



JOB NUMBER: 23-1883

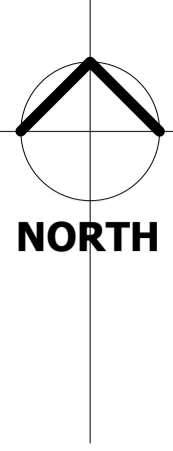
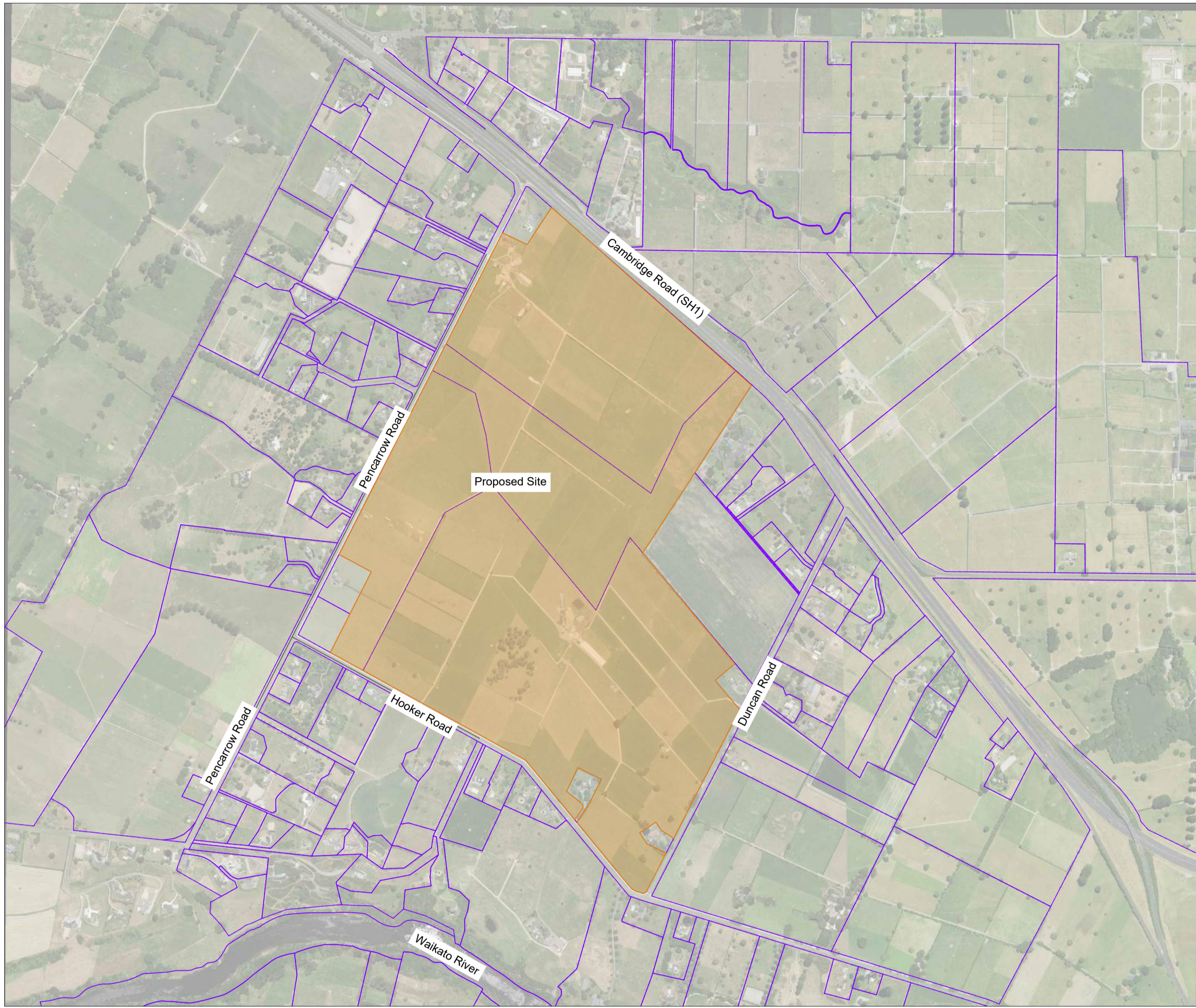
WAIKATO THROUGHbred PENCARROW ROAD, WAIKATO

WORK IN PROGRESS

Do not issue



WORK IN PROGRESS
Do not issue



Tender Notes

- Drawings issued prior to the completion of Building Consent issue are for the purpose of enabling the client/contractor to prepare, submit and negotiate a cost competitive and compliant tender for the project only.
- The client acknowledges that the Preliminary Design is an incomplete design, prepared with a limited time frame, with input provided by the client, other organisations and third parties and in many respects relied on experienced engineering judgement. Accordingly, amendments to the design may be required when further information is obtained as design/construction progresses. Such amendments may include additional work, increased quantities and/or additional time. The consultant shall not be responsible for the cost of such additional work, quantities or time unless the consultant is proven to have been negligent in preparation of the design. Furthermore, the consultant shall not be liable for any inaccuracies or incompleteness of any information not collected under the consultants direct control notwithstanding any coordination or management role undertaken by the consultants part of the services. To mitigate such risks of errors or omissions, the consultant will exercise due care and diligence in preparing the Design Documentation and will be available at the clients request to participate in a cost risk analysis with the client to enable a contingency sum for risk to be included in the tendered price for the project.
- The parties agree that:
 - The services and design documents do not and cannot constitute a complete Engineering Design and are likely to contain differences from the final engineering design when produced.
 - The risk of any such differences and any consequences that may flow from such differences (whether in relation to cost or otherwise) are solely the risk of the client.
 - BCD has provided Preliminary Design information and such information cannot be considered to be a fully detailed and checked design and that the client will prepare and price tender generally having regard to issues which arise as a result of not having such a fully detailed and checked design.
- The client must act in good faith and use all reasonable endeavours to work on a regular basis with the consultant to minimise the risk of error to develop solutions that fulfil the project requirements and embrace the clients preferred construction methodologies and practices.

Sheet Setouts

- Sheet No
- Civil drawings
- C-000 Index and Standard Notes (Civil and Survey)
 - C-001 Existing Site Plan (Civil and Survey)
 - C-002 - C-049 Survey Plans
 - C-050 - C-099 Planning Drawings
 - C-100 - C-199 GA plans e.g. Proposed Site plan (small projects)
 - C-200 - C-299 Earthworks plans/Site sections/Details
 - C-300 - C-499 Roading Plans/long sections/cross sections
 - C-500 - C-599 Environmental Plans/Erosion/Sediment Control
 - C-600 - C-699 Stormwater Plans (large projects)
 - C-700 - C-799 Wastewater Plans (large projects)
 - C-800 - C-899 Water Supply Plans (large projects)
- Architectural drawings
- A-000 series - architectural plans
- Structural drawings
- S-000 series - structural plans

Drawing List		
Sheet Number	Sheet Name	Revision
C-210	Proposed Site Plan - <i>not part of current set</i>	1
C-350	Proposed Roding Network and Roding Upgrades	1
C-355	Proposed Typical Street Sections	2
C-365	Proposed Typical Street Sections - Boulevard	1
C-365	Proposed Underpass - <i>not part of current set</i>	1
C-500	Proposed Infrastructure Plan - Overview	1
C-600	Existing Stormwater Catchment Plans - <i>not part of current set</i>	1
C-601	Proposed Stormwater Catchment Plans - <i>not part of current set</i>	1
C-602	Proposed Stormwater Plan - Overview	2
C-603	Proposed Stormwater Plan - Page 1	1
C-604	Proposed Stormwater Plan - Page 2	1
C-605	Proposed Stormwater Plan - Page 3	1
C-606	Proposed Stormwater Plan - Page 4	1
C-701	Proposed Wastewater Plan - Overview	2
C-801	Proposed Water Supply Plan - Overview	2
C-850	Proposed Typical Details - Sheet 1 of 2	1
C-851	Proposed Typical Details - Sheet 2 of 2	1

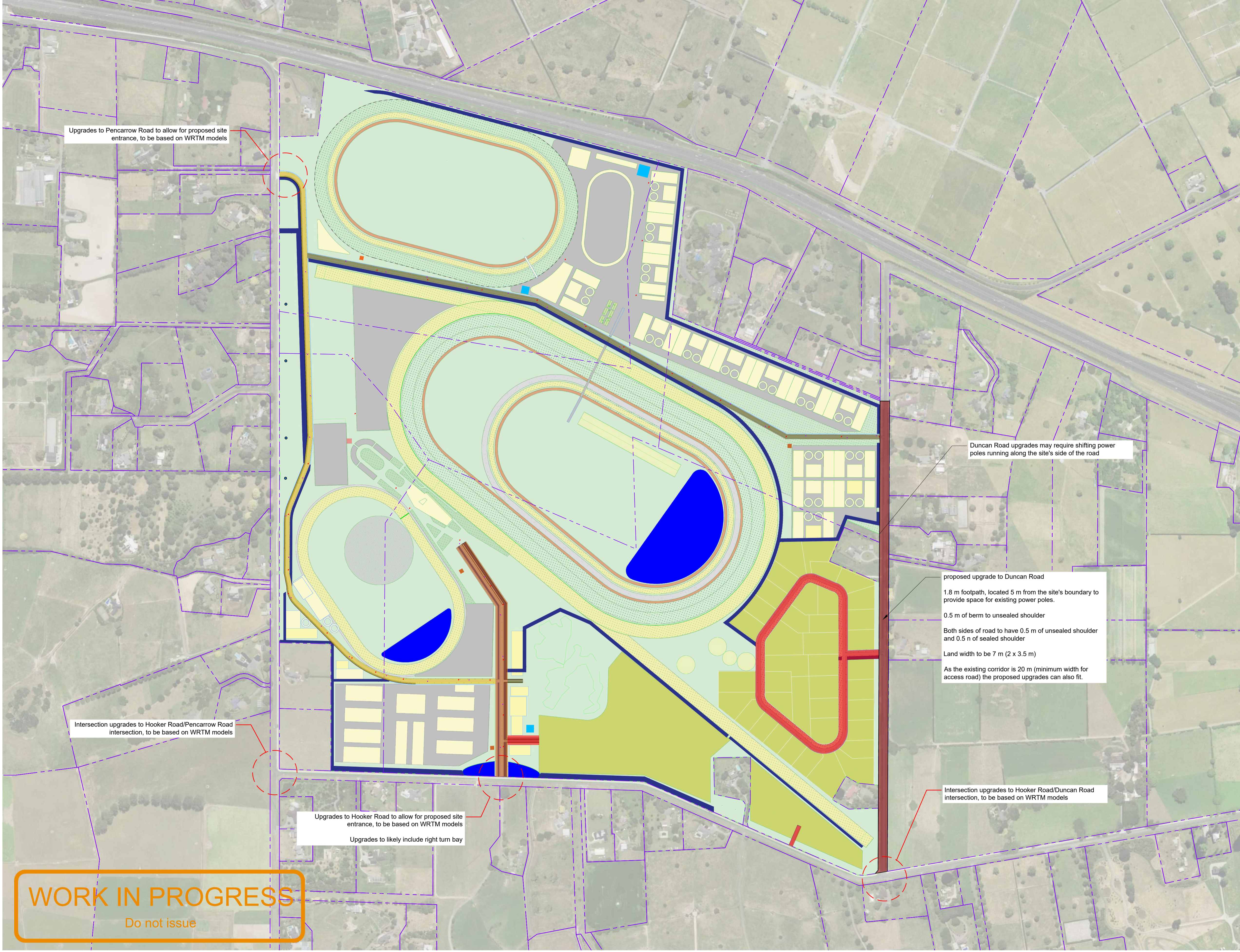
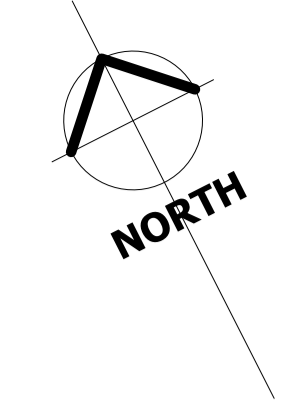
Standard Abbreviations

