Rural City of Wangaratta

Boat Ramp – Options Analysis

Frank Garth Reserve

And

Templeton St



May 2026

CHRIS DWYER
Director / Engineer
MIEAust CPEng NER
Confluence Group Pty. Ltd.
M 0437 163 678
E cdwyer@confluence.net.au
W www.confluence.net.au

Project	Frank Garth Reserve and Templeton St Boat Ramp – Options Analysis
Client	Rural City of Wangaratta
Confluence Group Project Manager	Chris Dwyer

Document History and Status

Rev. No.	Author	Reviewer	Distribution	Date Issued
V1 - draft	C Dwyer	T Clark	To client	13-3-26
V2 - final	C Dwyer	T Clark	To client	1-5-26

1 Introduction

1.1 Background

The Rural City of Wangaratta has engaged Confluence Group via a Better Boating Victoria grant to investigate options to:

- improve the functionality of a boat ramp on the Ovens River at Templeton St in Wangaratta
- consider options for construction of ramp upstream of Sydney Weir in Wangaratta at Frank Garth Reserve

The scope of this investigation for each ramp is to complete the following:

Stage 0:

Topographic and bathymetric survey via drone, LiDAR and topographic survey

Stage 1:

1a Project Inception

1b Desktop Values

1c Inspection

1d Consultation - on line

1e Council consultation

1f Summary of limitations and recommendations

Stage 2:

2a Concept design and report

2c Concept plan based on feedback

3a Finalise concept

3b Preliminary Costings

2 Site Assessment

2.1 Overview Templeton St

A boat ramp is located on the Ovens River, via parkland north of Templeton St. There are no firm details on the origins of the ramp, however based on concrete condition, it appears to have been constructed between 1960 and 1980. An extension to the ramp, which includes a grooved finish appears to be approximately 25 years old.

The ramp provides fishers with access to waters of the Ovens River downstream of Sydney Weir. Due to the unregulated nature of the reach, access via 3-4.2m aluminium boats. Access for larger boats would not be possible due to the high prevalence of snags through the reach. It is also likely kayakers would utilise the ramp for easy access to the river.

The ramp is approximately 3.5m wide. This provides minimal access around a car and trailer to access the boat. Large rip rap rock protects the ramp from erosion either side of the ramp, but may also pose a safety hazard to users. On the upstream side of the ramp, there does appear to be space to increase the width of the ramp, while reducing any further impact on vegetation.

The grade of the ramp is approximately 1:6 which was determined from survey. This is not ideal, but is close to the preferred grades of 1:8.

During low flows less than 8.11 on the Wangaratta Gauge, it will be difficult to unload boats safely from the ramp. The Wangaratta gauge is located approximately 80m upstream of the ramp.

This study investigates opportunities to preferably improve the functionality of the existing ramp by increasing the width and possibly the running surface.

2.2 Overview Frank Garth

There is currently a boat ramp located on the left bank of the King River, immediately upstream of the confluence with the Ovens River. Access to the ramp is very limited due to steep access off the upper bank to the park, and extreme wheel ruts and erosion in the park. Rural City of Wangaratta has identified a preference to consider a ramp in Frank Grath Reserve, at the confluence of the Ovens and King Rivers due to ready access for cars with trailers, and a preference to maintain this reserve for public access.

River bank heights on the Ovens River in this location are of the order 2.5m above the typical weir pool level. This means a ramp with a 1:8 grade plus 0.9m draft will be of the order 25-30m long. To minimise impacting the cut into the reserve, impacting mature vegetation, and maintain other access around the park, two locations on the east side of the reserve are investigated to optimise siting a ramp with minimal impact.

2.3 Property Planning Considerations

Property planning reports have been accessed for both Frank Grath Reserve and Templeton St. The following summary and possible consequences for development are provided following:

2.3.1 Templeton St

- Land Tenure
    - Public Park and Recreation – land managed by Council. Use for boating consistent with land use, however possible impacts need to be considered by the manager.
    - A planning permit will be required for a new ramp and possibly for upgrades depending on their extents. A Works on Waterways referral will be required.

    - Possible impacts on the tree protection zone around the two large trees at the head of the ramp will need to be considered if modifications are made.
- Flood Overlay and LSIO
    - Within a flood overlay and land subject to inundation (access) overlay – this will need to be considered in management of the facility, recognising to the need for closure at certain times.
    - Will have minimal or no impact on changes to flooding if modified.
- Areas of Aboriginal Heritage Sensitivity
    - Within the Ovens River designated area – given the largely disturbed nature of the river bank, due diligence will need to occur as a first step.
- Works on Waterways
    - North East CMA will require referral when working on the banks of the Ovens River. Given the erosion zone is currently managed with rock rip rap. It is expected possible impacts on river health will be manageable.
- Bushfire Prone Area
    - Unlikely to have features needed to manage bushfire impact.

2.3.2 Frank Garth Reserve

- Land Tenure
    - Public Park and Recreation – land managed by council. Use for boating consistent with land use, however possible impacts need to be considered by the manager.
    - A planning permit will be required on public land.
    - Impacts on vegetation will need to be considered in detail.
- Flood Overlay and LSIO
    - Within a flood overlay and land subject to inundation overlay – this will need to be considered in management of the facility, recognising to the need for closure at certain times.
    - Will have minimal or no impact on changes to flooding if constructed
- Areas of Aboriginal Heritage Sensitivity
    - Within the Ovens River designated area – given the largely undisturbed nature of the river bank, this site will likely require a full basic Cultural Heritage Management Plan.
- Works on Waterways
    - North East CMA recognise the significance of this site on the Ovens River, being at the confluence of two major rivers its visual impact and possible impacts on river health such as fish habitat will require referral and consideration.
- Bushfire Prone Area
    - Unlikely to have features needed to manage bushfire impact

2.4 Images of Templeton St

Site photographs are shown below.



Photograph 1 – Approach to ramp



Photograph 2 – View up ramp



Photograph 3 – View down ramp



Photograph 4 – Water Level January 2026

2.5 Images of Frank Garth Reserve

Site photographs are shown below.



Photograph 5 – River at site, including some minor sand deposition



Photograph 6 – on North South alignment



Photograph 7 – Gap in vegetation where west-East Ramp would be located



Photograph 8 – River bank in location of both ramps

3 Consultation

At this options stage of the investigations, consultation has been undertaken with stakeholders who would assist in informing design features of an upgraded ramp and constraints regarding the existing ramp.

Once concepts and risks have been addressed, broader consultation can occur with land managers, traditional owners and local government to determine opportunities to move forward with this project. Initial consultation has occurred with the following stakeholders:

- [redacted] (Public - fisher)
    - Limited fishable water on the Ovens River upstream of Frank Garth due to snag s crossing river. Does not want them removed, but managed. No boat access up the King is possible due to logs and shallow water
    - Fully supports maintaining Templeton. Grade is ideal for relatively shallow water river. In low flow when draft on ramp is too low, access is not possible either side anyway due to logs and gravel bars.
- [redacted] (North East CMA)
    - Templeton
        - minimal impact is preferred, therefore modify existing
        - Assess possible impact on mature vegetation if increasing width
        - Increase width to the east preferred.
    - Frank Garth
        - Iconic location with the confluence of both rivers, therefore, protect amenity
        - Ensure suitable management of users near NEW pumps
        - Minimise any impacts on river health by minimising cutting the river bank and removing vegetation
- [redacted] (Former Fisheries Officer)
    - Supports the provision of formal fishing access both upstream of weir and downstream
    - Only access for smaller boating craft including kayaks
- [redacted] (Fisheries Officer)
    - Supports the provision of formal fishing access both upstream of weir and downstream
    - Templeton is a functional ramp, where upgrades are worthwhile; fishing here is limited by flows
    - Access to current ramp on King River may be improved by sealing track to deter four wheel drive vehicles
    - Only access for smaller boating craft including kayaks

4 Risk Assessment

4.1 Overview

The risk assessment completed assesses the perceived risks posed by the existing locations and potential measures needed in any scenario to mitigate the risk.

The risk assessment ratings basis is shown below in Table 2.

