Lake Ginninderra Community Path **Feasibility Study Report**





HELLO@TAITNETWORK.COM 02 6253 0222 TAITNETWORK.COM

SUITE 1, LEVEL 2, 10 HOBART PLACE

GPO BOX 808 CANBERRA ACT 2601

Report Information

•

Reference	Lake Ginninderra Community Path Feasibility Study Report
Prepared by	Tait Network
On behalf of	Transport Canberra and City Services

Revision History

Re Nu	vision mber	Revision Date	Details	Authorised
	Α	14.05.2021	Draft for Client Review	RA
	В	09.07.2021	Final Issue	RA

Table of Contents

1.0	Introduction	3
1.1	Context	3
1.2	Project Description	3
1.2.1	Deliverables	3
3.0	Site Analysis	4
3.1	Land Use	4
3.2	Land Custodianship	5
3.3	Active Travel	6
3.4	Public Transport	7
3.5	Significant Species and Registered Trees	8
3.6	Recreational Areas and Destinations	9
4.0	Existing Asset Audit and Assessment	10
4.1	Audit Data	10
4.2	Definitions	10
4.3	Assessment	10
4.4	Asset Location Drawings	10
4.5	Additional Analysis Inputs	11
4.5.1	Path Defects	11
4.5.2	Strava Data	11
4.6	Consultant Inputs	11
5.0	Asset Analysis Mapping	12
5.1	Connectivity Corridors	12
5.2	Audit Analysis	13
6.0	Upgrade Recommendations	15
6.1	Departures from the Brief	15
6.2	Detailed Recommendations	16
6.2.1	Connectivity Corridor 1	16
6.2.2	Connectivity Corridor 2	19
6.2.3	Connectivity Corridor 3	23
6.2.4	Connectivity Corridor 4	25
6.2.5	Connectivity Corridor 5	29
6.2.6	Connectivity Corridor 6	32
6.2.7	Connectivity Corridor 7	36
7.0	Priority Areas	1 1
7.1	Methodology	11
7.2	Corridor Priority Ranking	11

7.3	Individual Asset Priority Ranking42
8.0	Preliminary Costings43
8.1	Connectivity Corridor 143
8.2	Connectivity Corridor 243
8.3	Connectivity Corridor 3
8.4	Connectivity Corridor 4
8.5	Connectivity Corridor 545
8.6	Connectivity Corridor 645
8.7	Connectivity Corridor 746
8.8	Overall Corridor Totals
9.0	Stakeholder Consultation47
9.1	Government Stakeholder presentation/comments received47
9.2	Pedal Power Consultation
10.0	Key Risks and Issues47
11.0	Attachments

1.0 Introduction

1.1 **Context**

Lake Ginninderra was created in 1974 with the construction of a dam wall on Ginninderra Creek to collect stormwater from surrounding Belconnen suburbs. The semi-natural landscape which surrounds the lake now provides a range of recreational opportunities including picnic areas, playgrounds, boat launching ramps, beach and swimming areas and two jetties.

The lake is situated directly to the north of the Belconnen Town Centre, with the southern shores of the lake providing the edge to developments along Emu Bank, the Belconnen Arts Centre and Emu Inlet. The suburbs of Florey, Evatt and McKellar lie to the north and west, with Lawson and Bruce to the east. The Kangara Waters retirement complex is situated to the eastern edge of the lake, directly north of John Knight Memorial Park.

The cycle path which circles the lake, the Lake Ginninderra Community Path, provides a popular and well utilised walking and cycling facility. With the population of surrounding areas increasing, particularly with the recent construction of numerous apartment buildings within Belconnen, the lake and surrounds now provides an important large scale open space with increasing demand on the existing recreational assets.

1.2 **Project Description**

Infrastructure Delivery Partners (IDP) on behalf of Transport Canberra and City Services (TCCS) has engaged Tait Network to undertake a feasibility study and detailed design of the Lake Ginninderra Community Path, with the overall aim of improving the quality, safety, connectivity and attractiveness of the community path and associated connections and active travel amenities.

The project site boundary takes in the land surrounding Lake Ginninderra, including path connections within Emu Bank to the south, Florey to the west, Evatt and McKellar to the north and University of Canberra to the east. The site boundary also includes the area of TCCS managed land fronting Ginninderra Creek to the west of future Lawson. The site boundary is indicated on the Context Plan.

1.2.1 **Deliverables**

The project is comprised of the following five phases:

- Preliminary Site Investigation, Audit and Asset Condition Assessment
- Feasibility Study
- Preliminary Sketch Plans
- Final Sketch Plans
- Final Design

The preliminary site investigation was undertaken over five days in April 2021. A full site walk was undertaken in which data was collected for assessment of lighting assets, path defects and general path safety concerns, along with mapping general site issues and deviations from the TCCS generated mapped assets.

The audit data used in the study utilises both TCCS generated data and data gained from onsite inspections of assets. The data provided by TCCS included inputs for paths, BBQ's, bins, drinking fountains, seats, shelters, signage, tables, and toilet facilities. All assets were assessed by the condition, utilisation and functionality of the asset. The site inspection identified both defects to existing assets and locations of missing assets which will increase safety and amenity for path users.