Structural Abbreviations	Foundation / Reinforcing Abbreviations	General Abbreviations	Plumbing Abbreviations
UB universal beam	crs centres	TBC to be confirmed	GT gully trap
UC universal column	T&B top & bottom	NTS not to scale	ORG overflow relief gully
SHS square hollow section	EW each way	COS confirm on site	TV terminal vent
RHS rectangle hollow section	EF each face	RL reduced level	FWG floor waste gully
UA unequal angle	vert vertical reinforcing	FFL finish floor level	WC water closet
EA equal angle	horz horizontal reinforcing	EX existing	HT hose tap
PFC parallel flange channel	IF inside face	DTF document transmittal form	GT gully trap
CHS circular hollow section	OF outside face	max maximum	DP down pipe
TFB tapered flange beam	BF both faces	min minimum	DIA diameter
WB welded beam	SSL structural slab level	APPR approved	ID inside diameter
G grade		BLDG building	OD outside diameter
Galv galvanised		CL centre line	IL invert level
SP splice		CNR corner	LL lid level
DB drossbach tube		DIM dimension	OF over flow
PC precast concrete panel	MH manhole	m metre	OFO over flow outlet
CON concrete	CP catchpit	mm millimetre	
CJ control joint	LL lid level	MISC miscellaneous	
EJ expansion joint	IL invert level	NO number	
HDG hot dip galvanised	RL reduced level	NZS New Zealand Standard	
MS mild steel	SW stormwater	R radius	
FT flat	SS sanitary sewer	REF reference	
PLY plywood	WW waste water	SK sketch	
SS stainless steel	WM/S water main/supply	SPEC specification	
FWAR fillet weld all round	ROW right of way	TYP typical	
BW butt weld	BC basecourse		
FP full penetration	SB subbase		
	SG subgrade		

Hamilton Auckland
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Client	Contractor	Sheet	Drawn: TDW	Scale:	at A1
WTR WAIKATO THOROUGHbred RACING TE RARA CAMBRIDGE WAIPA	BCD GROUP	CIVIL INDEX & STANDARD NOTES	Engineer: TDW		
		Project Title	Job No:	Sheet No:	Revision
		WAIKATO THOROUGHbred RACING			
		PENCARROW ROAD, WAIKATO	23-1883	C-000	2
			Rev	Date	by
			2	17/02/2026	TDW FOR FAST TRACK APPLICATION
			1	16/12/2025	TDW FOR FAST TRACK APPLICATION
					Reason



Upgrades to Pencarrow Road to allow for proposed site entrance, to be based on WRTM models

Duncan Road upgrades may require shifting power poles running along the site's side of the road

proposed upgrade to Duncan Road
 1.8 m footpath, located 5 m from the site's boundary to provide space for existing power poles.
 0.5 m of berm to unsealed shoulder
 Both sides of road to have 0.5 m of unsealed shoulder and 0.5 m of sealed shoulder
 Land width to be 7 m (2 x 3.5 m)
 As the existing corridor is 20 m (minimum width for access road) the proposed upgrades can also fit.

Intersection upgrades to Hooker Road/Pencarrow Road intersection, to be based on WRTM models

Upgrades to Hooker Road to allow for proposed site entrance, to be based on WRTM models
 Upgrades to likely include right turn bay

Intersection upgrades to Hooker Road/Duncan Road intersection, to be based on WRTM models

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5. The ultimate stormwater drainage design of the commercial, track, and trainer zones should, as far as possible, match the proposed catchments on C-602
6. Not all service connections have been shown. Service plans show Fibre on Pencarrow Road, Hooker Road, and Duncan Road
7. Refer architectural drawings for all power, data + services information.
8. Refer to C-355 and C-356 for roading cross-sections and refer to C-603-C-606 for in plan roading width dimensions

Legend

- property boundary
- building
- retirement village
- existing landscaping
- grass track
- synthetic track
- main track
- sand track
- plowed track
- pond/wetland
- subdivision
- council urban road - as per RITS
- council rural road - as per RITS
- landscaped boulevard
- service road with footpath
- service road without footpath
- roadside stormwater swale (to handle floodwater)
- roadside local swale

Client **WTR**
WAIKATO THOROUGHBRED RACING
 TE RAPA · CAMBRIDGE · WAIPA

Contractor

BCD GROUP

Sheet **PROPOSED ROAD NETWORK AND ROADING UPGRADES**
 Project Title **WAIKATO THOROUGHBRED RACING**
 PENCARROW ROAD, WAIKATO

Rev	Date	By	Reason
2	27/02/2026	TDW	FOR FAST TRACK APPLICATION
1	19/12/2025	TDW	FOR FAST TRACK APPLICATION

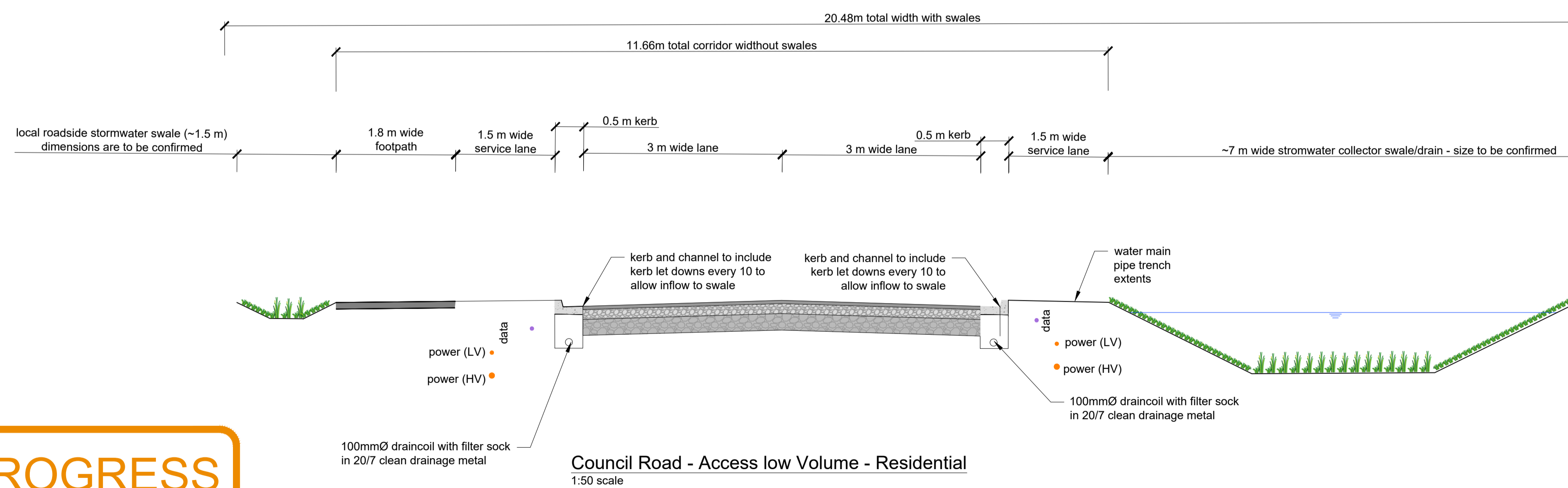
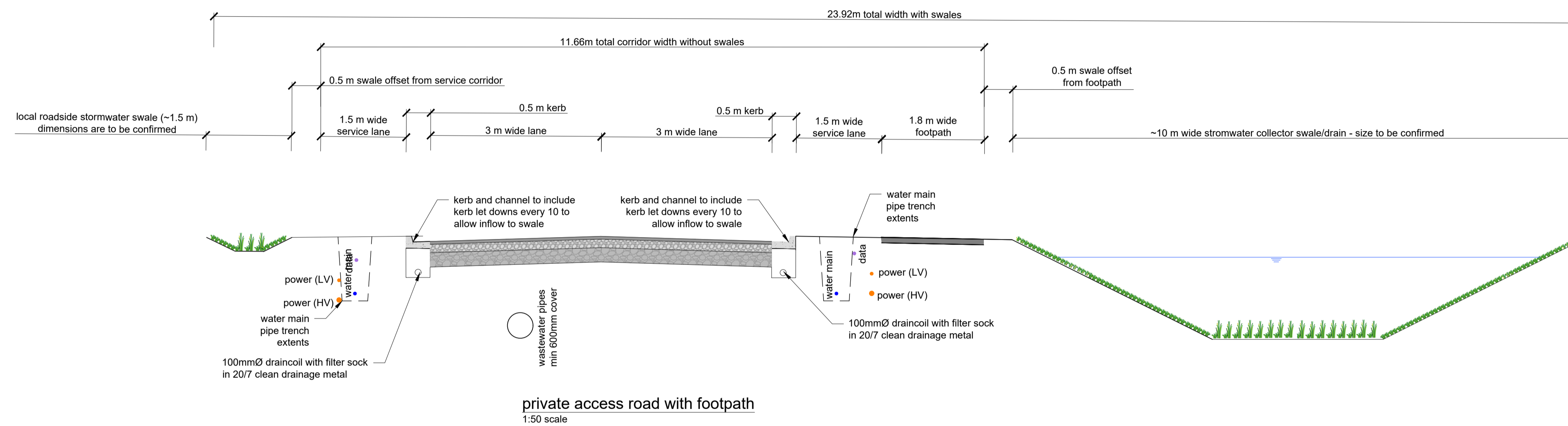
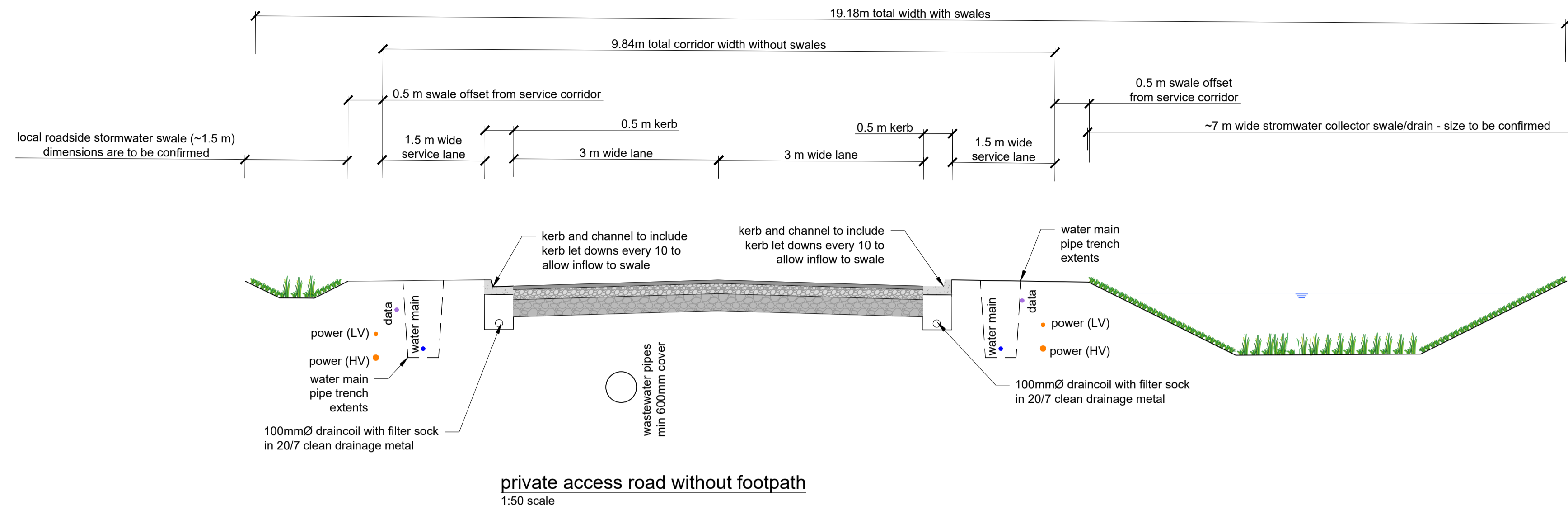
Drawn: TDW	Scale: 1:4000	at A1
Engineer: TDW		
Job No: 23-1883	Sheet No: C-350	Revision: 2

all dimensions to be verified on site before making any shop drawings or commencing any work.