Table 2 Adopted Risk Rating Matrix

Risk Matrix			Consequences			
			Very High	High	Medium	Low
			4	3	2	1
Likelihood	Almost Certain	5	20	15	10	5
	Probable	4	16	12	8	4
	Possible	3	12	9	6	3
	Unlikely	2	8	6	2	2
	Very Unlikely	1	4	3	2	1

4.2 Templeton St Risk Assessment

The risk assessment outcomes are documented in Tables 3 and 4 for both existing conditions and post mitigation conditions (i.e. residual risk).

Table 3 provides a summary of the risk assessment.

Table 4 provides details for the 16 individual risks assessed.

Table 3 Risk Assessment Summary

Scenario	Risk Category	Number of risks
Existing conditions	Very High Risks	1
	High Risks	6
	Medium Risks	9
Post mitigation measures (residual risks)	Very High Risks	0
	High Risks	0
	Medium Risks	8
	Low Risk	8

Table 4 Risk Assessment Details Templeton St Sites

Identified Risk	Existing Consequences	Existing Likelihood	Potential Level of Risk	Mitigation Measure	Residual Consequences	Residual Likelihood	Residual Risk
Public Safety							
Vessels and occupants getting washed away from the launching point if unable to start motors.	Very High	Probable	Very High	Maintain site specific emergency reference so emergency services can locate site in 000 emergency situation. Close ramp during higher flow events Provide tie up bollard near toe of ramp	Very High	Unlikely	Medium
Slipping on roughened rock beaching on edges	High	Possible	High	Provide a wider concreted access area.	High	Unlikely	Medium
Ramp is relatively narrow, with limited room for a person and vehicle side by side.	High	Possible	High	Consider widening the ramp	High	Unlikely	Medium
Vehicles back over end of ramp, drowning boats and vehicles and posing a serious risk to humans in the process.	High	Possible	High	Consider use of a speed hump bumper at the end of the ramp	High	Very Unlikely	Low
Time to unload tie up, park, then depart in boat, creates a slow unsafe environment.	Medium	Possible	Medium	Consider provision of tie up zones and pedestrian access to tie up area downstream of the ramp.	Medium	Unlikely	Low
Slipping on mossy and muddy surfaces	Medium	Possible	Medium	If using a new ramp consider the use of a concrete ramp with grooves and a broomed finish to reduce the slipping risk. Provide adequate drainage and traction via herringbone drainage pattern. If modifying an existing remap, it is possible this risk remains	Medium	Possible	Medium
Accumulation of debris on ramp causes slipping or vehicle traction issues.	Medium	Possible	Medium	Have a management program in place for seasonal maintenance of the ramp.	Medium	Very Unlikely	Low

Ramp gradient too steep at 1:6 to safely reverse a trailer.	Medium	Possible	Medium	For a new design investigate whether the grade of the ramp needs to be steepened (1:8) to allow for safe reversing and exit. If modifying an existing remap, it is possible this risk remains	Medium	Unlikely	Low
Shallow draft create an unsafe environment for users particularly when unloading	High	Probable	High	Recognise the limitations of a ramp in this location. Provide a gauge replicating the Wangaratta gauge, showing when suitable draft is provided. This is likely to reflect when boating is also optimal.	Medium	Possible	Medium
Cultural Values							
Damage to heritage site. This is unlikely given the disturbed nature of the site.	Very high	Unlikely	High	Engage with the indigenous community and complete appropriate due diligence to ensure any design changes and ongoing usage does not impact sites.	Medium	Possible	Medium
Misuse by general public of cultural site.	Very high	Unlikely	High	Engage with the indigenous community to ensure any increase in usage does not impact local indigenous culture.	Medium	Possible	Medium
Environmental Values							
Damage to native vegetation.	Medium	Possible	Medium	Keeping the ramp in the existing location, ensure any designs avoid significant vegetation, enforcing tree protection zones.	Medium	Very Unlikely	Low
Economic Values							
The ramp is poorly maintained with unclear ownership roles and responsibilities	Medium	Possible	Medium	Work with stakeholder agencies (especially Council) to confirm ownership for the ramp. Include agreements for future governance and maintenance of the ramp and any associated infrastructure such as parking and foot paths.	Medium	Very Unlikely	Low
Social Values							
A lack of public amenities including parking, toilets reduces public usage.	Medium	Possible	Medium	Work with stakeholders to establish links to the site via assets such as parking, signage and footpaths.	Medium	Unlikely	Low
The site remains a low visible amenity, leading to unfavourable public behaviour.	Medium	Possible	Medium	Work with stakeholders to establish links to the site via assets such as parking, signage and footpaths	Medium	Unlikely	Low
Increased usage, causes parking limitations	Medium	Possible	Medium	Demand is unlikely to increase to a large, degree, but public safety and maintenance main focuses	Medium	Possible	Medium

4.3 Frank Garth Reserve Sites Risk Assessment

The risk assessment outcomes are documented in Tables 3 and 4 for both existing conditions and post mitigation conditions (i.e. residual risk).

Table 5 provides a summary of the risk assessment.

Table 6 provides details for the 15 individual risks assessed.

Table 5 Risk Assessment Summary

Scenario	Risk Category	Number of risks
Existing conditions	Very High Risks	3
	High Risks	6
	Medium Risks	6
Post mitigation measures (residual risks)	Very High Risks	0
	High Risks	0
	Medium Risks	11
	Low Risk	4

Table 6 Risk Assessment Details Frank Garth St Options

Identified Risk	Existing Consequences	Existing Likelihood	Potential Level of Risk	Mitigation Measure	Residual Consequences	Residual Likelihood	Residual Risk
Public Safety							
Vessels and occupants getting washed away from the launching point if unable to start motors.	Very High	Possible	High	Maintain site specific emergency reference so emergency services can locate site in 000 emergency situation. Close ramp during higher flow events Provide tie up bollard near toe of ramp	Very High	Unlikely	Medium
Slipping on the edge of an untreated or roughened boat ramp batter	High	Possible	High	Provide a treatment with a measure such as elcobag or finish the batter with a geomesh and gravel	High	Very Unlikely	Low
Vehicles back over end of ramp, drowning boats and vehicles and posing a serious risk to humans in the process.	High	Possible	High	Consider use of a speed hump bumper at the end of the ramp	High	Very Unlikely	Low
Time to unload tie up, park, then depart in boat, creates a slow unsafe environment.	High	Possible	High	Consider provision of tie up zones and pedestrian access to tie up area downstream of the ramp. Provide signage for parking within the reserve	Medium	Possible	Medium
Slipping on mossy and muddy surfaces	High	Possible	High	Consider the use of a concrete ramp with grooves and a broomed herringbone finish to reduce the slipping risk. Provide adequate drainage and traction via herringbone drainage pattern.	High	Very Unlikely	Low
Accumulation of debris on ramp causes slipping or vehicle traction issues.	Medium	Possible	Medium	Have a management program in place for seasonal maintenance of the ramp. Construct the ramp on an angle such that it promotes self cleansing	Medium	Very Unlikely	Low
Ramp gradient too steep to safely reverse a trailer.	Medium	Possible	Medium	Design the grade of the ramp to 1:8 to allow for safe reversing and exit. If modifying an existing remap, it is possible this risk remains	Medium	Unlikely	Low
Shallow draft create an unsafe environment for	High	Probable	High	Extend the ramp a suitable distance into the river to provide suitable draft	Medium	Unlikely	Low

users particularly when unloading							
Cultural Values							
Damage to heritage site. This is unlikely given the disturbed nature of the site.	Very high	Unlikely	High	Engage with the indigenous community and a complete CHMP to ensure any design changes and ongoing usage does not impact sites.	Medium	Possible	Medium
Misuse by general public of cultural site.	Very high	Unlikely	High	Engage with the indigenous community to ensure any increase in usage does not impact local indigenous culture.	Medium	Possible	Medium
Environmental Values							
Damage to native vegetation.	Very High	Probable	Very High	Ensure any designs avoid significant vegetation, enforcing tree protection zones.	Medium	Possible	Medium
Economic Values							
The ramp is poorly maintained with unclear ownership roles and responsibilities	Medium	Possible	Medium	Work with stakeholder agencies (especially Council) to confirm ownership for the ramp. Include agreements for future governance and maintenance of the ramp and any associated infrastructure such as parking and foot paths.	Medium	Very Unlikely	Low
Social Values							
A lack of public amenities including parking, toilets reduces public usage.	Medium	Possible	Medium	Work with stakeholders to establish links to the site via assets such as parking, signage and footpaths.	Medium	Unlikely	Low
The site remains a low visible amenity, leading to unfavourable public behaviour.	Very High	Probable	Very High	Work with stakeholders to establish links to the site via assets such as parking, signage and footpaths	Medium	Possible	Medium
Increased usage, causes parking limitations	Very High	Probable	Very High	Use suitable signage to direct cars and trailers. Unlikely to attract such numbers that would adversely impact the park.	Medium	Possible	Medium
Difficult access to the park from Parfitt Rd with a car and trailer	Very High	Probable	Very High	Improve access over the levee bank and provide a suitable pull off bay from the road to provide suitable access. Consider relocating the cairn in the park to improve access.	Medium	Unlikely	Low