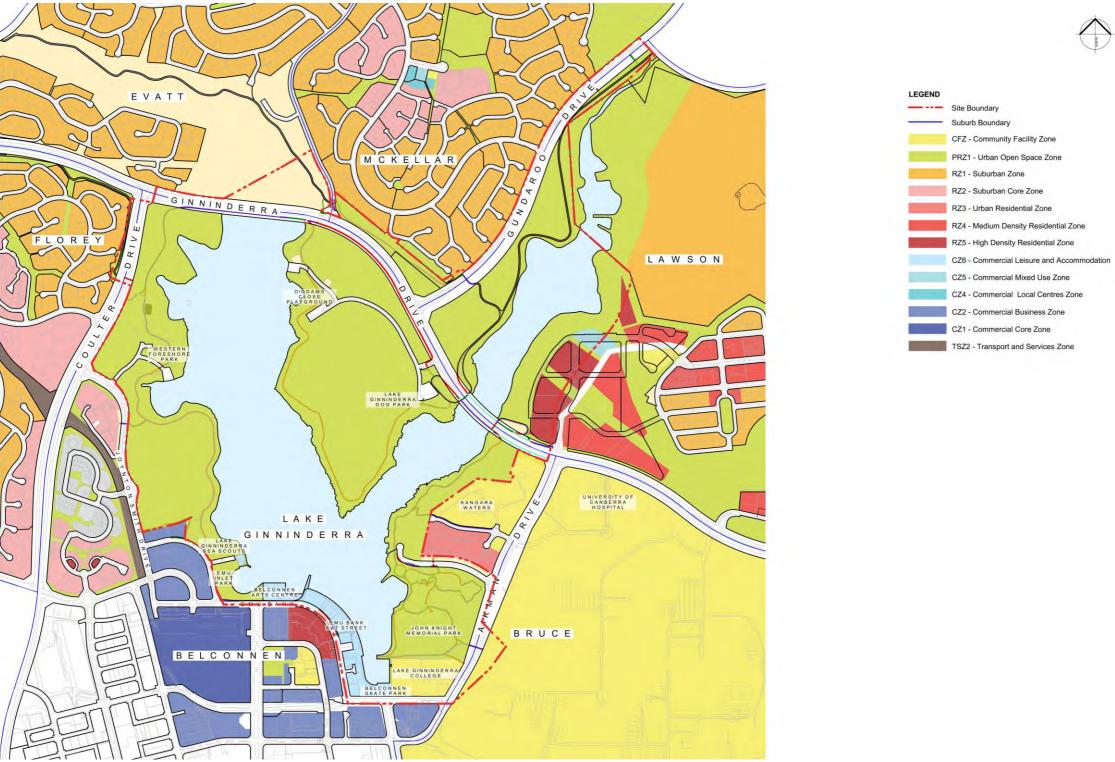


Context Plan - Connectivity Corridors numbering included as outlined is Section 05 below.

Site Analysis 3.0

Land Use 3.1

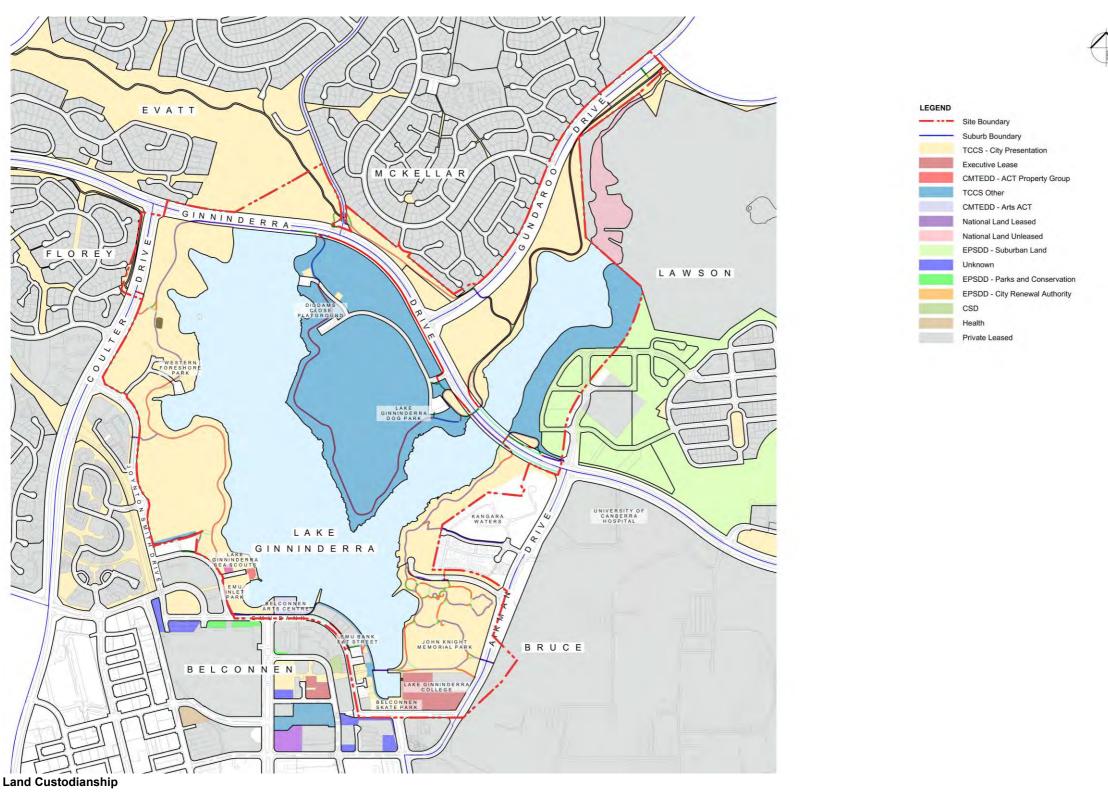
The majority of land surrounding Lake Ginninderra is zoned PRZ1 – Urban Open Space. Other than PRZ1 the frontage to the lake along Emu Bank is zoned CZ6 – Commercial, Leisure and Accommodation, with the small block to the north of Emu Inlet, previously the site of the Water Police also zoned CZ6. The site of Lake Ginninderra College with is zoned CFZ - Community Facility Zone.



