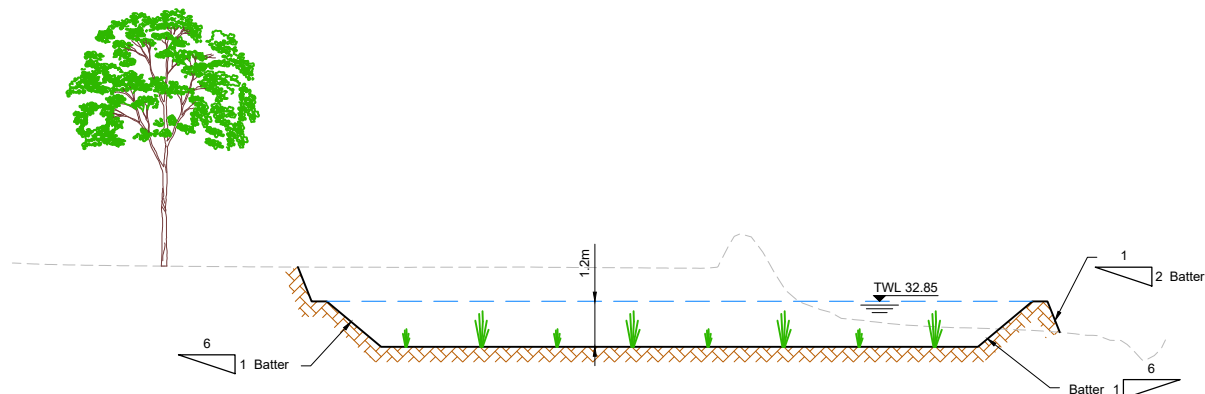
Issued For Exhibition



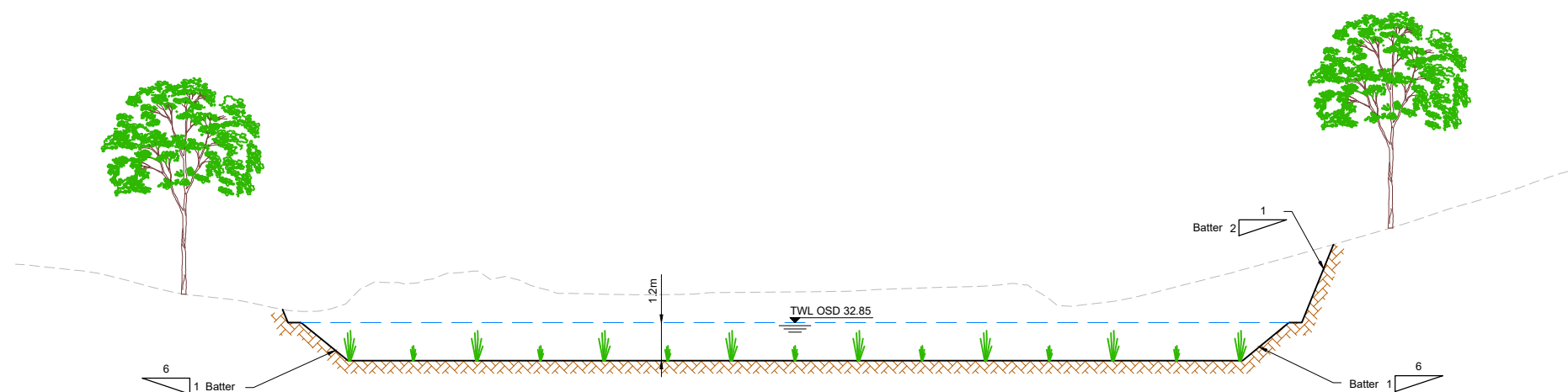
Basin 1  
1:1000



Basin 1 Outlet Weir Detail  
NTS



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



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

Notes

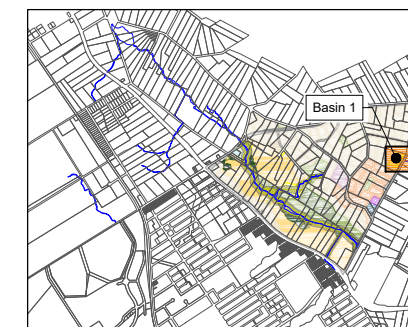
Earthworks Volume

Total cut -26,370m<sup>3</sup>  
Total fill +444m<sup>3</sup>  
Total balance -25,926m<sup>3</sup>

- 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
P8	31.10.17	RH	Issued For Post-Exhibition	GL	-
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	-



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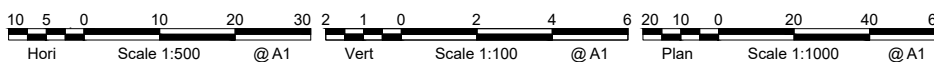
Vineyard Precinct  
Water Cycle Management Plan