5 Multi Criteria Assessment

Multi-criteria analysis has been undertaken to assist in quantifying values and constraints associated with the proposed boat ramp upgrade measures. It assists in rating this asset as a feasible outcome.

The multi criteria rating scoring system is documented in Table 7.

The multi criteria analysis outcomes are summarised in Table 8 and 9.

Table 7 Multi Criteria Analysis Ratings

Rating Score	Description
5	Highly valued
4	Generally positive values
3	Neutral
2	Generally constrained
1	Highly constrained

Table 8 Multi Criteria Analysis Summary – Templeton St

Physical Values and Constraints				
	Modify Existing Width		Rebuild Ramp Finished Surface	
Gradient, Width and Extents	The existing ramp is 3.5m wide, which is slightly narrow, but with minor modifications will be optimal. The gradient of the ramp is 1:6 which is relatively steep The river is relatively shallow at lower flows, exposing logs, which would limit access anyway	2	The existing ramp is 3.5m wide, which is slightly narrow by reconstructing provide consistent surface and optimal width. The gradient of the ramp is 1:6 which is relatively steep. Reconstruction provides optimal gradients for unloading The river is relatively shallow at lower flows, exposing logs, below a specific flow, remodelling the ramp to gain more draft has limited benefit, and possibly detrimental, therefore simply lay new finished surface.	4
Parking	There is good parking in proximity to the ramp. And is not expected to change .	4	There is good parking in proximity to the ramp. And is not expected to change .	4
Complimentary Infrastructure	The site is in close proximity to existing walking paths roads, but	3		3

	no toilet amenities are present of required			
Velocity of flows	Flows are manageable at the site and not of significant concern.	3		3
Social / Cultural Values and Constraints				
Safety of Site	The site is adjacent to a well used walkway.	3	The site is adjacent to a well used walkway.	3
Indigenous Heritage	This is a highly disturbed site. Confirmation via due diligence will confirm this.	4	This is a highly disturbed site. Confirmation via due diligence will confirm this.	4
Environmental Values and Constraints				
Vegetation	Maintenance will have limited impact on mature native vegetation at the head of the ramp	4	Maintenance will have limited impact on mature native vegetation at the head of the ramp	4
River health and river amenity	The foreshore in this location is significantly modified. Will have no discernible impact.	3	The foreshore in this location is significantly modified. Will have no discernible impact.	3
Economic and Tenure Values and Constraints				
Capital costs	The site is close to optimal width and gradient, therefore the extent of works is relatively minor.	3	The cost of reconstruction will be significantly higher than remodelling	2
Land management	Land tenure at the site is Crown Land under the management of Council, who are a key stakeholder in the project.	3	Land tenure at the site is likely to be Crown Land under the management of Council, who are a key stakeholder in the project.	3
	Total	**32/50**		**33/50**

Comparing values and constraints associated with this site, the provision of a new finished surface provides improved safety and access for users, slightly offsetting the capital cost increase.

Table 9 Multi Criteria Analysis Summary – Frank Garth

Physical Values and Constraints				
	West-East Ramp		North-South Ramp	
Gradient, Width and Extents	The proposed ramp is 4.5m wide, an optimal gradient of of 1:8. It is 28m long extending a longer distance into the park, with significant impact on existing tracks.	2	The proposed ramp is 4.5m wide, an optimal gradient of of 1:8. It is 30m long extending a shorter distance into the park, with minimal	3

	Furthermore battering due to cut impacts 20m of width.		impact on existing tracks. Furthermore battering due to cut impacts 24m of width.	
Parking	There is informal parking in proximity to the ramp. This options impacts tracks and possibly movement of traffic for parking	2	There is informal parking in proximity to the ramp. This options impacts tracks less and therefore possibly movement of traffic for parking	3
Complimentary Infrastructure	The site is in close to Apex park for amenities, no upgrades are planned as part of the ramps development	3	The site is in close to Apex park for amenities, no upgrades are planned as part of the ramps development	3
Velocity of flows	The ramp is perpendicular to flow, which may be slightly prone to siltation.	3	Facing downstream, this ramp is more conducive to be self cleansing.	4
Social / Cultural Values and Constraints				
Safety of Site	Increasing boat traffic will not likely impact current safety to the public at the site in a positive or negative manner.	3	Increasing boat traffic will not likely impact current safety to the public at the site in a positive or negative manner.	3
Indigenous Heritage	Construction would require significant disturbance and a requirement for a full CHMP.	2	Construction would require significant disturbance and a requirement for a full CHMP.	2
Environmental Values and Constraints				
Vegetation	This option requires removal of mature native vegetation and scattered regrowth	2	This option requires removal of mature native vegetation and a significant amount of scattered regrowth	1
River health and river amenity	This option requires significant modification to 20m of river bank, and has a significant visual impact on the amenity of the park.	3	This option requires significant modification to 24m of river bank, but has less visual impact on the amenity of the park if managed well	3
Economic and Tenure Values and Constraints				

Capital costs	Capital comparison between options is similar	3	Capital comparison between options is similar	3
Land management	Land tenure at the site is Crown Land under the management of Council, who are a key stakeholder in the project.	4	Land tenure at the site is Crown Land under the management of Council, who are a key stakeholder in the project.	4
	Total	**27/50**		**29/50**

Comparing values and constraints associated with this site, the north south alignment provides slightly more positive outcomes by impacting less on the roadways and park reserve.

6 Concept Designs

6.1 Design Overview

A concept design drawing has been developed for review, utilising survey completed at the site in 2026.

The drawings are provided for:

- Templeton St Reconstruct a New Finish over Existing
  - A concept showing modification of the existing ramp.
  - Width consistent with Better Boating Victoria Guidelines
  - Grade not modified
  - Pour a new slab over the old slab, increasing the width and providing a consistent new finish
- Templeton St Modify Width of Ramp
  - A concept showing modification of the existing ramp, focussing on increasing the width, but maintaining the current finish.
  - Width consistent with Better Boating Victoria Guidelines
  - Grade not modified
- Frank Garth Reserve West-East Alignment
  - A concept showing a newly constructed ramp.
  - Width (4.5m), Grade (1:8) consistent with Better Boating Victoria Guidelines
  - Plan shows significant impact on tracks and vegetation in the reserve
- Frank Garth Reserve North-South Alignment
  - A concept showing a newly constructed ramp.
  - Width (4.5m), Grade (1:8) consistent with Better Boating Victoria Guidelines
  - Plan shows minor impact on tracks, but greater impact on vegetation and river bank in the reserve
- Parfitt Road Slip Lane
  - Any works in Frank Garth require upgrade to access off Parfitt Road
  - Provide a slip lane relocating some existing assets and drainage to achieve this
  - Provide a longer cross over at 1:10 over the levee bank to provide safe access and improved visibility for boats on trailers.