Land Use

Land Custodianship 3.2

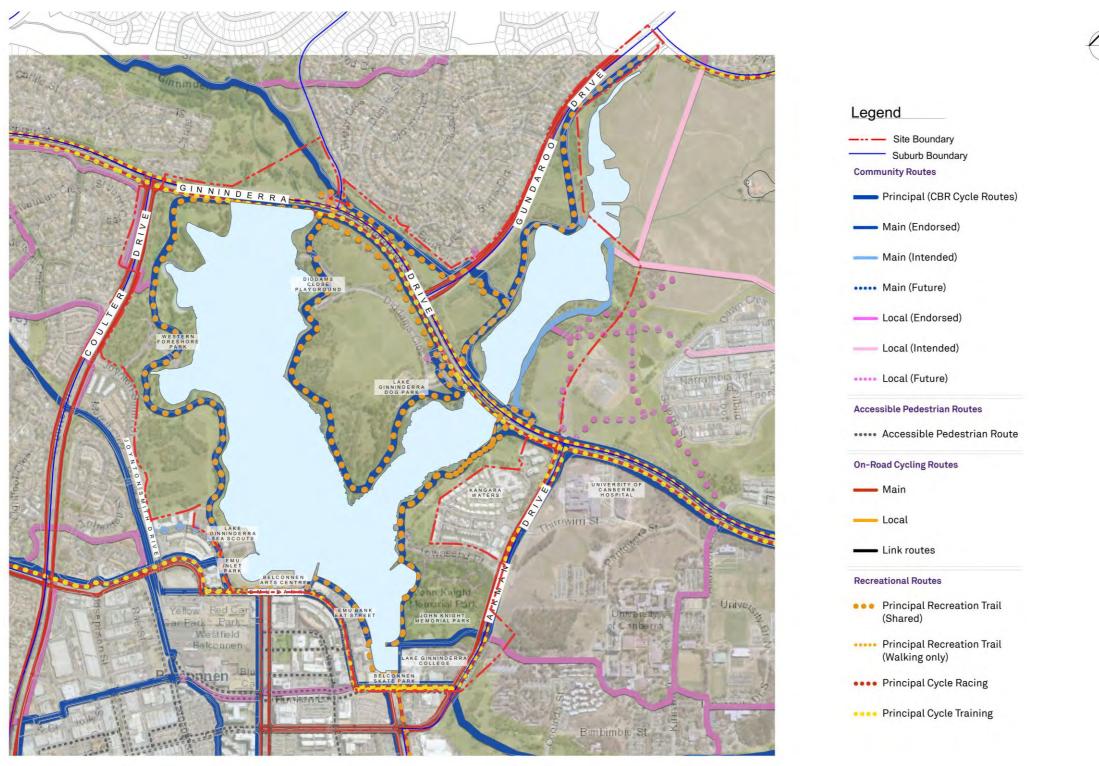
Transport Canberra and City Services manages the majority of the land within the site boundary. This includes the path area fronting the southern foreshore of the lake to Emu Bank. Chief Minister, Treasury and Economic Development Directorate manage the blocks containing the Belconnen Arts Centre and the vacant block which was previously the Water Police.





Active Travel 3.3

The Lake Ginninderra Community Path is classed as a Main Community Route with an overlay of Principal Recreation Trail (Shared). The adjoining paths connecting into Evatt and McKellar are classed as Principal Community Routes, also with an overlay of Principal Recreation Trail (Shared).