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Notes:

1. The swales sizes alongside each road type will vary based on the road's location. The swale shown in the cross-section is the largest swale likely to accompany that road type, based on the current stormwater plans.
2. The swales can be on either side of the road

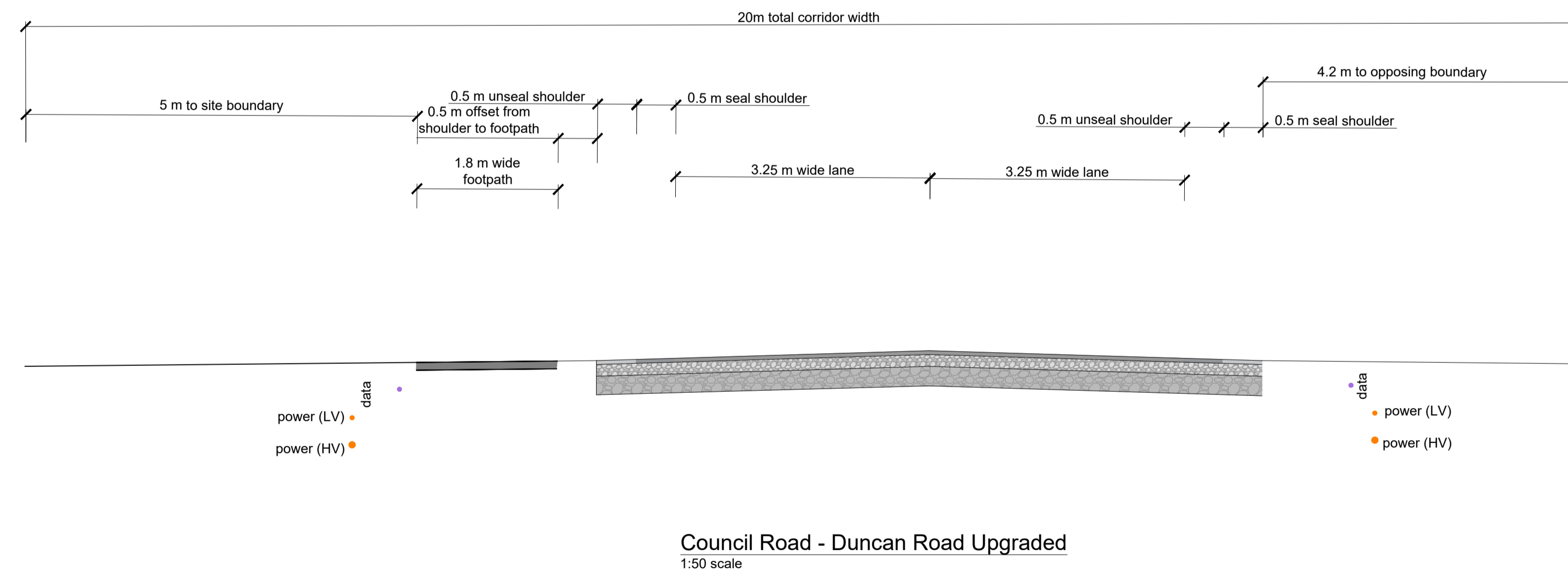
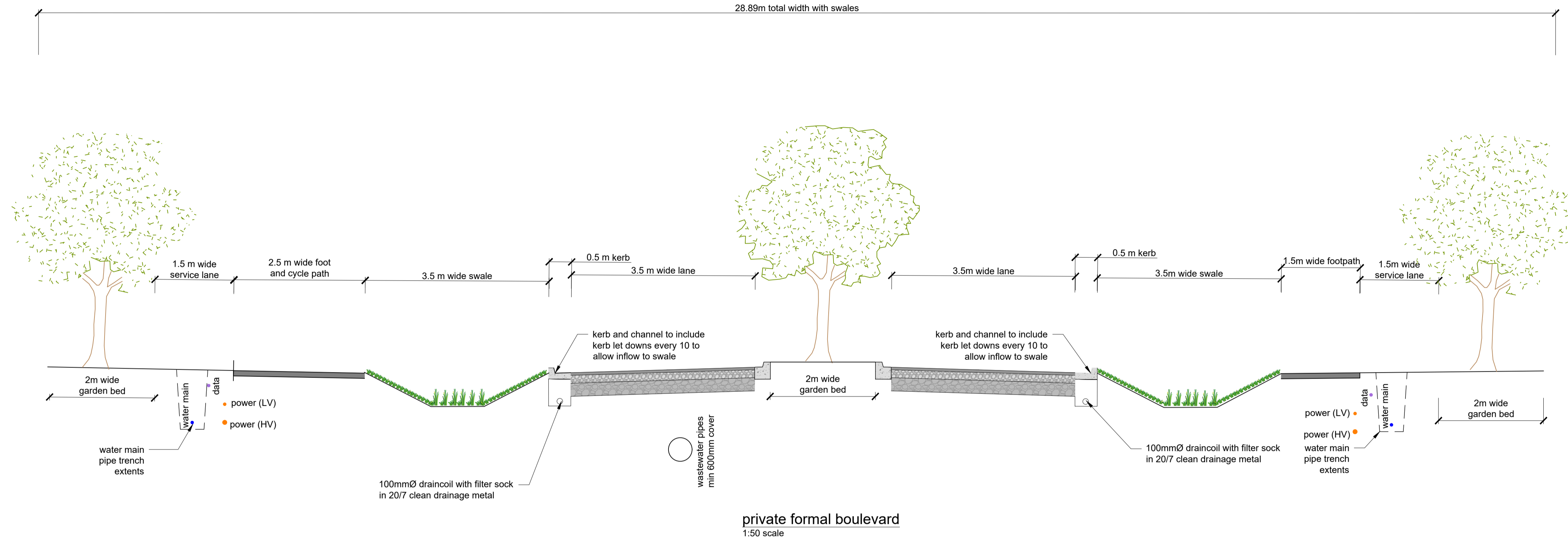


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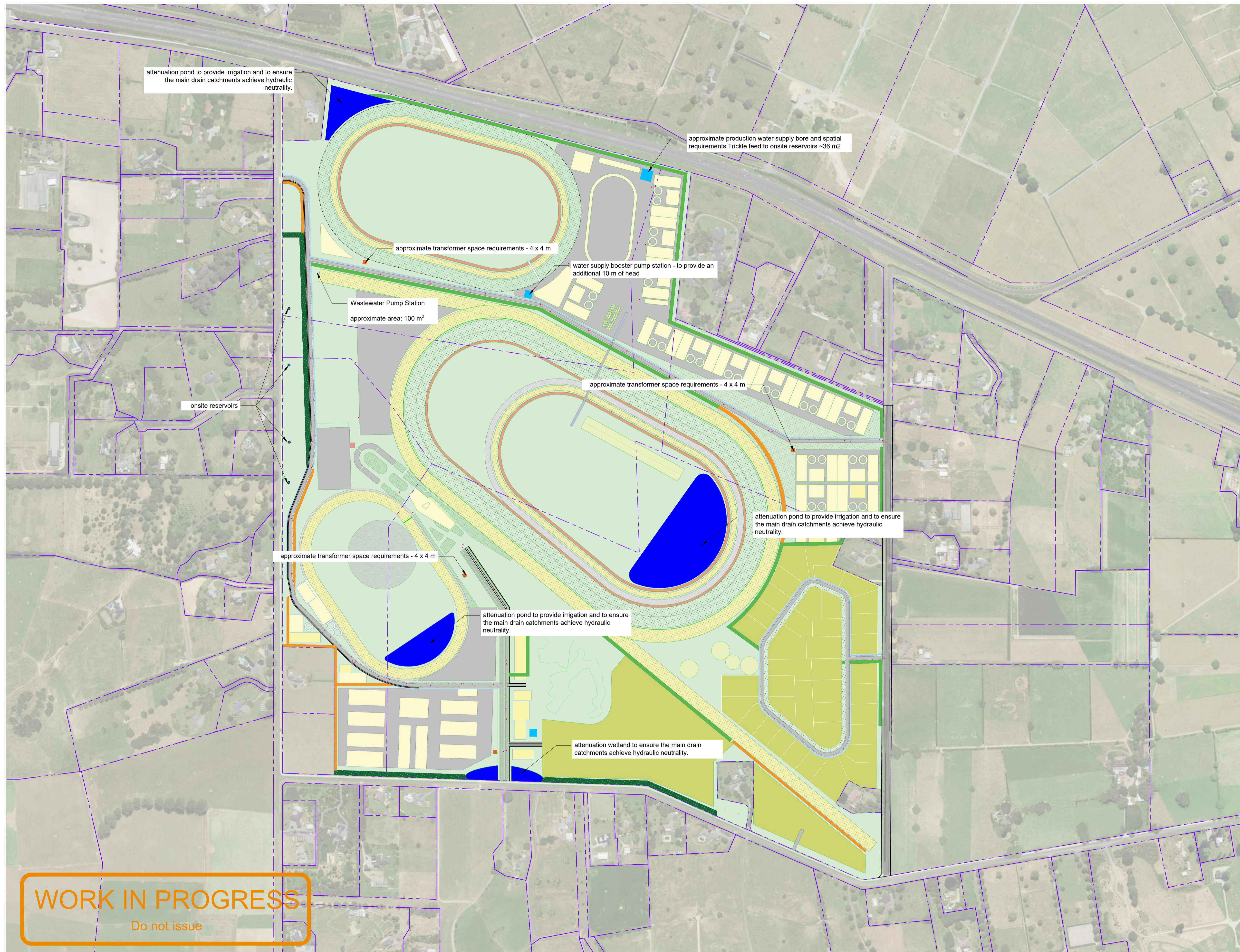
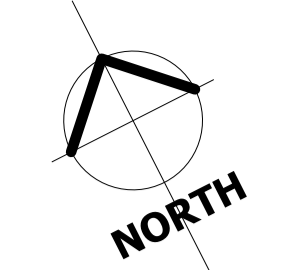
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7. Refer architectural drawings for all power, data + services information.

Legend

- property boundary
- building
- retirement village
- landscaping
- grass track
- synthetic track
- main track
- sand track
- plowed track
- pond/wetland
- subdivision
- ~5 m wide swale
- ~7 m wide swale
- ~10 m wide swale
- water supply tank
- water supply pump station
- wastewater pump station and disposal
- wastewater manhole
- water supply hydrant
- power transformer

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Client **WTR**
WAIKATO THOROUGHBRED RACING
TE RAPA · CAMBRIDGE · WAIPIA