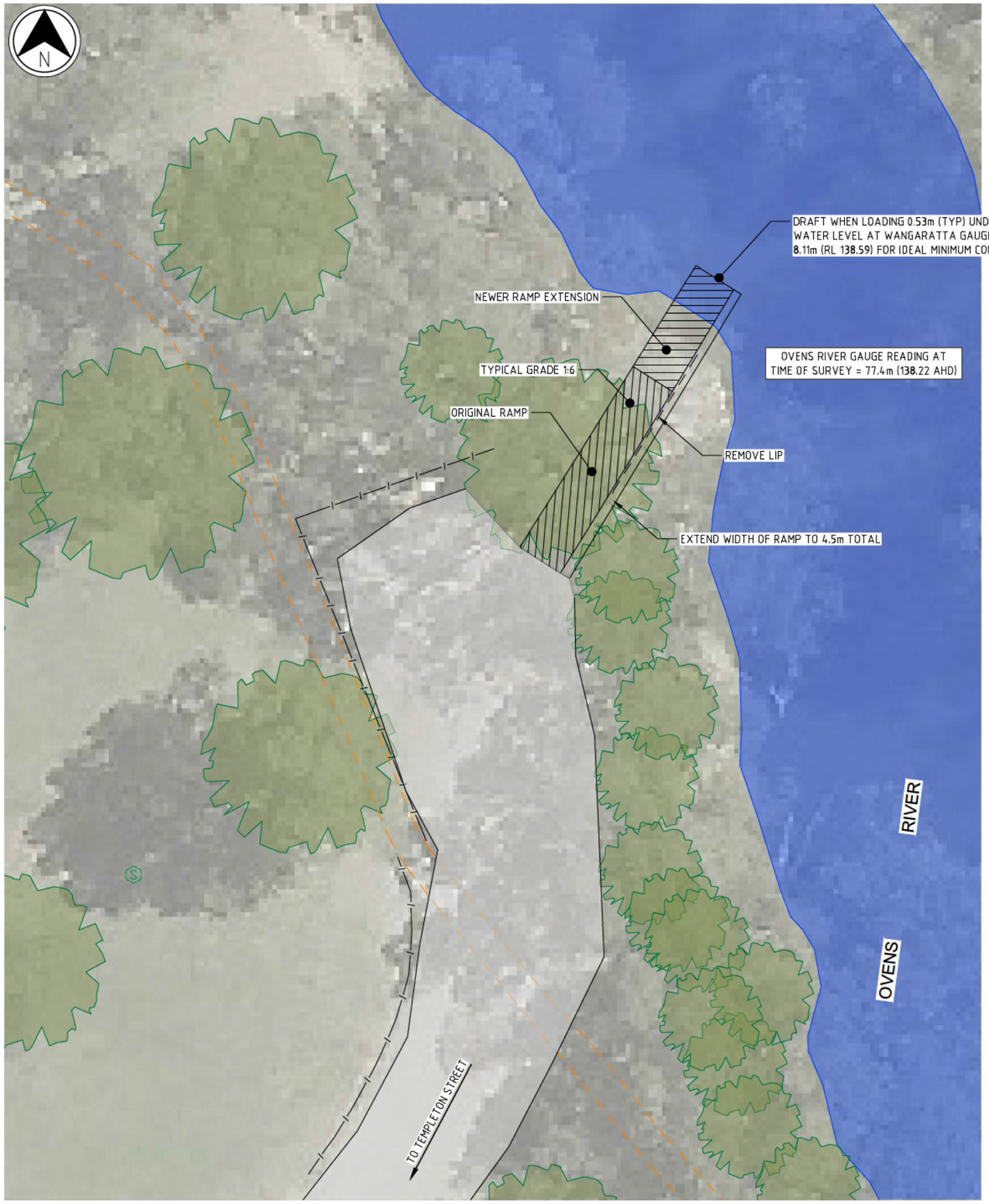
6.2 Recommendation

It is recommended:

- The provision of a North-South Boat Ramp in Frank Garth Reserve is more feasible than a West-East alignment
- Modification of the existing Templeton St Ramp with a new finished surface provides beneficial user safety benefits and better life span than simply increasing the width.

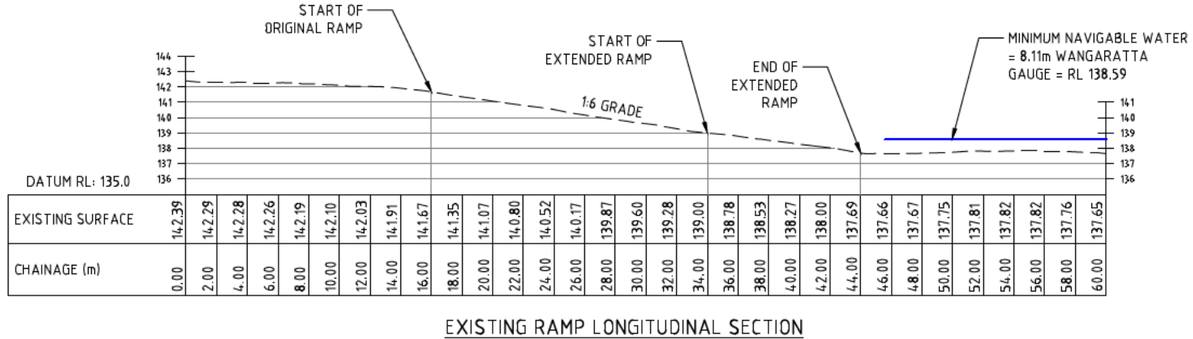
6.3 Preliminary Cost Estimates

The following preliminary cost estimates are provided for each concept design.



PLAN
SCALE 1:200

NOTE:
ENSURE 7.3m TURNING RADIUS ON
ANY CONSTRUCTED TRACKS



EXISTING SURFACE	142.39	142.29	142.28	142.26	142.19	142.10	142.03	141.91	141.67	141.35	141.07	140.80	140.52	140.17	139.87	139.60	139.28	139.00	138.78	138.53	138.27	138.00	137.69	137.66	137.67	137.75	137.81	137.82	137.82	137.76	137.65
CHAINAGE (m)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00	58.00	60.00

EXISTING RAMP LONGITUDINAL SECTION
SCALE 1:200

LEGEND

- ORIGINAL BOAT RAMP
- EXTENDED WIDTH OF RAMP
- EXISTING TRACK
- FOOTPATH
- RIVER
- NATIVE TREE

1:200 0 4 8 12 16 20m
4 3 2 1 AT A1

Rev.	Description	Drn	Ckd	App	Date
B	REISSUED FOR DISCUSSION	SG	CD		15/04/2026
A	ISSUED FOR DISCUSSION	SG	CD	.	11/03/2026

DOCUMENTS ISSUED DO NOT BEAR ORIGINAL SIGNATURES. EVIDENCE OF VERIFICATION AND APPROVAL MAY BE OBTAINED FROM THE COMPANY.

	Name	Date
Drawn	S. GRAHAM	.
Design	C. DWYER	.
Checked	.	.
Discipline Head		
Job Manager		