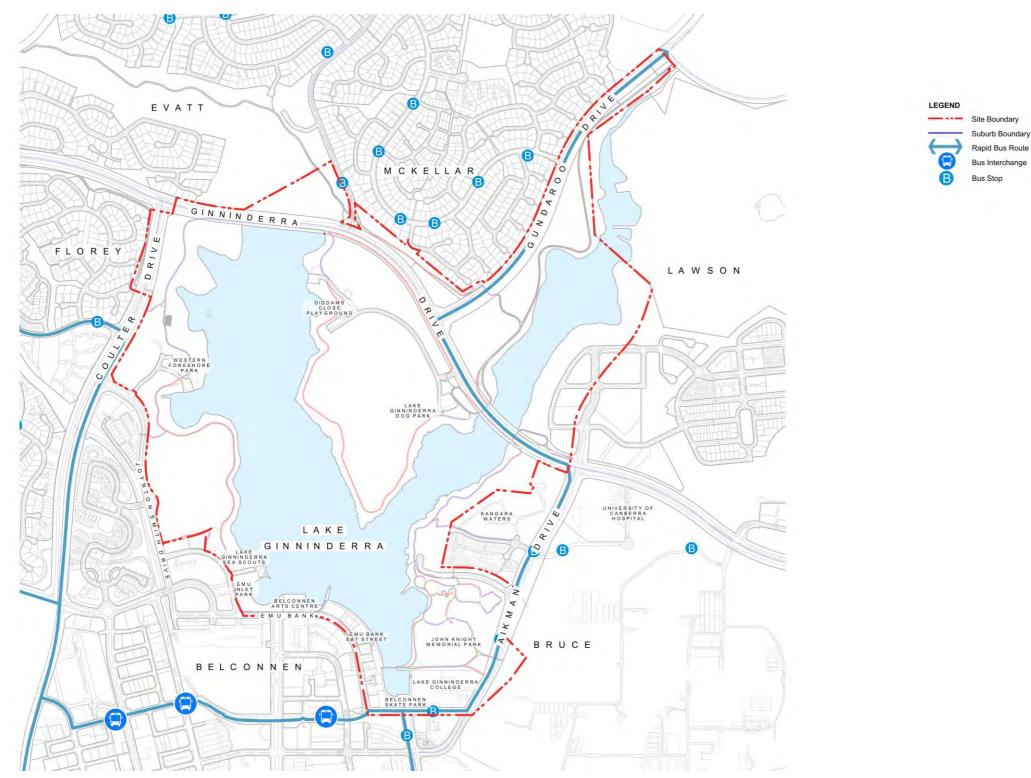


Active Travel



Public Transport 3.4

Bus routes provide stops at locations in proximity to the south eastern area of the project site, with the Belconnen bus interchange to the south and stops to Aikman Drive to the east.

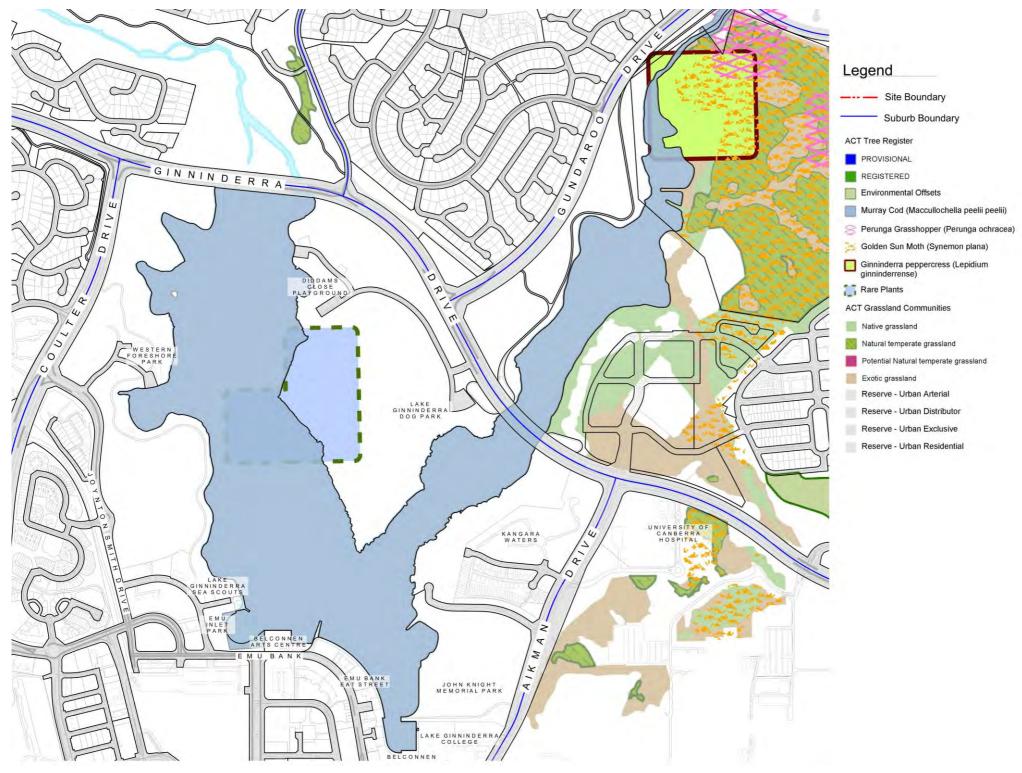






3.5 Significant Species and Registered Trees

An area noted as containing rare plants is located to the western side of the central peninsula. There are no registered trees within the project site boundary.