Basin 1  
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
				P8

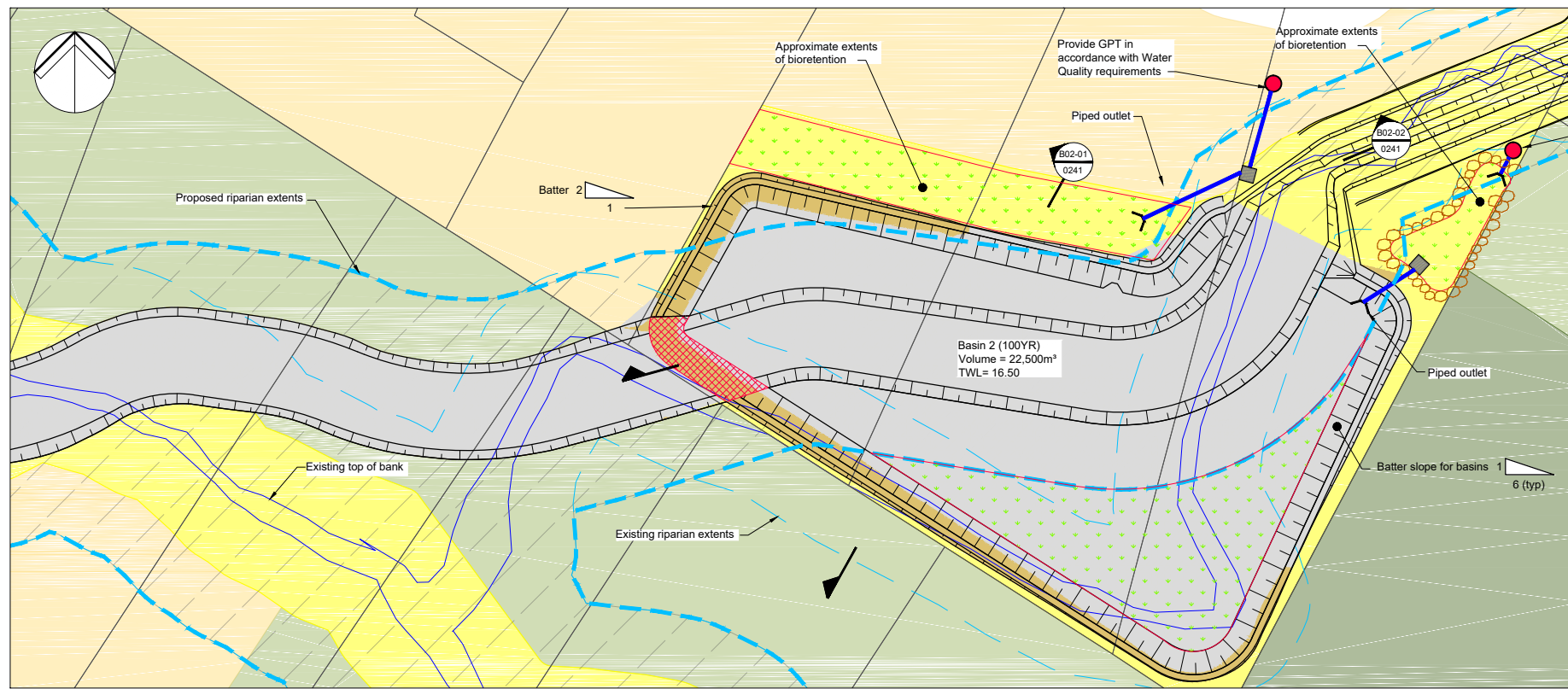
Drawing Number  
MMD-334311-C-DR-VY-XX-0240

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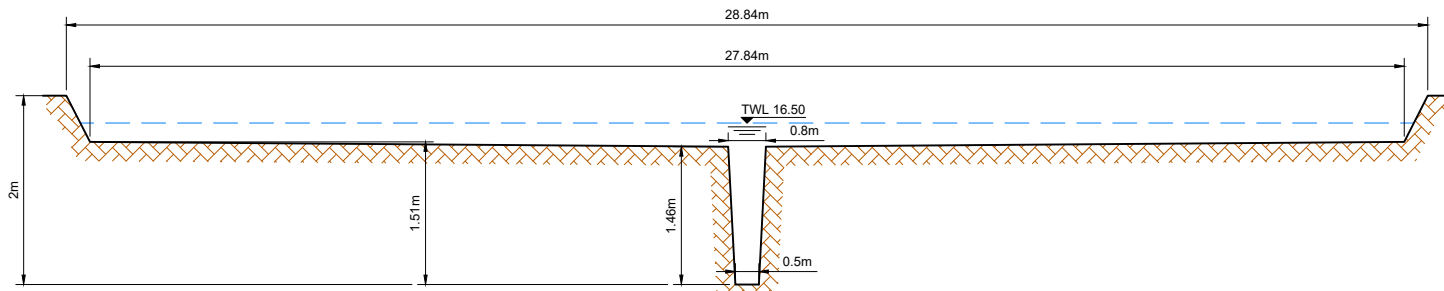