Contractor

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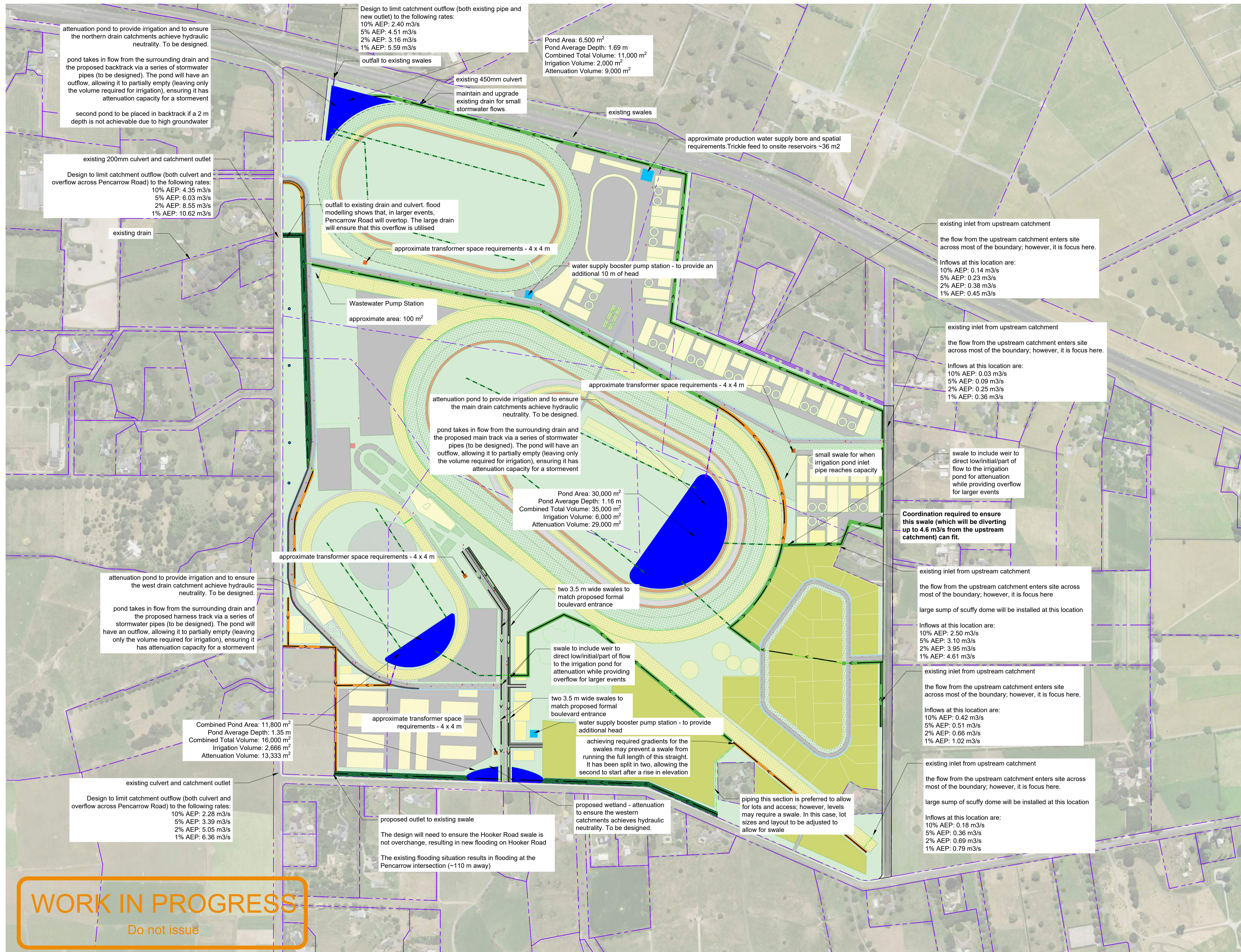
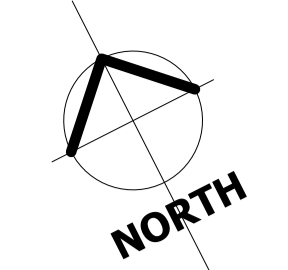
Sheet **PROPOSED INFRASTRUCTURE PLAN - OVERVIEW**
Project Title **WAIKATO THOROUGHBRED RACING**
PENCARROW ROAD, WAIKATO

Rev	Date	By	Reason
1	27/02/2026	TDW	FOR FAST TRACK APPLICATION

Drawn: TDW	Scale: 1:4000	at A1
Engineer: TDW		
Job No: 23-1883	Sheet No: C-500	Revision: 1

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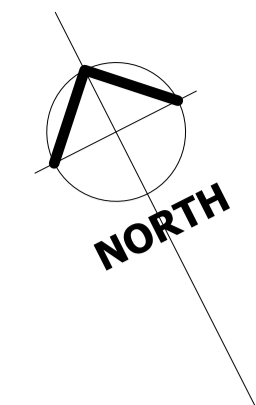
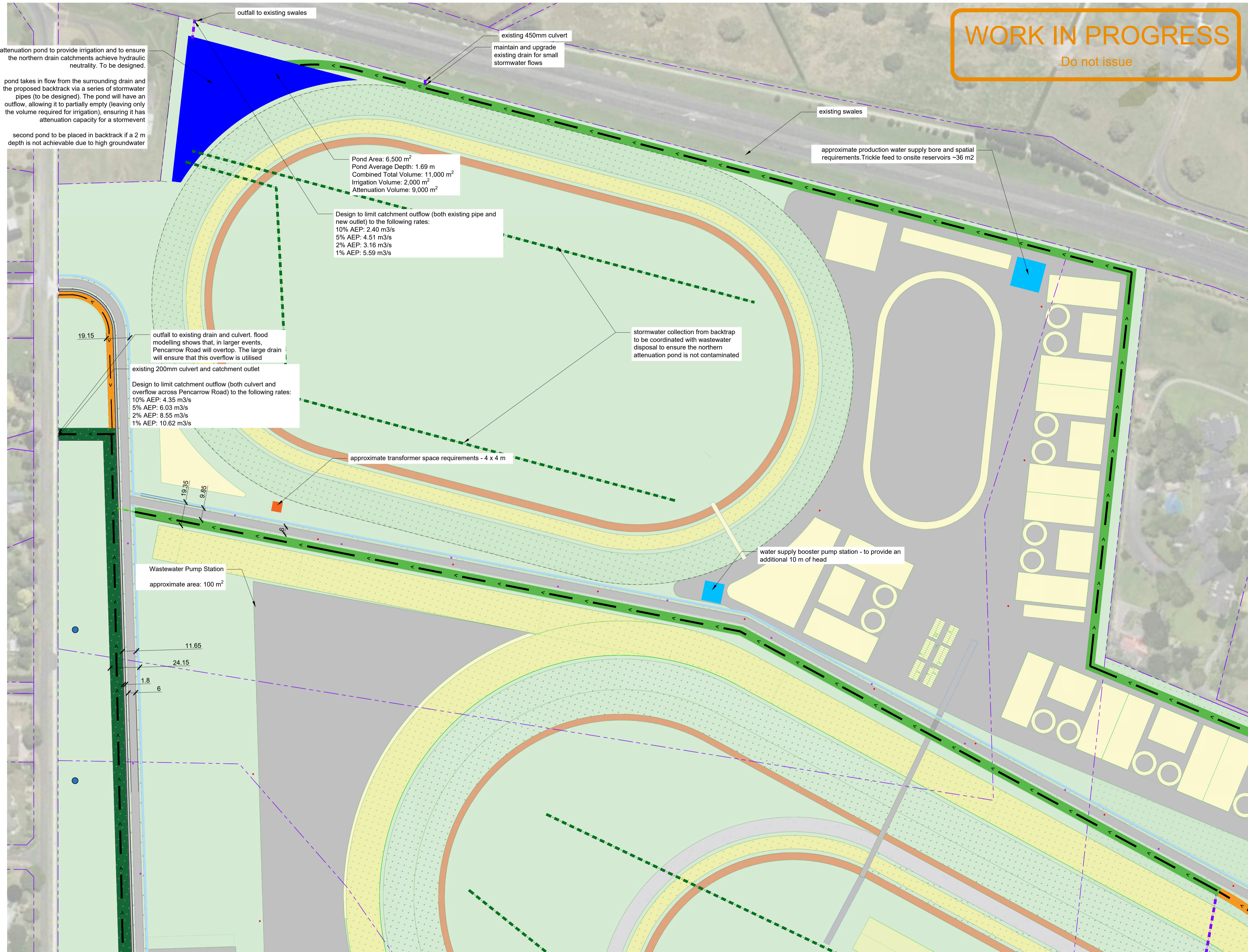
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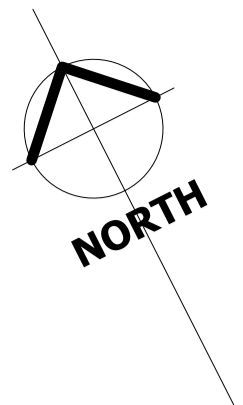
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Legend

- property boundary
- building
- retirement village
- existing landscaping
- grass track
- synthetic track
- main track
- sand track
- plowed track
- pond/wetland
- subdivision
- pond inlet from swale
- pond outlet to swale
- stormwater culvert
- ~5 m wide swale
- ~7 m wide swale
- ~10 m wide swale
- water supply tank
- water supply pump station
- wastewater pump station and disposal
- wastewater manhole
- water supply hydrant
- power transformer

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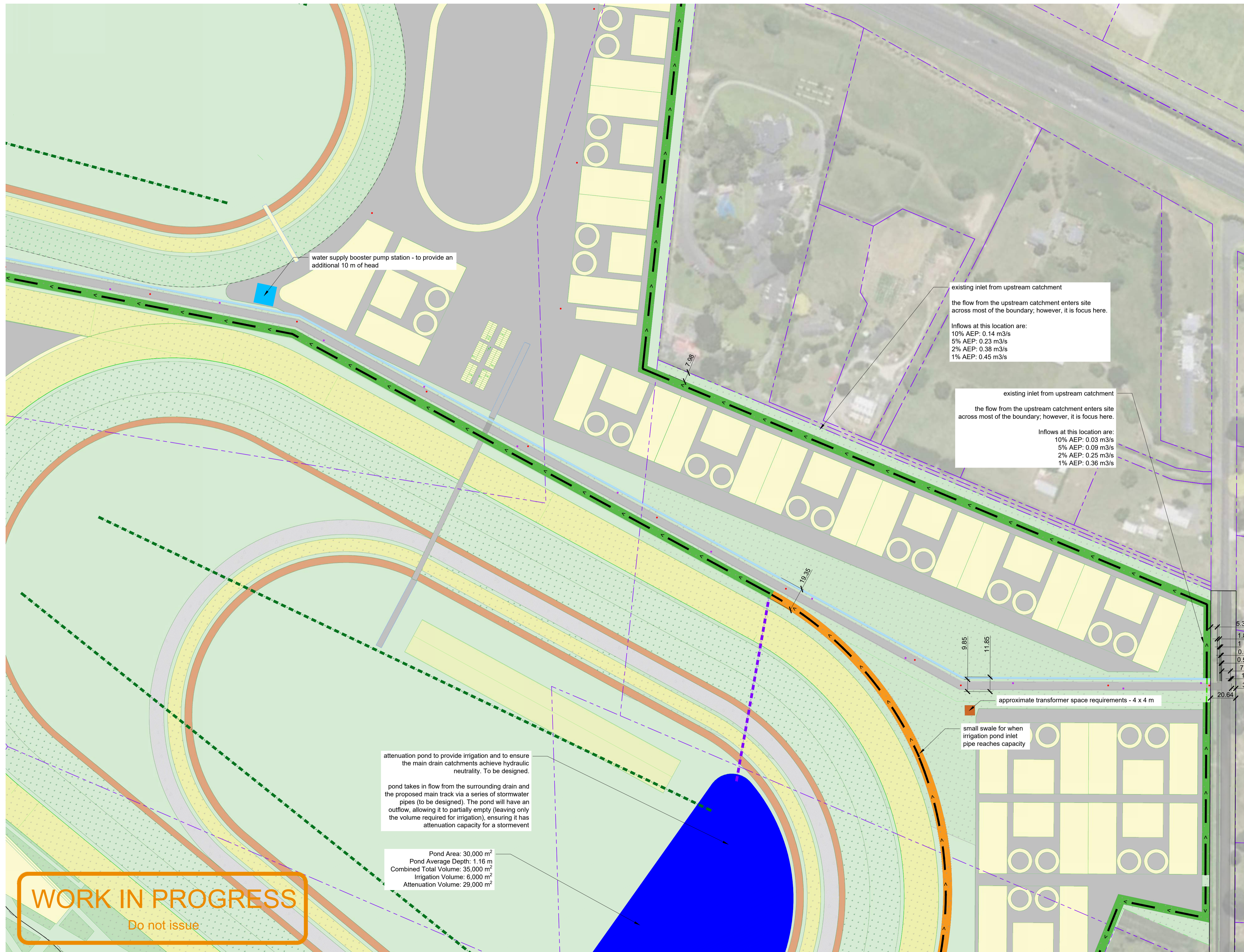


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- trainer areas
- stormwater main to with outlet to swale
- pond inlet from swale
- pond outlet to swale
- stormwater culvert
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- water supply pump station
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Client **WTR**
WAIKATO THOROUGHBRED RACING
TE RAPA - CAMBRIDGE - WAIPA