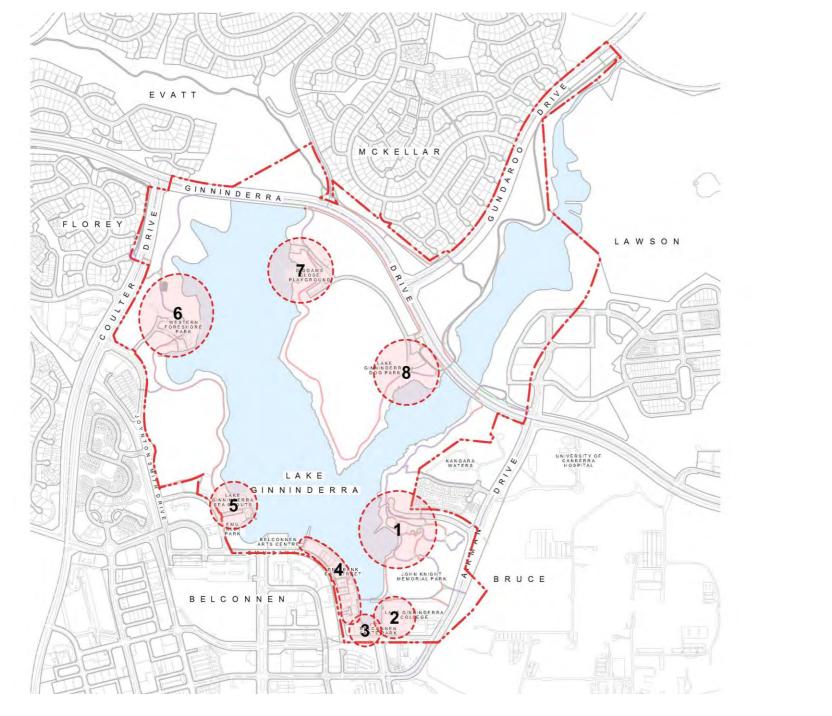


Significant Species and Registered Trees

Recreational Areas and Destinations 3.6

The following recreation areas are spread around the edge of the lake, all of which are connected by the community path:

- John Knight Memorial Park, located to the south eastern corner of the study site. Provides BBQ, picnic and playground facilities.
- Lake Ginninderra College, Belconnen Skate Park and the Emu Bank 'Eat Street' all front onto the southern foreshore.
- The Belconnen Arts Centre, Emu Inlet and the Lake Ginninderra Sea Scouts building are located within the south western corner of the study site.
- The Western Foreshore Park area is accessed via Joynton Smith Drive, provides playground and BBQ facilities, beach and swimming enclosures and a boat launching ramp.
- Dulwa Beach, located to the north west of the central peninsula, provides playground and BBQ facilities, beach and boat launching ramp.
- Bimbi Beach, located to the north east of the central peninsula, provides playground and BBQ facilities and beach and swimming enclosures. Accessed via Diddams Close which also provides access to the adjacent Belconnen Dog Park.





- Rainbow Serpent Playground Ginninderra Parkrun Start Location
- Lake Ginninderra Colleg 2
- nen Skate Park
- Emu Bank Urban Interface
- Lake Ginninderrra Sea Scouts Hall
- Vestern Foreshore Park Aacdermott Place Boat Ram Bargang Beach Yerra Beach
- Learn to Ride Track
- Dulwa Beach Diddams Close Playground 7
- Bimbi Beach Lake Ginninderra Dog Park 8 Playground

Recreational Areas and Destinations

4.0 Existing Asset Audit and Assessment

4.1 Audit Data

Audit data has been compiled for all existing assets within the study site boundary. The majority of this data was provided by Transport Canberra and City Services, with the assessment of lighting being undertaken through on-site assessment. The following assets are included in the audit and assessment:

- Paths
- Lighting
- Signage
- Seating
- Tables
- Drinking Fountains
- Tree Canopy

The audit data has been compiled as an Excel data base which provides a working tool which can be filtered by asset number, asset type, location, and condition. Images of each asset are also included within the data.

4.2 **Definitions**

Each asset has been assessed, using the following definitions as per the Institute of Public Works Engineering Australasia Condition Assessment and Asset Performance Guidelines. The IPWEA Guidelines set out generic principles applicable to all types of assets. It covers the basic concepts of condition assessment, performance measurement, risk management and data management. The definitions assist in analysing the state of the identified assets.

Condition

Condition reflects the physical state of the asset, which may or may not affect its performance. The performance of the asset is the ability to provide the required level of service to customers. Generally, this can be measured in terms of reliability, availability, capacity, and meeting customer demands and needs.

Condition and performance failure can be considered as 'cause' and 'effect' respectively. That is, condition deterioration is a cause of failure, the effect of failure is poor performance (failure to meet required levels of service). The asset condition has been ranked from very poor to very good.

Capacity or Utilisation

Capacity or utilisation is another cause of failure and poor performance. An asset can be considered to have failed when it no longer achieves the required levels of service.

Assets must be utilised effectively in order to deliver the required levels of service. Wherever possible the aim should be high utilisation of assets.

Underutilisation of an asset can be considered as a capacity failure. Unlike normal capacity failure, (i.e. the demand for the asset exceeds its capacity) this failure represents a lack of demand for the service the asset provides. The asset utilisation has been ranked from very poor to very good.