Scale 1:200 Sheet A1

Client: Rural City of Wangaratta

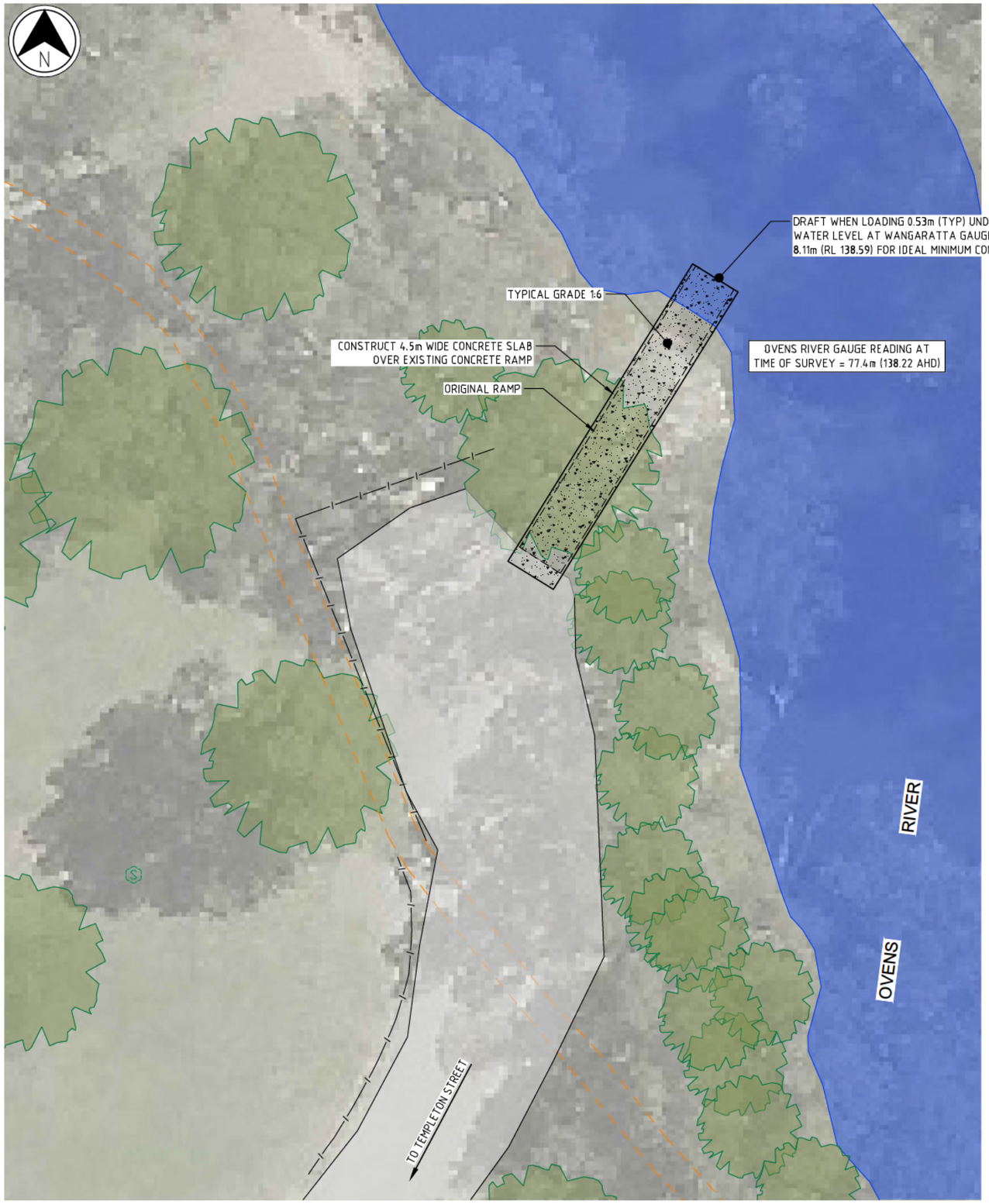
CONFLUENCE GROUP
Confluence Group P/L
765 Walker Road, Wangandary, Vic. 3678
M: 0437 163 678 W: www.confluence.net.au

Project: TEMPLETON STREET BOAT RAMP

Title: BOAT RAMP PLAN
OPTION 1

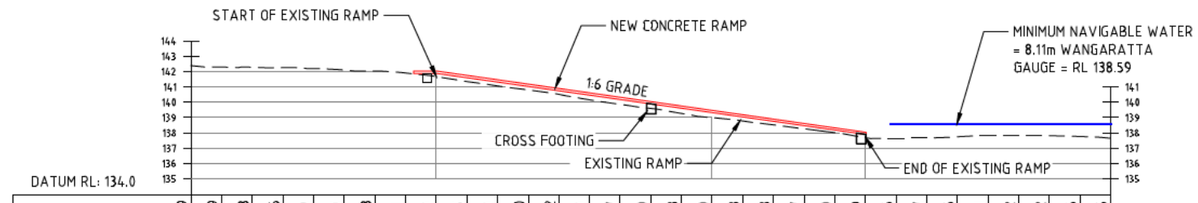
Drawing Status: FOR DISCUSSION

Drawing No. TS-1 | Sheet. 01/01 | Rev. B



PLAN
SCALE 1:200

NOTE:
ENSURE 7.3m TURNING RADIUS ON
ANY CONSTRUCTED TRACKS



CHAINAGE (m)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00	58.00	60.00
EXISTING SURFACE	142.39	142.29	142.28	142.26	142.19	142.10	142.03	141.91	141.67	141.35	141.07	140.80	140.52	140.17	139.87	139.60	139.28	139.00	138.78	138.53	138.27	138.00	137.69	137.66	137.67	137.75	137.81	137.82	137.82	137.76	137.65

EXISTING RAMP LONGITUDINAL SECTION
SCALE 1:200

NOTE
- CONSTRUCT CONCRETE SLAB OVER EXISTING
- INCREASE WIDTH TO 4.5m
- CUT CONCRETE AROUND EXISTING AND PROVIDE FOOTING ALL AROUND.
- PROVIDE CROSS FOOTING AT HEAD, MIDDLE AND END OF RAMP.
- PROVIDE HERRINGBONE PATTERN TO REDUCE SLIPPAGE AND IMPROVE DRAINAGE.
- MATCH TO HEAD ELEVATION OF EXISTING RAMP TO AVOID CAR DISTURBANCE.

LEGEND
- ORIGINAL BOAT RAMP
- 4.5m CONCRETE SLAB OVER EXISTING
- EXISTING TRACK
- FOOTPATH
- RIVER
- NATIVE TREE

1:200 0 4 8 12 16 20m
4 3 2 1 AT A1

Rev.	Description	Drn	Ckd	App	Date
A	ISSUED FOR DISCUSSION	SG	CD	.	15/04/2026

DOCUMENTS ISSUED DO NOT BEAR ORIGINAL SIGNATURES. EVIDENCE OF VERIFICATION AND APPROVAL MAY BE OBTAINED FROM THE COMPANY.

Scale 1:200 | Sheet A1

	Name	Date
Drawn	S. GRAHAM	.
Design	C. DWYER	.
Checked	.	.
Discipline Head		
Job Manager		