Contractor **BCD GROUP**

Sheet **PROPOSED STORMWATER PLAN - SHEET 2 OF 4**

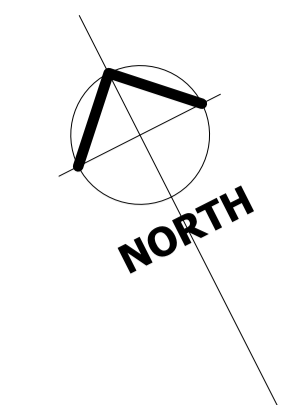
Project Title **WAIKATO THOROUGHBRED RACING**
 PENCARROW ROAD, WAIKATO

Rev	Date	By	Reason
1	27/02/2026	TDW	FOR FAST TRACK APPLICATION

Drawn: TDW	Scale: 1:1500	at A1
Engineer: TDW		
Job No: 23-1883	Sheet No: C-604	Revision: 1

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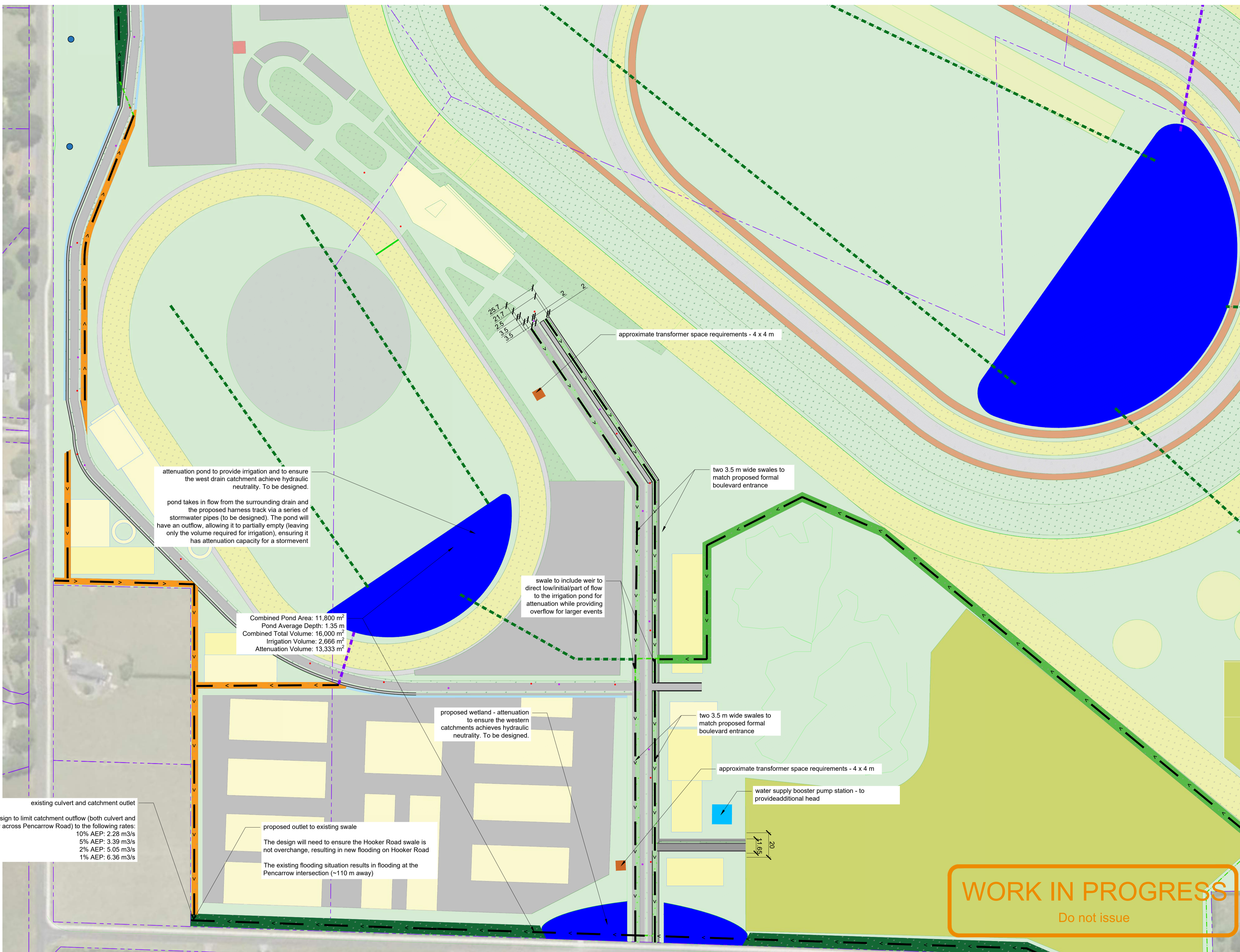


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attenuation pond to provide irrigation and to ensure the west drain catchment achieve hydraulic neutrality. To be designed.

pond takes in flow from the surrounding drain and the proposed harness track via a series of stormwater pipes (to be designed). The pond will have an outflow, allowing it to partially empty (leaving only the volume required for irrigation), ensuring it has attenuation capacity for a stormevent

Combined Pond Area: 11,800 m²
 Pond Average Depth: 1.35 m
 Combined Total Volume: 16,000 m³
 Irrigation Volume: 2,666 m³
 Attenuation Volume: 13,333 m³

swale to include weir to direct low/initial/part of flow to the irrigation pond for attenuation while providing overflow for larger events

proposed wetland - attenuation to ensure the western catchments achieves hydraulic neutrality. To be designed.

existing culvert and catchment outlet

Design to limit catchment outflow (both culvert and overflow across Pencarrow Road) to the following rates:

- 10% AEP: 2.28 m³/s
- 5% AEP: 3.39 m³/s
- 2% AEP: 5.05 m³/s
- 1% AEP: 6.36 m³/s

proposed outlet to existing swale

The design will need to ensure the Hooker Road swale is not overchange, resulting in new flooding on Hooker Road

The existing flooding situation results in flooding at the Pencarrow intersection (~110 m away)

approximate transformer space requirements - 4 x 4 m

two 3.5 m wide swales to match proposed formal boulevard entrance

two 3.5 m wide swales to match proposed formal boulevard entrance

approximate transformer space requirements - 4 x 4 m

water supply booster pump station - to provide additional head

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 TE RAPA - CAMBRIDGE - WAIPA

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Sheet **PROPOSED STORMWATER PLAN - SHEET 3 OF 4**
 Project Title **WAIKATO THOROUGHbred RACING**
 PENCARROW ROAD, WAIKATO

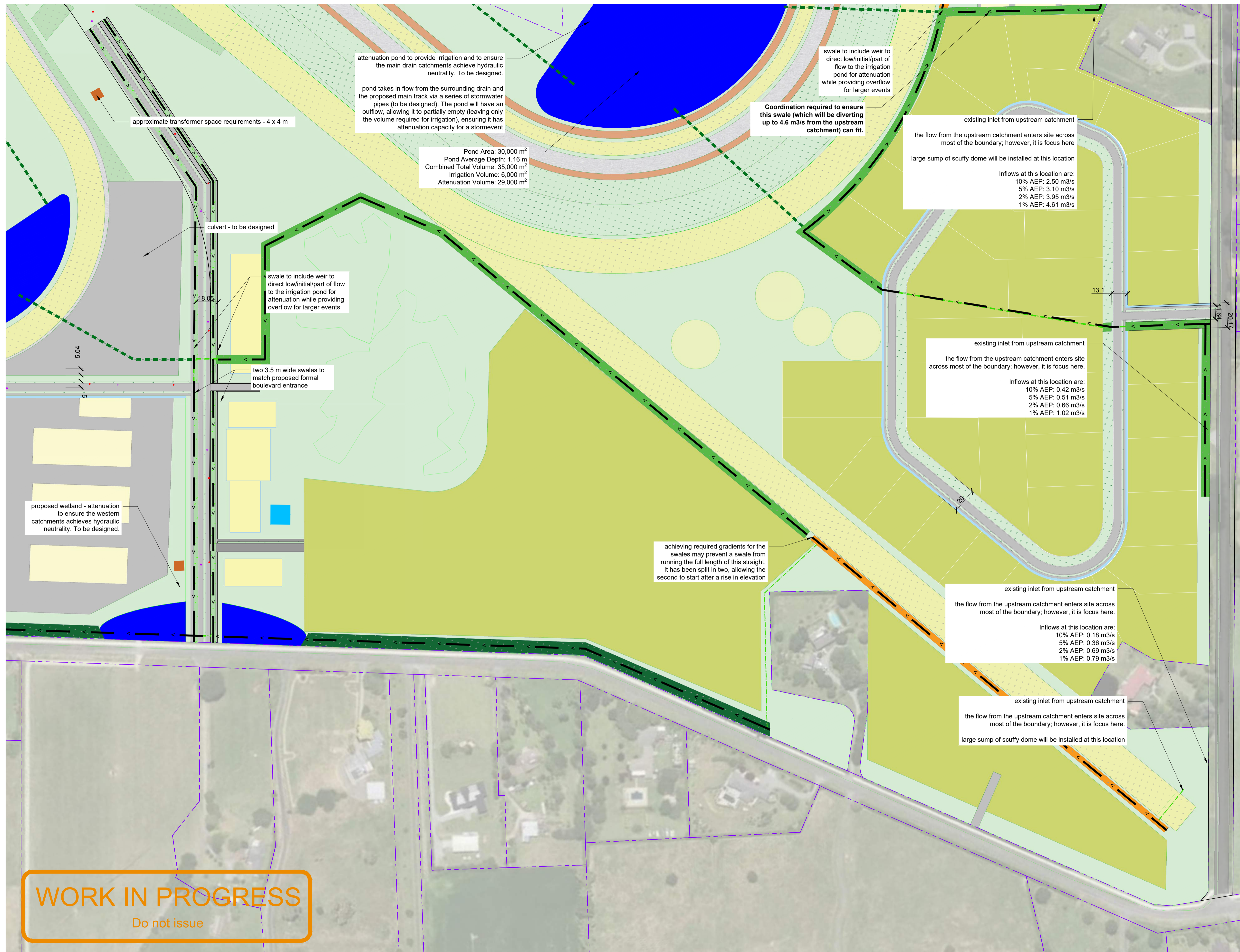
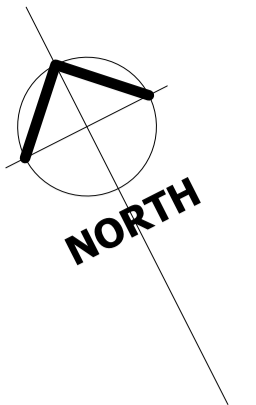
Rev	Date	By	Reason
1	27/02/2026	TDW	FOR FAST TRACK APPLICATION

Drawn	Scale	at A1
TDW	1:1500	
Engineer: TDW		
Job No:	Sheet No:	Revision
23-1883	C-605	1

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TDW	1:1500	
Engineer: TDW		
Job No:	Sheet No:	Revision
23-1883	C-605	1

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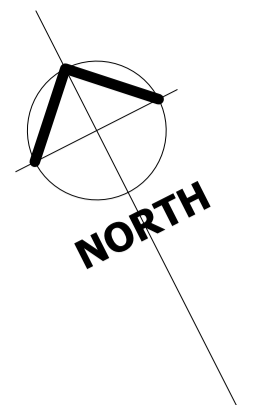
Sheet **PROPOSED STORMWATER PLAN - SHEET 4 OF 4**
Project Title **WAIKATO THOROUGHbred RACING**
PENCARROW ROAD, WAIKATO