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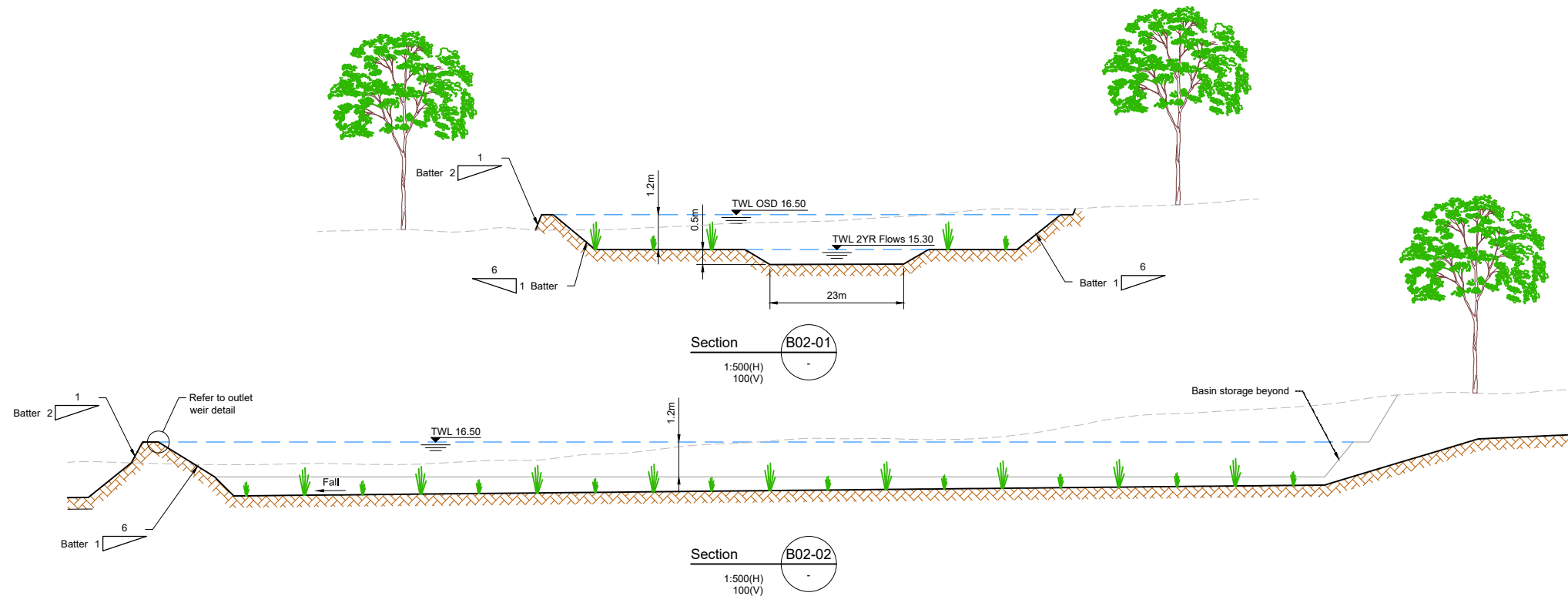




**Basin 2**  
1:1000

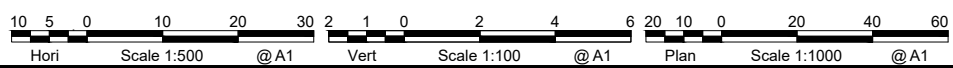


**Basin 2 Outlet Weir Detail**  
NTS



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

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



**Notes**

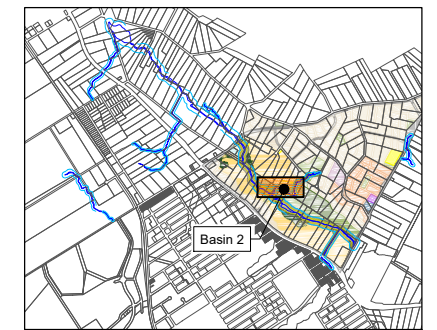
**Earthworks Volume**

Total cut -30,163m³  
Total fill +958m³  
Total balance -29,305m³

- 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
P8	31.10.17	RH	Issued For Post-Exhibition	GL	-
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	-

**Title**  
Vineyard Precinct  
Water Cycle Management Plan

**Basin 2**  
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	P8

**Drawing Number**  
MMD-334311-C-DR-VY-XX-0241

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