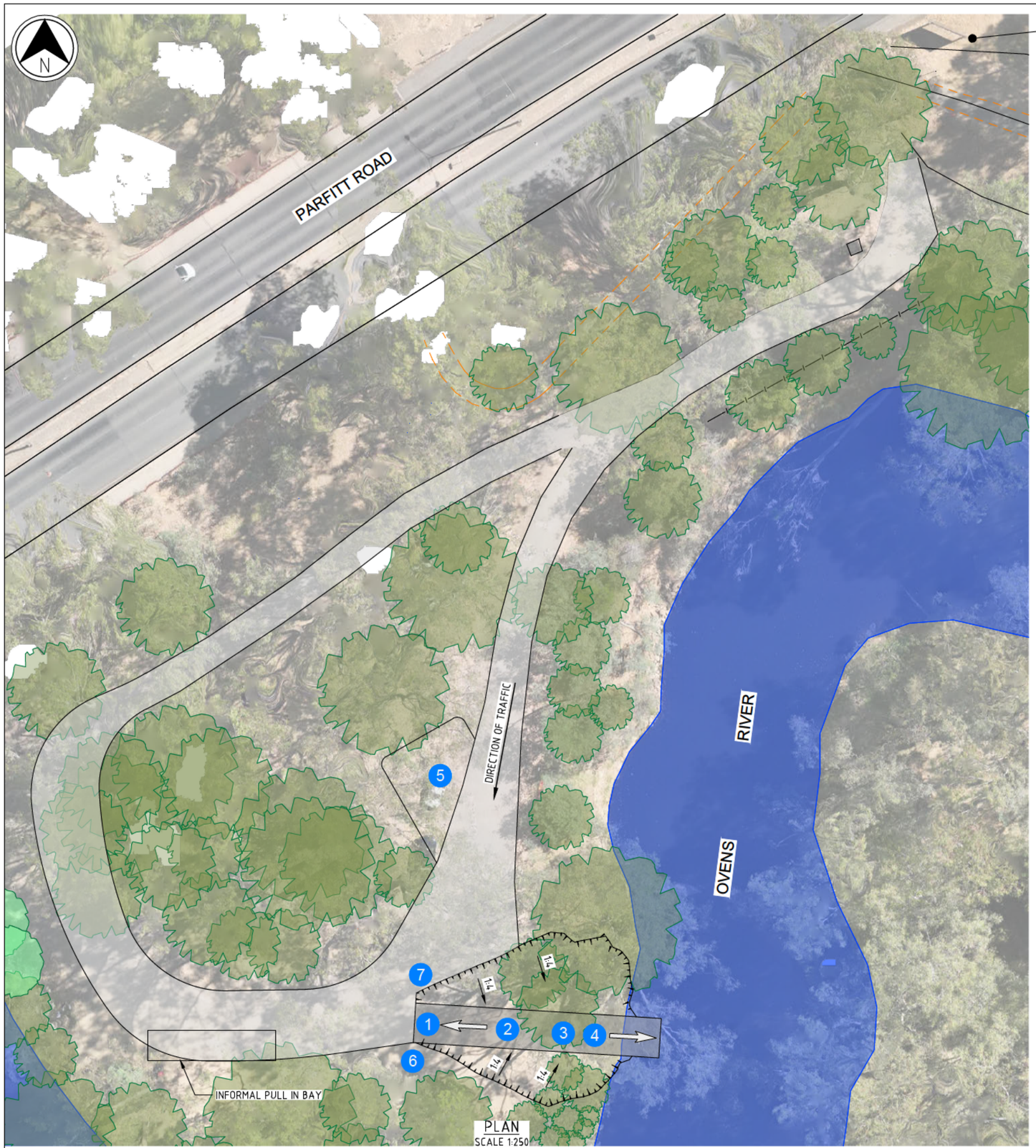
Client: Rural City of Wangaratta

CONFLUENCE GROUP
Confluence Group P/L
765 Walker Road, Wangandary, Vic. 3678
M: 0437 163 678 W: www.confluence.net.au

Project: TEMPLETON STREET BOAT RAMP
Title: BOAT RAMP PLAN
OPTION 2

Drawing Status: FOR DISCUSSION

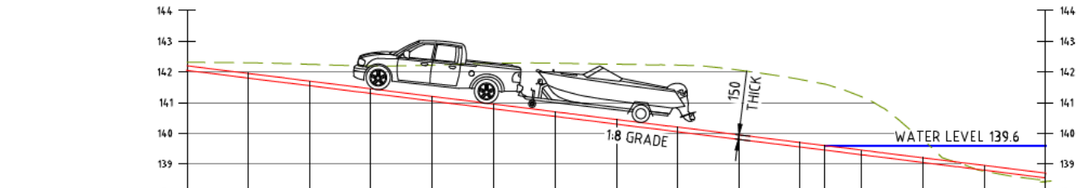
Drawing No. TS-2 | Sheet. 01/01 | Rev. A



PLAN
SCALE 1:250

- RELOCATE CAIRN AT PARK ENTRANCE TO IMPROVE TRAFFIC ACCESSIBILITY.
- PROVIDE EXIST LANE OFF PARFITT ROAD TO IMPROVE SAFE ACCESS FOR VEHICLES.
- INCREASE THE BATTER OF THE LEVEE INTO THE PARK TO A MINIMUM OF 1:10

NOTE:
ENSURE 7.3m TURNING RADIUS ON ANY CONSTRUCTED TRACKS



DATUM RL: 135.0

CHAINAGE (m)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	20.80	22.00	24.00	26.00	28.00
RAMP DESIGN SURFACE	142.20	141.95	141.70	141.45	141.20	140.95	140.70	140.45	140.20	139.95	139.70	139.60	139.45	139.20	138.95	138.70
EXISTING SURFACE	142.32	142.30	142.24	142.19	142.22	142.29	142.28	142.25	142.22	142.06	141.75	141.61	141.19	139.81	138.76	138.46

RAMP LONGITUDINAL SECTION
SCALE 1:100

OPTION 1

1. NEW RAMP
2. EXCAVATION INTO UNDISTURBED GROUND NECESSARY.
3. HERRINGBONE FINISH TO REDUCE SLIPPAGE AND IMPROVE DRAINAGE OFF RAMP.
4. 4.5m WIDTH OF RAMP FOR EASE OF ACCESS AROUND BOATS.
5. PULL IN BAY
6. SOLAR LIGHTING
7. MARITIME SAFETY SIGNAGE.

LEGEND

- ACCESS RAMP
- EXISTING TRACK
- RIVER
- NATIVE TREE
- EXOTIC TREE
- TOP OF BANK
- FOOTPATH

1:100 0 2 4 6 8 10m — 2 1 — AT A1
1:250 0 5 10 15 20 25m — 5 4 3 2 1 — AT A1

Rev.	Description	Drn	Chkd	App	Date
A	ISSUED FOR DISCUSSION	SG	CD	.	.

DOCUMENTS ISSUED DO NOT BEAR ORIGINAL SIGNATURES. EVIDENCE OF VERIFICATION AND APPROVAL MAY BE OBTAINED FROM THE COMPANY.

Scale: VARIES | Sheet: A1

	Name	Date
Drawn	S. GRAHAM	.
Design	C. DWYER	.
Checked	.	.
Discipline Head		
Job Manager		

Client: Rural City of Wangaratta

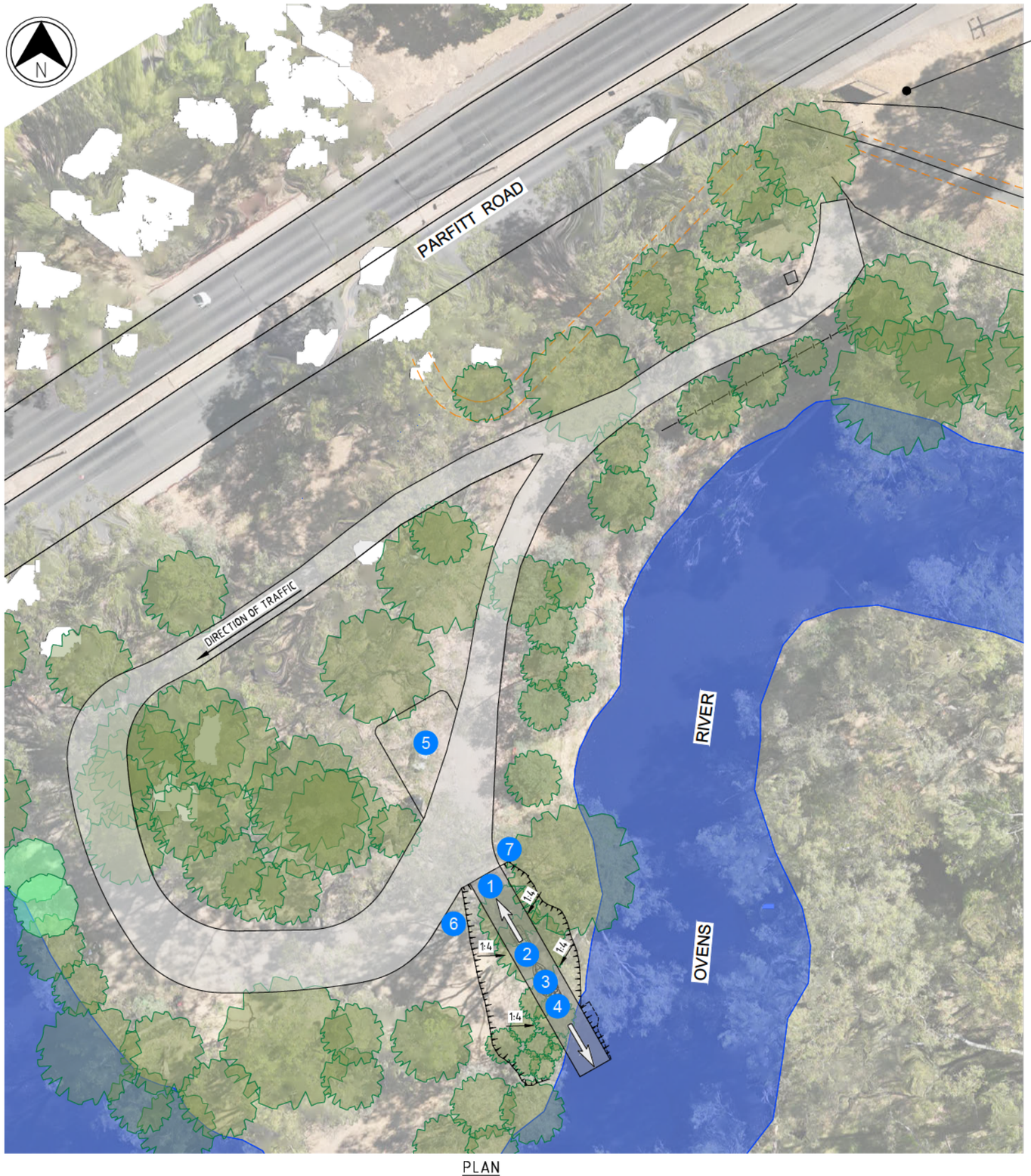
CONFLUENCE GROUP
Confluence Group P/L
765 Walker Road, Wangandary, Vic. 3678
M: 0437 163 678 W: www.confluence.net.au