Rev	Date	By	Reason
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Drawn: TDW	Scale: 1:1500	at A1
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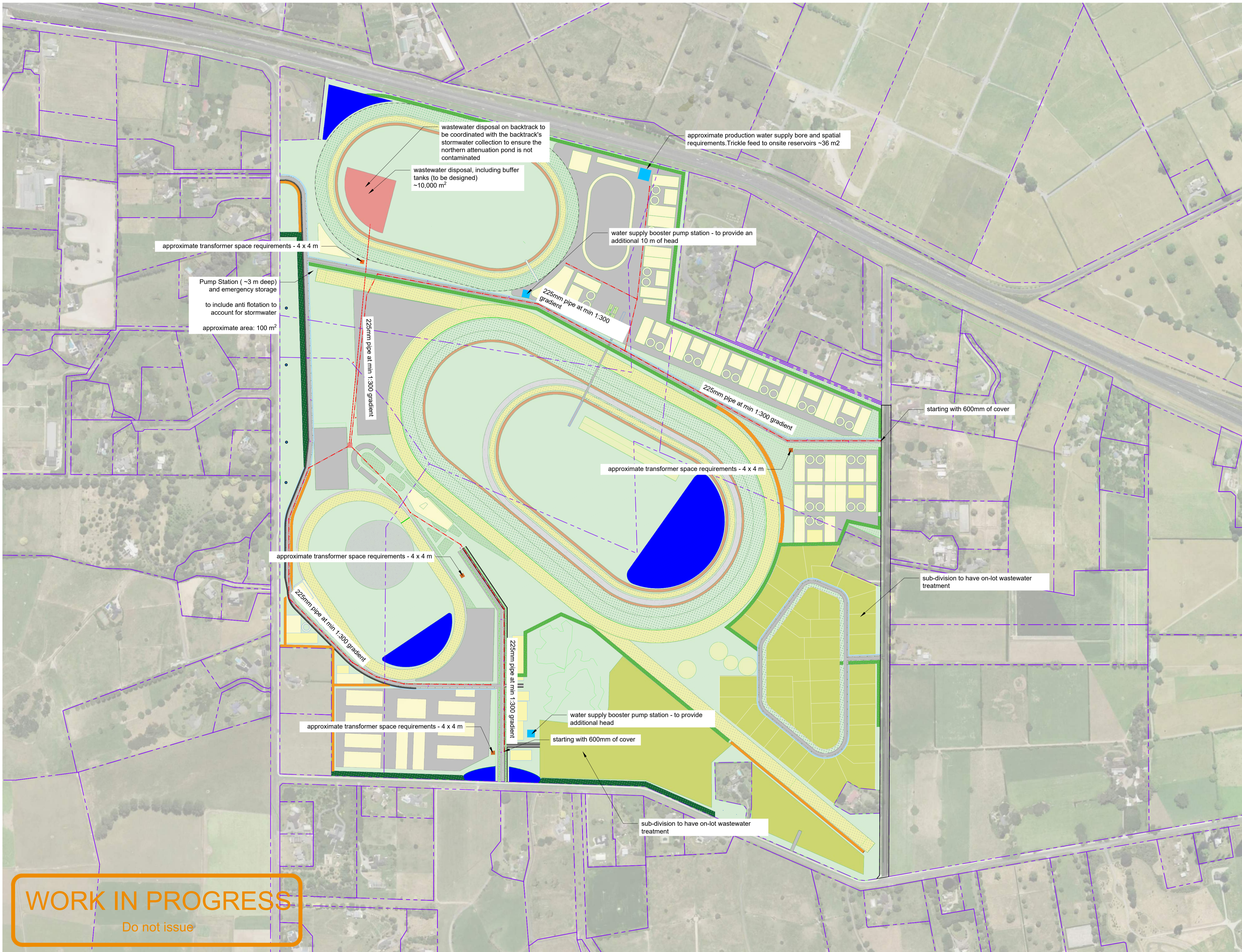


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2. The location and extent of existing services shown may not be exhaustive and cannot be guaranteed. All efforts have been made to identify the utilities in the construction area.
3. The Contractor must confirm the location of all existing services, and pothole potentially conflicting services prior to commencing permanent works construction if required.
4. If the Contractor locates any utilities not shown on the drawings, or identified by the relevant authority, they must inform the Engineer immediately. The Engineer shall then advise the Contractor on how to proceed. The Contractor is to include the location of the extra services in the As-Built information they provide to the Engineer.
5. Not all service connections have been shown. Service plans show Fibre on Pencarrow Road, Hooker Road, and Duncan Road.
6. Wastewater network to have wastewater manholes with a maximum spacing of 120 m.
7. Refer architectural drawings for all power, data + services information.

Legend

- property boundary
- building
- retirement village
- existing landscaping
- grass track
- synthetic track
- main track
- sand track
- plowed track
- pond/wetland
- subdivision
- wastewater main - 150mm dai min.
- wastewater disposal
- ~5 m wide swale
- ~7 m wide swale
- ~10 m wide swale
- water supply tank
- water supply pump station
- wastewater pump station and disposal
- wastewater manhole
- water supply hydrant
- power transformer



WORK IN PROGRESS
Do not issue

Client **WTR**
WAIKATO THOROUGHBRED RACING
TE RAPA - CAMBRIDGE - WAIPA

Contractor **BCD GROUP**

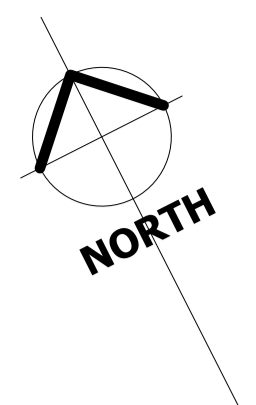
Sheet **PROPOSED WASTEWATER PLAN - OVERVIEW**
Project Title **WAIKATO THOROUGHBRED RACING**
PENCARROW ROAD, WAIKATO

Rev	Date	By	Reason
2	27/02/2025	TDW	FOR FAST TRACK APPLICATION
1	19/12/2025	TDW	FOR FAST TRACK APPLICATION

Drawn: TDW	Scale: 1:4000	at A1
Engineer: TDW		
Job No:	Sheet No:	Revision
23-1883	C-701	2

all dimensions to be verified on site before making any shop drawings or commencing any work.

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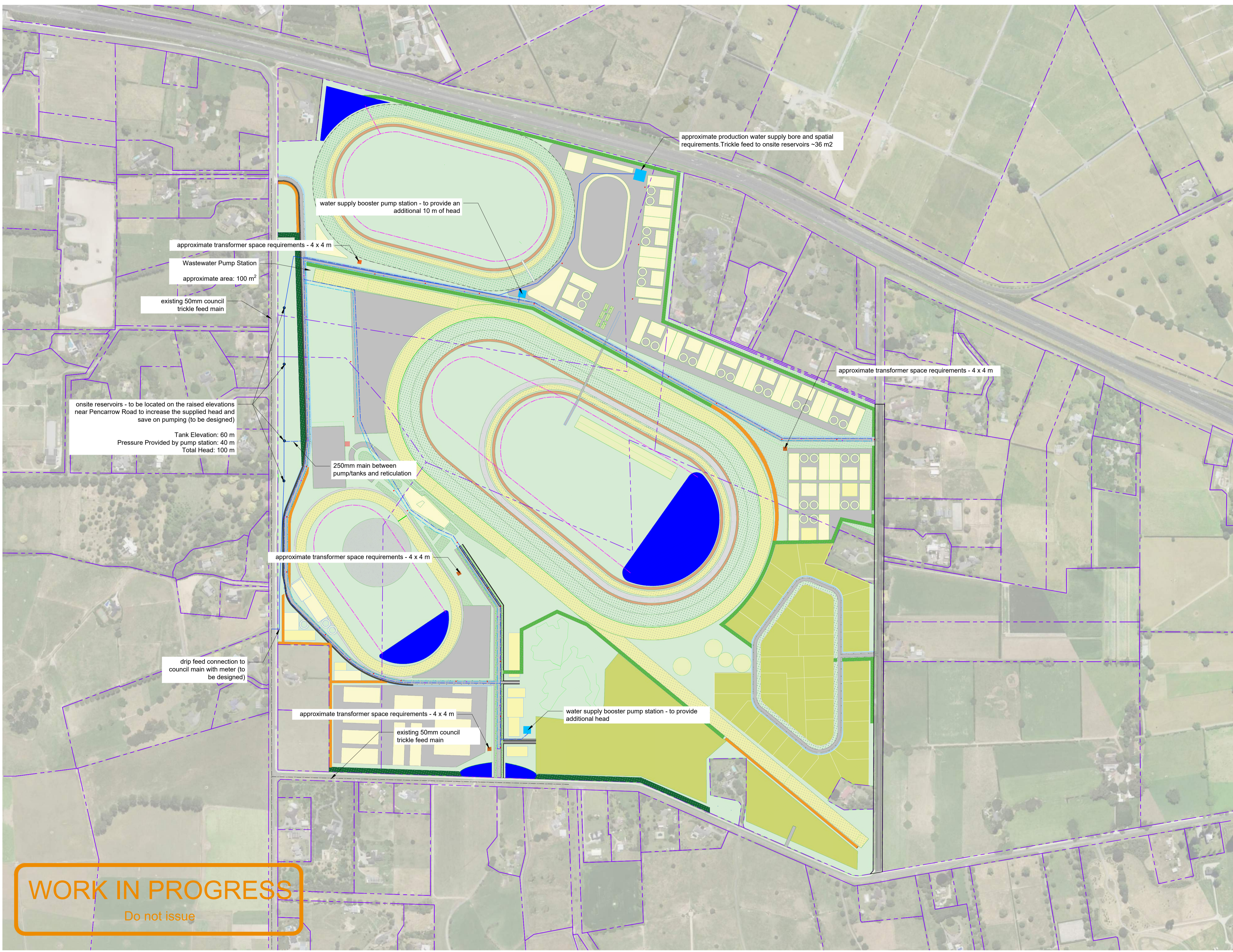


Notes:

1. While all due care has been taken during design, the Contractor is to confirm all invert levels and existing surface levels prior to commencing permanent works construction. If any levels are significantly different, these are to be reported to the Engineer immediately.
2. The location and extent of existing services shown may not be exhaustive and cannot be guaranteed. All efforts have been made to identify the utilities in the construction area.
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5. Individual buildings are to include water storage, both for operational use and fire fighting.
6. Network to include hydrants on both sides of the road, located a spacing (on each side) of no less than 90 m.
7. Water supply network to include trust blocks, valves, and backflow prevention.
8. Irrigation layout to be confirmed.
9. Not all service connections have been shown. Service plans show Fibre on Pencarrow Road, Hooker Road, and Duncan Road.
10. Refer architectural drawings for all power, data + services information.

Legend

- property boundary
- building
- retirement village
- existing landscaping
- grass track
- synthetic track
- main track
- sand track
- plowed track
- pond/wetland
- subdivision
- water supply main - 100 mm unless otherwise noted
- water supply rider main - 50 mm
- water supply irrigation main
- water supply trickle feed
- ~5 m wide swale
- ~7 m wide swale
- ~10 m wide swale
- water supply tank
- water supply pump station
- wastewater pump station and disposal
- wastewater manhole
- water supply hydrant
- power transformer



WORK IN PROGRESS
Do not issue

Client **WTR**
WAIKATO THOROUGHBRED RACING
TE RARA CAMBRIDGE WAIPA

Contractor **BCD GROUP**

Sheet **PROPOSED WATER SUPPLY PLAN - OVERVIEW**
Project Title **WAIKATO THOROUGHBRED RACING**
PENCARROW ROAD, WAIKATO

Rev	Date	By	Reason
2	27/02/2025	TDW	FOR FAST TRACK APPLICATION
1	19/12/2025	TDW	FOR FAST TRACK APPLICATION

Drawn: TDW	Scale: 1:4000	at A1
Engineer: TDW		
Job No: 23-1883	Sheet No: C-801	Revision: 2