Functionality or Suitability

Suitability or 'fitness for purpose' also needs to be monitored. Suitability needs to recognise service needs for current and future purposes. By assessing the suitability of an asset opportunities for varying the level of service can be considered. An asset functionally or

suitability rated '4 poor' or '5 very poor' is identified as a safety hazard due to its poor condition. Assets that receive such ratings should be prioritised for works as they have been identified as a hazard that may result in injury. The asset function has been ranked from very poor to very good.

4.3 Assessment

Within the Excel data base, the rating of the Condition, Function, and Utilisation of each asset has been rated from Very Poor to Very Good. A colour coding system has been applied to these ratings. This provides an instant overall visual assessment of the assets.

4.4 Asset Location Drawings

Each individual asset is assigned a unique asset ID number, this number identifies the asset within the excel data base. This ID number is now cross referenced and shown on drawings to provide location information of the asset. Refer to Asset Location Drawings at Attachment 1.

Additional Analysis Inputs 4.5

Path Defects 4.5.1

An on-site inspection of the Lake Ginninderra Community Path was undertaken to assess and locate all path defects including drainage issues, path edge damage, path surface damage and locations of safety issues. These additional defects have been added to the Excel data and mapped.

4.5.2 Strava Data

Strava data which has been captured within the study site shows the intensity of path usage by both cyclists and pedestrians over weekday and weekend time periods.



Cycle Usage Weekday (All day)



Cycle Usage Weekend (All day)



Pedestrian Usage

4.6

Consultant Inputs

The following Consultants have provided specialist inputs to the design process:

- Civil Engineer: Indesco. Civil and hydraulic advice concerning design and costing of the culverts.
- the provision of lighting to required areas.
- and Detail Design stage.

remediation of drainage defect issues including treatment of concrete edge strips and

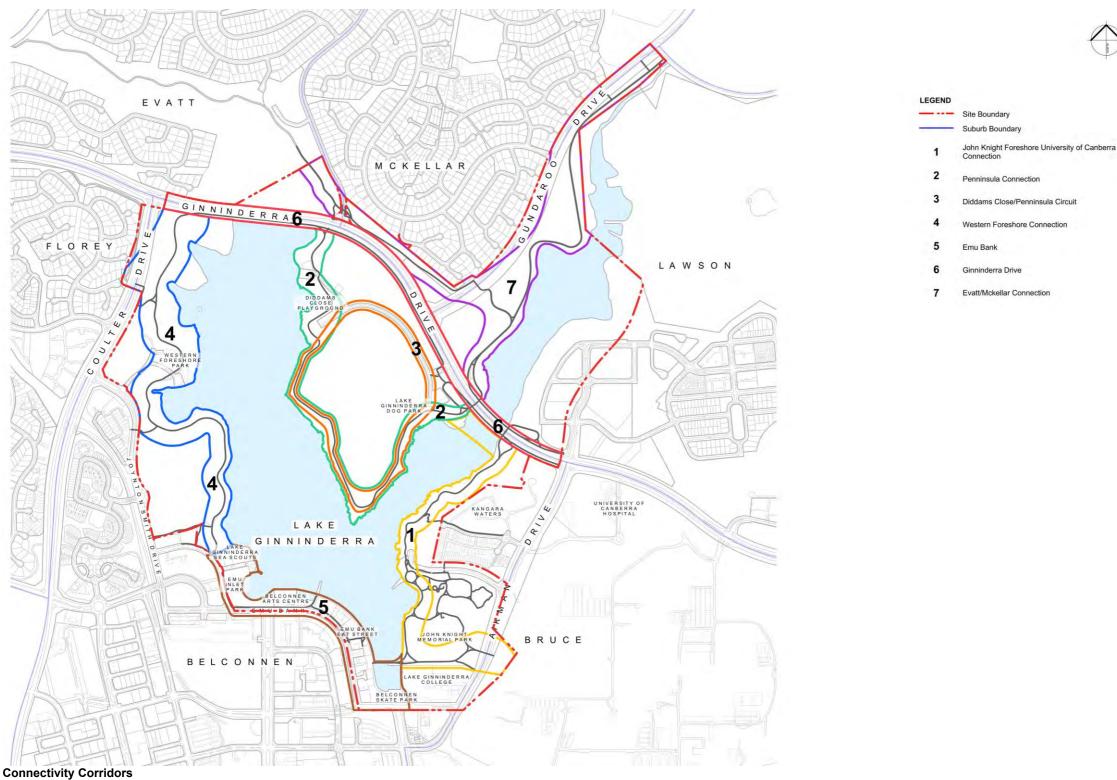
• Electrical Engineer: John Raineri and Associates. Advice concerning design and costing of

Surveyor: ACT Survey: Survey data to selected areas which require detail design at FSP

Asset Analysis Mapping 5.0

Connectivity Corridors 5.1

To assist in the analysis of the asset assessment data, the study site has been broken down into 7 corridors which capture distinct movement zones and path connections across the site. These connectivity corridors provide manageable areas in which assets can be grouped to aid the management of prioritising asset upgrades.