Project: FRANK GARTH RESERVE BOAT LAUNCHING FACILITY

Title: PRELIMINARY CONCEPT
OPTION 1

Drawing Status: FOR DISCUSSION

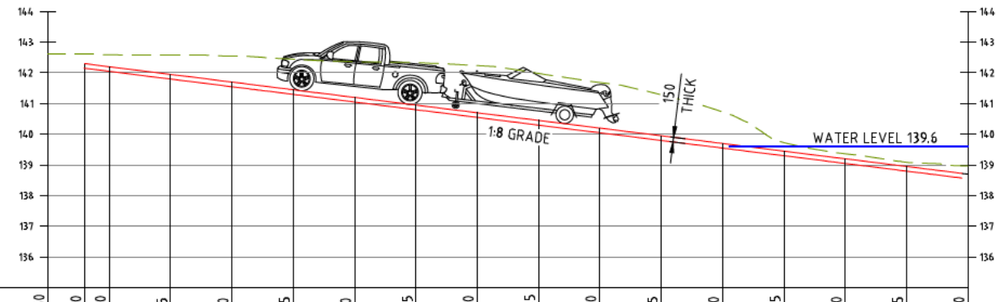
Drawing No.: FG-OPTION 1 | Sheet: 01/01 | Rev.: A



PLAN
SCALE 1:300

- RELOCATE CAIRN AT PARK ENTRANCE TO IMPROVE TRAFFIC ACCESSIBILITY.
- PROVIDE EXIST LANE OFF PARFITT ROAD TO IMPROVE SAFE ACCESS FOR VEHICLES.
- INCREASE THE BATTER OF THE LEVEE INTO THE PARK TO A MINIMUM OF 1:10

NOTE:
ENSURE 7.3m TURNING RADIUS ON ANY CONSTRUCTED TRACKS



DATUM RL: 135.0

RAMP DESIGN SURFACE	142.60	142.30	142.20	141.95	141.70	141.45	141.20	140.95	140.70	140.45	140.20	139.95	139.70	139.45	139.20	138.95	138.70																
EXISTING SURFACE	142.60	142.69	142.59	142.58	142.54	142.44	142.37	142.34	142.24	141.98	141.69	141.29	140.73	139.73	139.36	139.09	138.96																
CHAINAGE (m)	0.00	1.20	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00																

RAMP LONGITUDINAL SECTION
SCALE 1:100

OPTION 1

1. NEW RAMP
2. EXCAVATION INTO UNDISTURBED GROUND NECESSARY.
3. HERRINGBONE FINISH TO REDUCE SLIPPAGE AND IMPROVE DRAINAGE OFF RAMP.
4. 4.5m WIDTH OF RAMP FOR EASE OF ACCESS AROUND BOATS.
5. PULL IN BAY
6. SOLAR LIGHTING
7. MARITIME SAFETY SIGNAGE.

LEGEND

- ACCESS RAMP
- EXISTING TRACK
- RIVER
- NATIVE TREE
- EXOTIC TREE
- TOP OF BANK
- FOOTPATH

1:100 0 2 4 6 8 10m AT A1
1:300 0 6 12 18 24 30m AT A1

Rev.	Description	Drn	Ckd	App	Date
A	ISSUED FOR DISCUSSION	SG	CD	.	11/03/2026

DOCUMENTS ISSUED DO NOT BEAR ORIGINAL SIGNATURES. EVIDENCE OF VERIFICATION AND APPROVAL MAY BE OBTAINED FROM THE COMPANY.

Scale: VARIES | Sheet: A1

	Name	Date
Drawn	S. GRAHAM	.
Design	C. DWYER	.
Checked	.	.
Discipline Head		
Job Manager		

Client: Rural City of Wangaratta

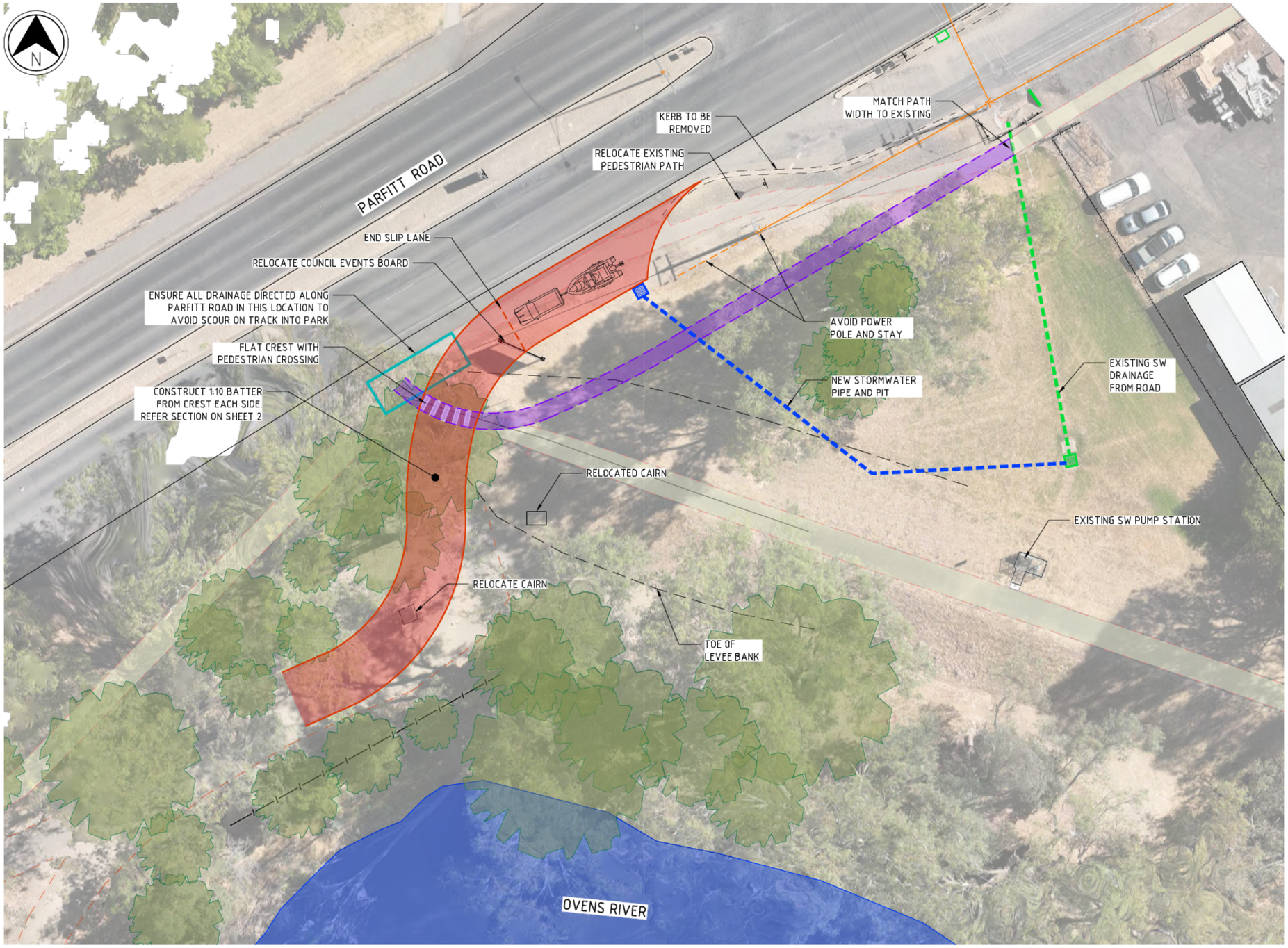
CONFLUENCE GROUP
Confluence Group P/L
765 Walker Road, Wangandary, Vic. 3678
M: 0437 163 678 W: www.confluence.net.au