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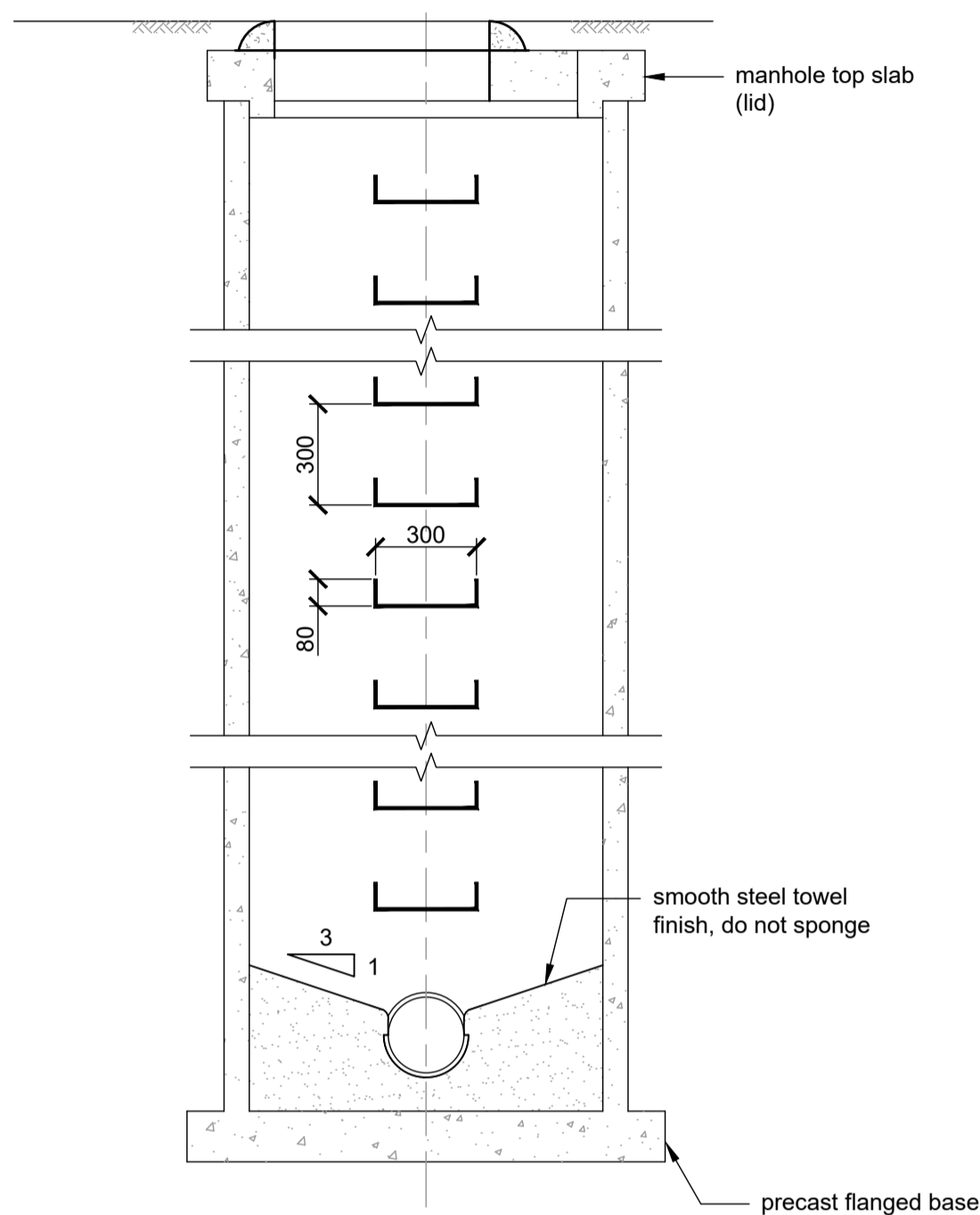
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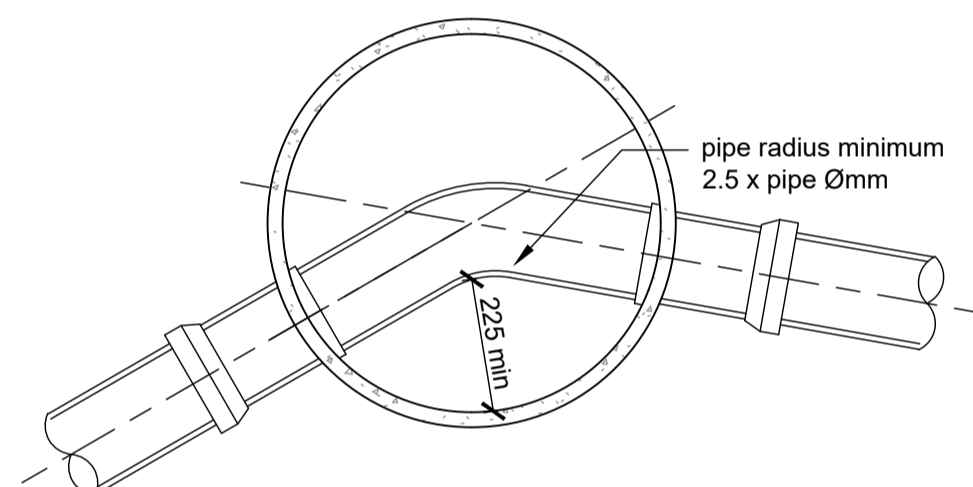
Do not issue

Manhole Notes:

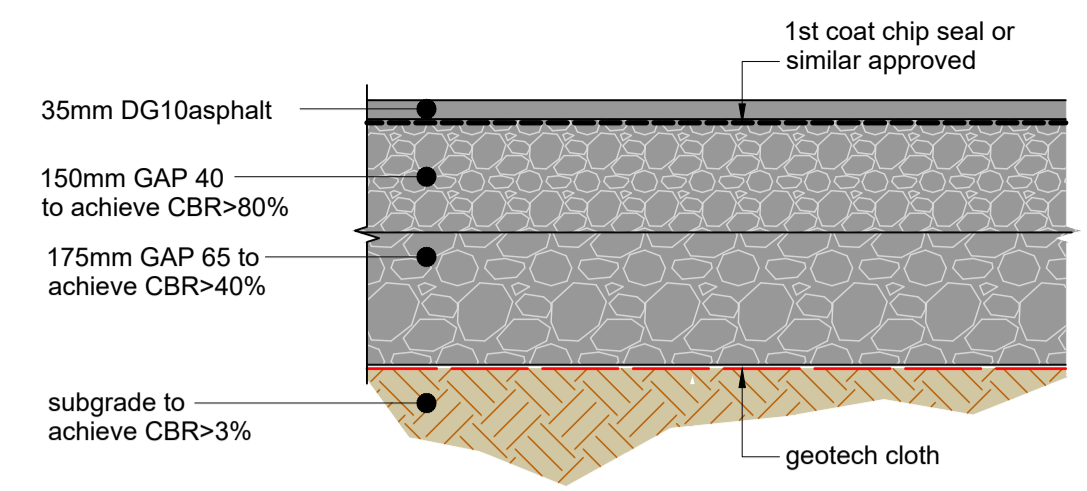
- Diameters of precast manholes pipes are nominal only.
- Wastewater manholes to use ceramic or accepted pre-formed channel. Stormwater manholes may use concrete.
- See standard detail for ductile iron cover and frame to fit recess and locking bolts and pre-cast slab detail.
- Ground level tolerances:
 - Pavement +0mm, -5mm
 - Berm +5mm, -5mm
 - Footpath +10mm, -0mm
- Manhole lid and frame to follow ground slope.
- Accepted steps as per Acceptable Products list.



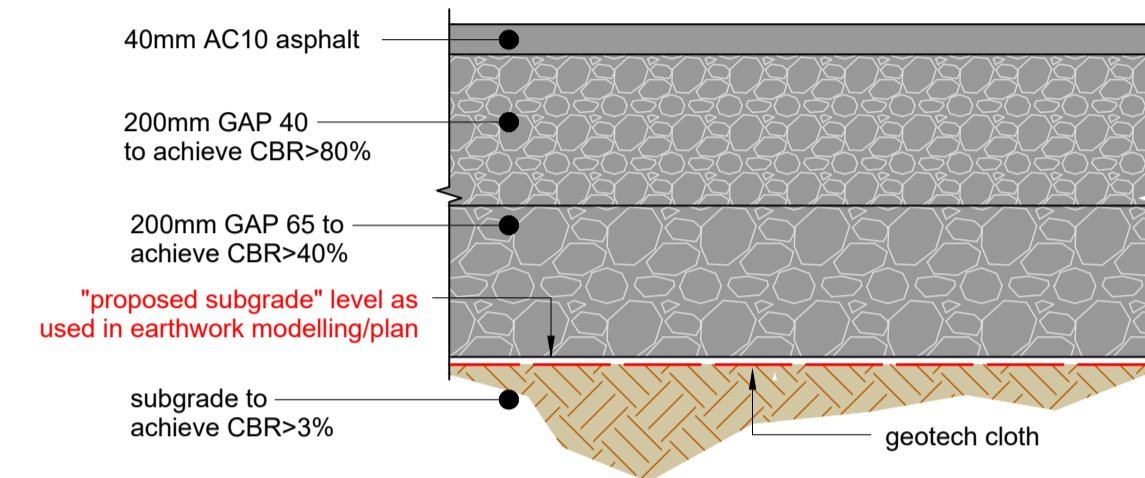
Details DN1050 & DN1200 Manholes
scale 1:20



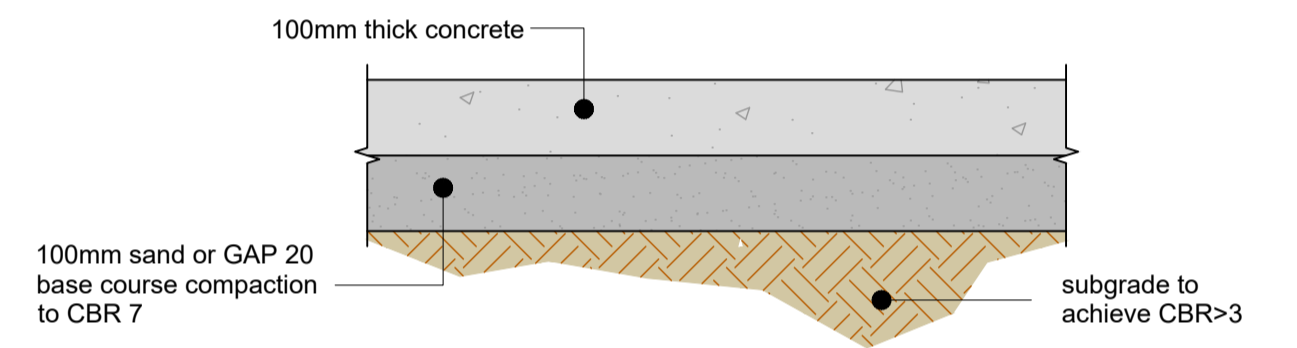
Typical Plan Curve through Manhole
scale 1:20