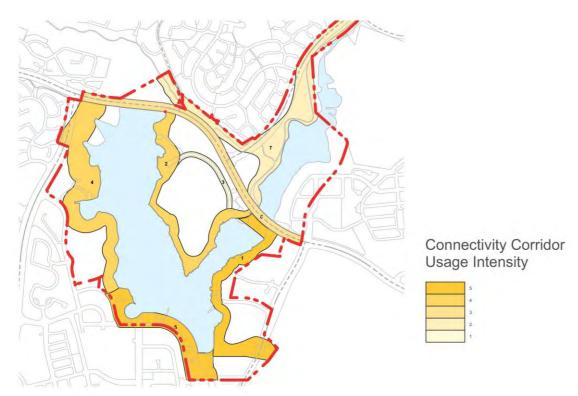


Audit Analysis 5.2

The connectivity corridors have been used as a basis to produce a series of maps which use the compiled audit data to provide the following snap-shot graphics of the overall asset assessment within a corridor.

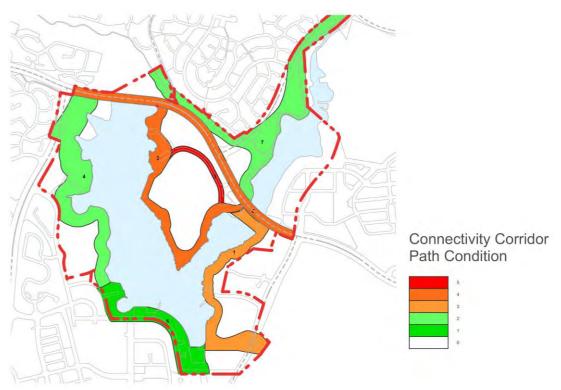
The condition, function and safety of the paths and condition and function of all other assets within each of the connectivity corridors has been ranked and mapped. Each of these maps has rated the criteria from 1 to 5, 1 being very good, 5 very poor.

The intensity of path and other facility usage within a corridor has been assessed and ranked using both on site observations the presence of recreation facilities and destinations and the available strava data. Usage intensity is ranked from 5, high to 1, low.



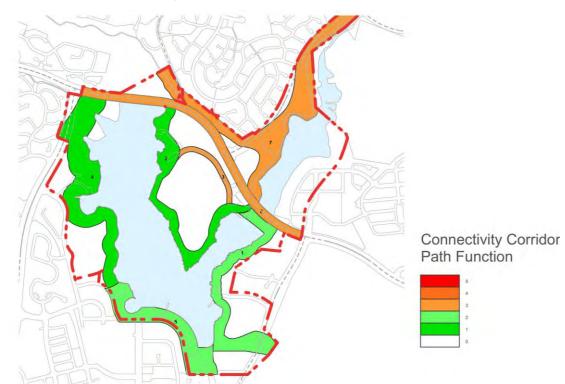
Connectivity Corridor Usage Intensity

The audit data of path condition assessment has been averaged across each connectivity corridor to produce a ranking of 1 to 5.



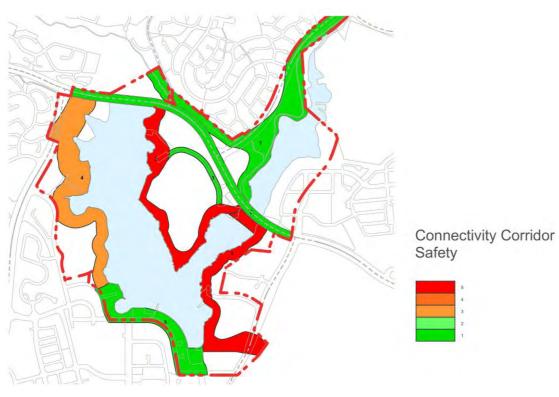
Connectivity Corridor Average Path Condition Ranking

The audit data of path function assessment has been averaged across each connectivity corridor to produce a ranking of 1 to 5.



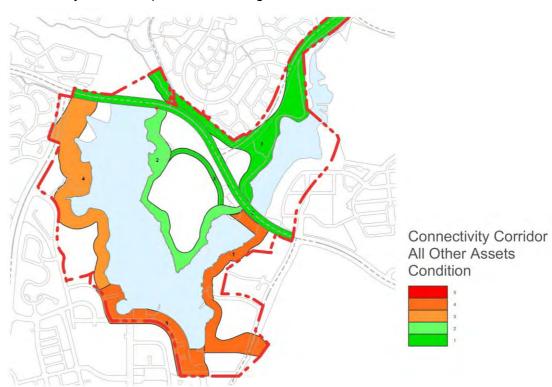
Connectivity Corridor Average Path Function Ranking

The audit data of path safety assessment has been averaged across each connectivity corridor to produce a ranking of 1 to 5.



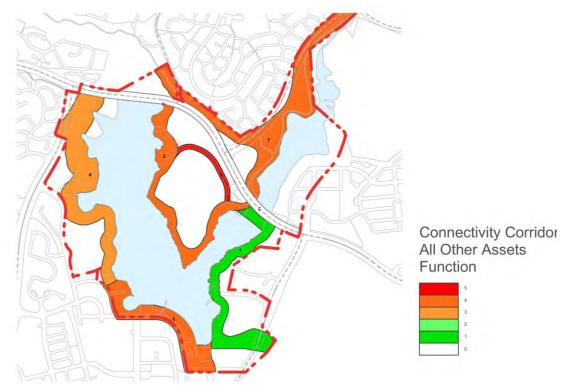
Connectivity Corridor Path Safety Ranking

The audit data of all other asset condition assessment has been averaged across each connectivity corridor to produce a ranking of 1 to 5..