Project: FRANK GARTH RESERVE BOAT LAUNCHING FACILITY

Title: PRELIMINARY CONCEPT OPTION 2

Drawing Status: FOR DISCUSSION

Drawing No.: FG-OPTION 2 | Sheet: 01/01 | Rev.: A



PLAN
SCALE 1:200

LEGEND

- NEW SLIP LANE AND TRACK
- EXISTING PEDESTRIAN PATH
- NEW PEDESTRIAN PATH
- EXISTING TRACK
- PEDESTRIAN PATH TO BE REMOVED
- RIVER
- NATIVE TREE
- EXISTING STORMWATER DRAIN
- NEW STORMWATER DRAIN
- OVERHEAD POWERLINES
- EXISTING FENCE

1:200 0 4 8 12 16 20m
4 3 2 1 AT A1

Rev.	Description	Drn	Ckd	App	Date
A	ISSUED FOR REVIEW	SG	CD	.	30/04/2026

DOCUMENTS ISSUED DO NOT BEAR ORIGINAL SIGNATURES. EVIDENCE OF VERIFICATION AND APPROVAL MAY BE OBTAINED FROM THE COMPANY.

Scale 1:200 | Sheet A1

	Name	Date
Drawn	S. GRAHAM	30/04/26
Design	C. DWYER	30/04/26
Checked	.	.
Discipline Head		
Job Manager		

Client: Rural City of Wangaratta

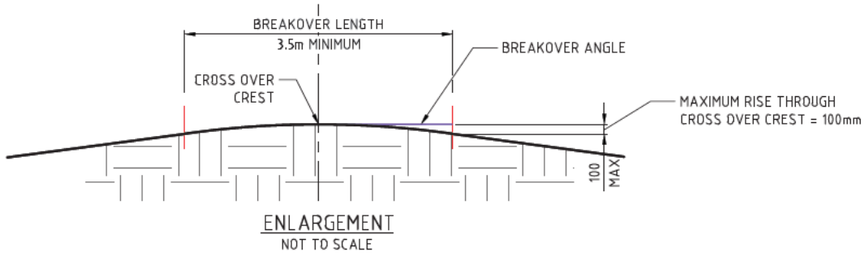
CONFLUENCE GROUP
Confluence Group P/L
765 Walker Road, Wangandary, Vic. 3678
M: 0437 163 678 W: www.confluence.net.au

Project: PARFITT ROAD SLIP LANE CONCEPT DRAWING

Title: SITE PLAN

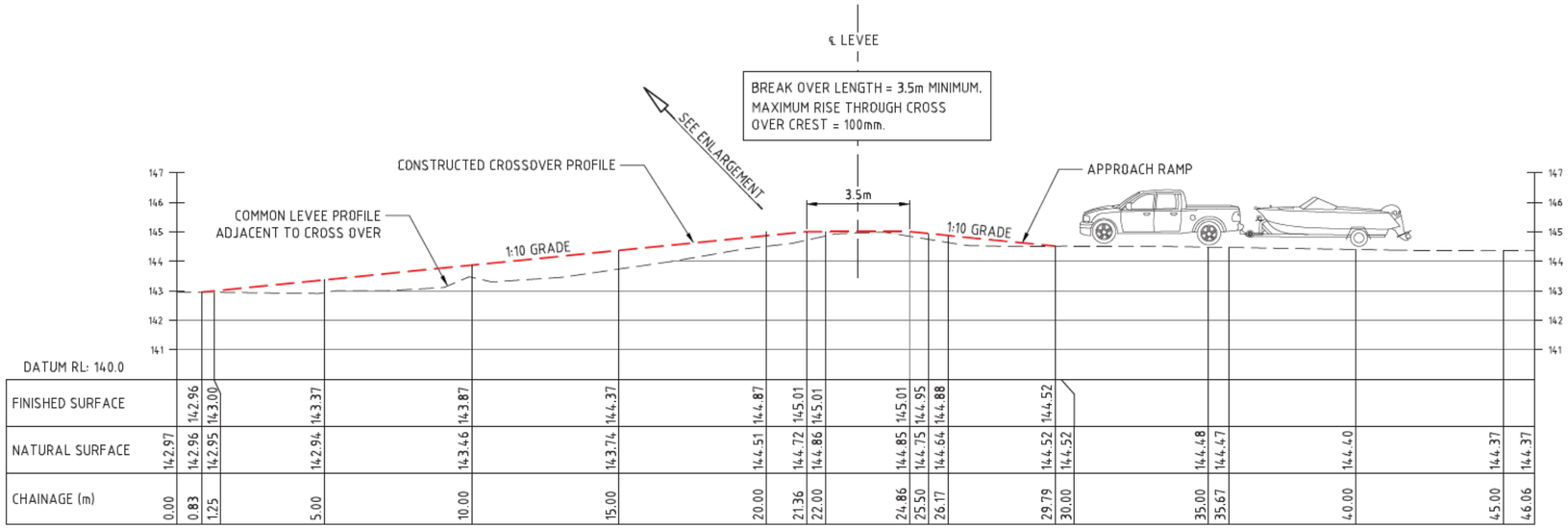
Drawing Status: FOR REVIEW

Drawing No.	Sheet.	Rev.
FG-SLIP LANE	01/02	A



ENLARGEMENT
NOT TO SCALE

NOTE
- THIS TREATMENT IS FOR SITES WHERE A 4WD UTE OR WAGON, OR A LIGHT RIGID FIRE TRUCK REQUIRE ACCESS. IT SHOULD ALSO BE NOTED THIS IS ALSO SUITABLE FOR 2WD VEHICLES TOWING CARAVANS AND SMALL BOAT TRAILERS.
- ENSURE LEVEE IS RESTORED TO DESIGN FLOOD PROTECTION HEIGHT WITH COMPACTED CLAY FILL IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR EACH SPECIFIC SITE.



CHAINAGE (m)	0.00	0.83	1.25	5.00	10.00	15.00	20.00	21.36	22.00	24.86	25.50	26.17	29.79	30.00	35.00	35.67	40.00	45.00	46.06
NATURAL SURFACE	142.97	142.96	142.95	142.94	143.46	143.74	144.51	144.72	144.86	144.85	144.75	144.64	144.52	144.52	144.48	144.47	144.40	144.37	144.37
FINISHED SURFACE	142.96	142.96	143.00	143.37	143.87	144.37	144.87	145.01	145.01	145.01	144.95	144.88	144.52						

CROSS SECTION
SCALE 1:100

1:100 0 2 4 6 8 10m
2 1 AT A1

Rev.	Description	Drn	Ckd	App	Date
A	ISSUED FOR REVIEW	SG	CD	.	30/04/2026

DOCUMENTS ISSUED DO NOT BEAR ORIGINAL SIGNATURES. EVIDENCE OF VERIFICATION AND APPROVAL MAY BE OBTAINED FROM THE COMPANY.

Scale: VARIES | Sheet: A1

	Name	Date
Drawn	S. GRAHAM	30/04/26
Design	C. DWYER	30/04/26
Checked	.	.
Discipline Head		
Job Manager		

Client: Rural City of Wangaratta

CONFLUENCE GROUP
Confluence Group P/L
765 Walker Road, Wangandary, Vic. 3678
M: 0437 163 678 W: www.confluence.net.au

Project: PARFITT ROAD SLIP LANE CONCEPT DRAWING

Title: SECTIONS

Drawing Status: FOR REVIEW

Drawing No.	Sheet.	Rev.
FG-SLIP LANE	02/02	A