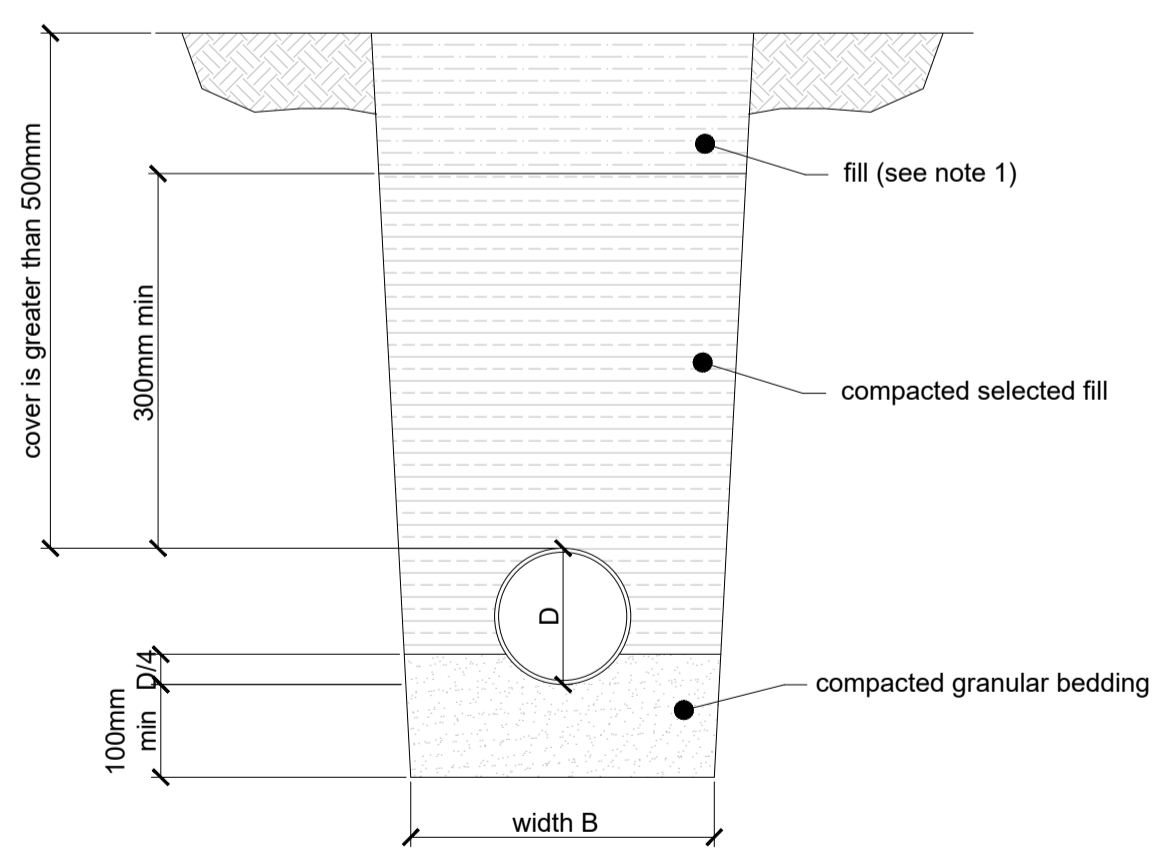
35mm Asphalt
scale 1:10



40mm Asphalt
scale 1:10



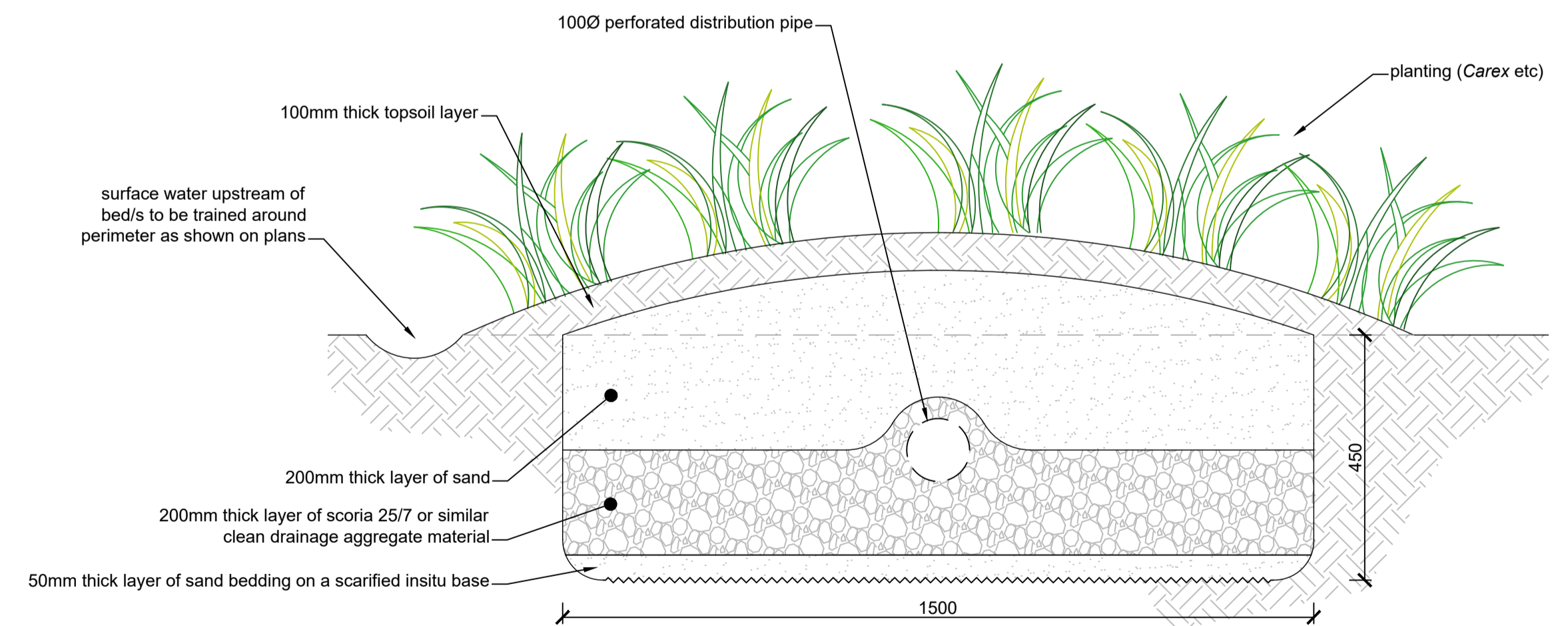
100mm Concrete slab for footpaths
scale 1:10



Cover Greater than 500mm

Note:

- Fill shall be:
 - 1.1. Ordinary fill where drains are located below gardens and open country
 - 1.2. Compacted selected fill where the drains are located below residential driveways and similar areas subjected to light traffic

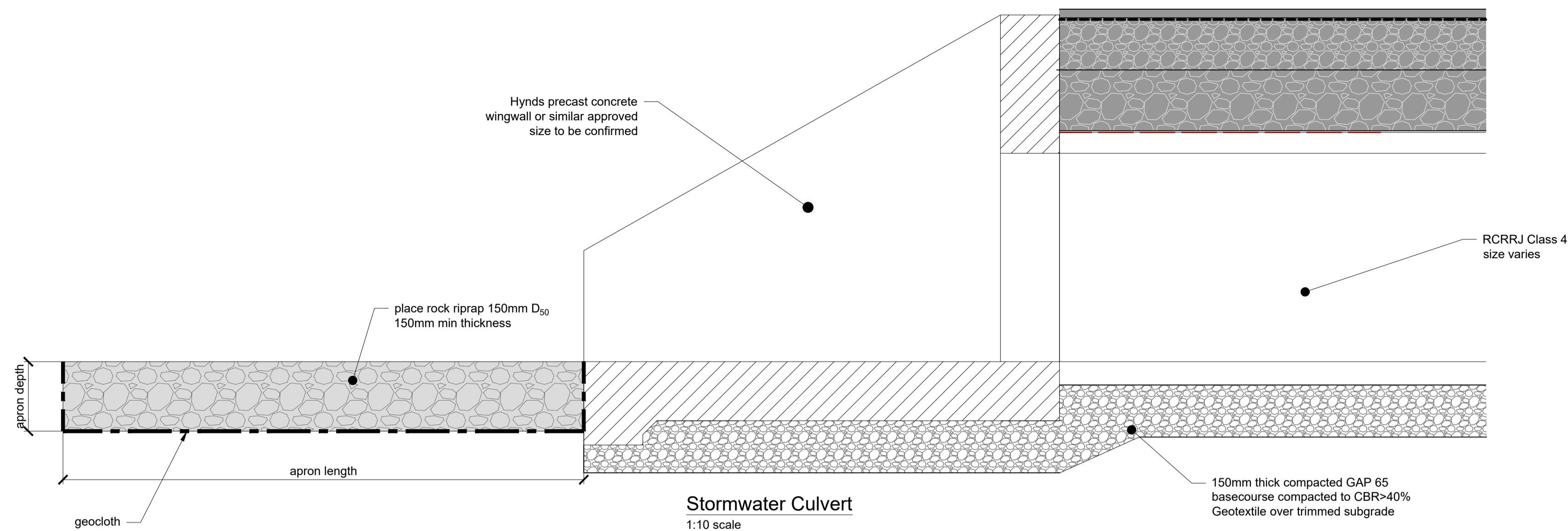
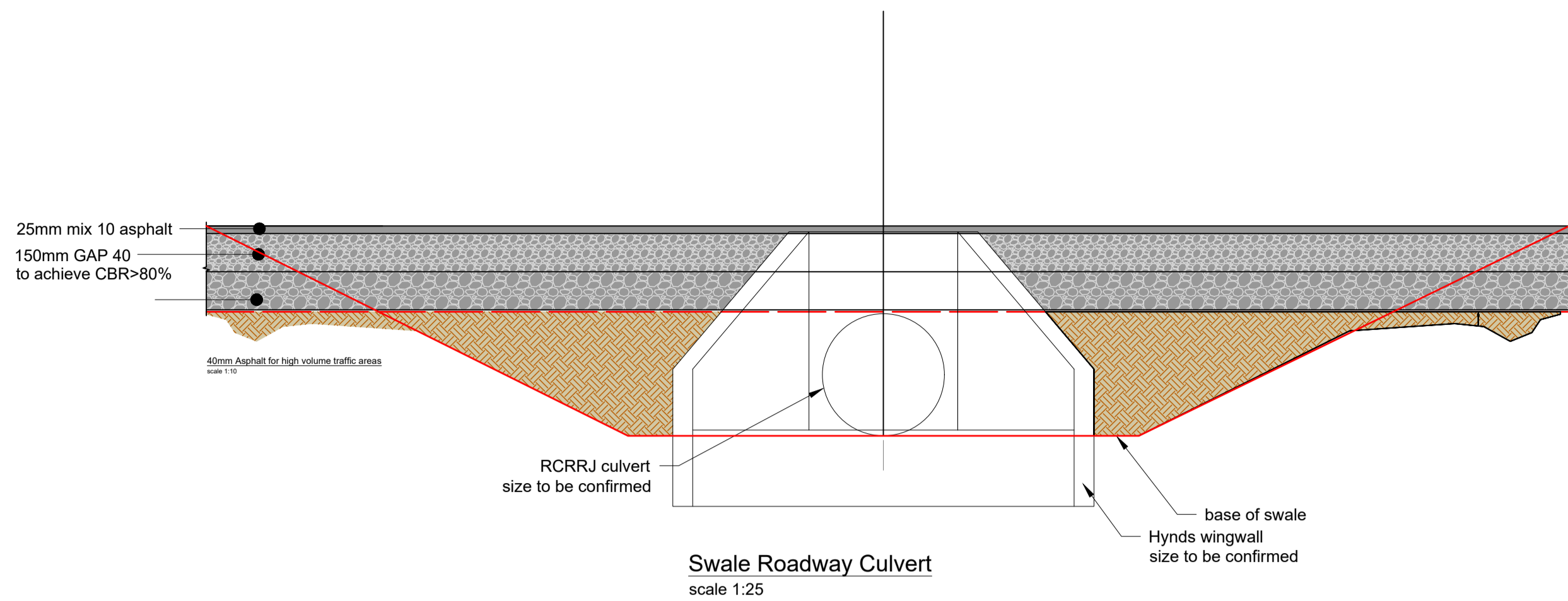


Typical Section Through Evaporation Transpiration Trench
scale 1:10

Client 	Contractor 	Sheet PROPOSED TYPICAL DETAILS SHEET 1 OF 2 Project Title WAIKATO THOROUGHbred RACING PENCARROW ROAD, WAIKATO	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 10%;">19/12/2025</td> <td style="width: 10%;">TDW</td> <td style="width: 75%;">FOR FAST TRACK APPLICATION</td> </tr> <tr> <td>Rev</td> <td>Date</td> <td>By</td> <td>Reason</td> </tr> </table>	1	19/12/2025	TDW	FOR FAST TRACK APPLICATION	Rev	Date	By	Reason	Drawn: TDW Scale: AS STATED at A1 Engineer: TDW Job No: Sheet No: Revision <div style="background-color: orange; color: white; padding: 5px; display: flex; justify-content: space-between;"> 23-1883 C-850 1 </div>
1	19/12/2025	TDW	FOR FAST TRACK APPLICATION									
Rev	Date	By	Reason									

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Client

TE RARA · CAMBRIDGE · WAIPA

Contractor

Sheet
PROPOSED TYPICAL DETAILS SHEET 2 OF 2
 Project Title
WAIKATO THOROUGHbred RACING
 PENCARROW ROAD, WAIKATO

Rev	Date	By	Reason
1	19/12/2025	TDW	FOR FAST TRACK APPLICATION

Drawn: TDW	Scale: AS STATED	at A1
Engineer: TDW		
Job No:	Sheet No:	Revision
23-1883	C-851	1

all dimensions to be verified on site before making any shop drawings or commencing any work.

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