Connectivity Corridor Average of All Other Asset Condition Ranking

The audit data of all other asset function assessment has been averaged across each connectivity corridor to produce a ranking of 1 to 5.



Connectivity Corridor Average of All Other Asset Function Ranking

Upgrade Recommendations 6.0

On-site investigations were undertaken to both ground-truth the provided audit data and to provide additional observations of asset condition, capacity and function. Data and observations obtained from these investigations, combined with the audit data provide the basis of the proposed upgrade recommendations. These include recommendations for both the upgrade of existing assets and the provision of new assets where required.

These recommendations have been made across the whole of the study site. For ease of manageability and the ability to provide logical groupings of upgrade recommendations they are presented within the connectivity corridor zones.

The recommendations can be broadly grouped into the following categories:

- Path renewal and widening
- Remediation of path drainage issues
- Remediation of path surface damage issues
- New paths to improve path capacity and safety
- New paths or extensions to existing paths to improve connectivity in the network
- Lighting improvements
- New seating locations or upgrades to existing seating
- New drinking fountain locations
- Lighting is to be provided to the majority of new path connections which are proposed as part of the upgrade design.
- Signage upgrades. Additional directional signage is proposed at all new path intersection locations as per Standard Drawings SD 0572. Additional shared path signage is proposed at locations deemed to be lacking adequate existing signage, indicating appropriate path behaviour as per Standard Drawing SD-0580. On road cycling signage is to be included at new on/off road slip lane connections as per Standard Drawing SD 0571.

Departures from the Brief 6.1

The upgrade to all signage within the project site has not been included within this study. The design of signage upgrade works requires individual assessment of the functionality of each signage asset. Due to the detailed aspect of this task this has not been undertaken and requires analysis and investigation as part of a separate project.

Detailed Recommendations 6.2

Connectivity Corridor 1 6.2.1

Corridor 1 covers the community path zone which extends from Ginninderra Drive east bridge to the southern edge of John Knight Memorial Park, refer to Drawings 411 and 412. This area has one of the highest usage intensities within the study site, with a large carparking area providing access to playground, bbg and picnic facilities as well as the community path. Strava data indicates that the path within this area is used by weekday commuting cyclists, which adds to the demand placed upon the path.

A section of path within the southern section of Corridor 1 is in the current works program for removal and replacement. It is proposed to continue this replacement of path to either side, (asset numbers 1A and 1B) resulting in a new length of path which also resolves a number of existing path safety and defect issues.

A path drainage issue has been identified on the link path connecting to the University of Canberra (1R and 1S). This is to be remediated through a combination of regrading of adjacent grass surfaces and the introduction of an OCI.

Two options have been proposed to increase capacity of path 1C. As there are existing trees to either side of the path edge which pose a constraint to the widening of the path a separated path is proposed to the edge of the existing bbg area (path 1AC), which would thread between the existing trees. To the north of this a second separated path (path 1AB) is proposed to follow the alignment of the existing gravel access track. The other option is to widen path 1C to 4m where possible.

There are a number of drainage issues along the length of path 1C which will be rectified with a combination of removal and regrading and culvert installation.

A path drainage issue identified to the north of the Ginninderra Drive underpass (1AD) is to be remediated through the regrading of adjacent surfaces to allow for the free flow of water.

An additional path connection (1AD) is proposed to Kangara Waters retirement complex. An existing path stub is to be extended, providing access to the coffee shop within Kangara which is currently utilised by path users. Lighting is proposed to this path connection.

A number of locations for additional seating are proposed within Corridor 1, both to the edge of the existing path and to locations along the proposed separated path, providing additional amenity particularly for elderly residents of Kangara who regularly frequent this section of path.

There are also a number of areas of additional tree planting proposed to the eastern side of the existing path, increasing shade and overall amenity within this area. The design of lighting to the eastern underpass of the Ginninderra Drive Bridge east will be included in the DR phase of the project.

Low Level Bridge Connection

The current path connection which uses the Ginninderra Drive east bridge has a number of safety issues, including the location of light poles to the centre of the path. A proposal has been put forward to construct a low level pedestrian bridge to the south of the road bridge, providing an at grade connection between the eastern and western foreshore which avoids interaction with the road bridge. This bridge would also alleviate the current steep path connections to the road bridge. The low level bridge proposal is considered a long term option.

Short term options have been considered, with the recommendation of providing a connection to the on road cycle lane considered the most viable short term option.

The low level bridge proposal has been provided at this Feasibility Study stage of the project for consideration.

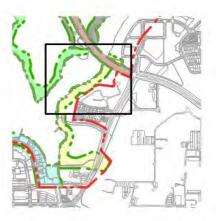


	END FOR ALL PLANS, NOT ALL ITEMS
	PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING





COMMONIEG	END FOR ALL PLANS, NOT ALL ITEMS
	PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
۲	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
Δ	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING



6.2.2 Connectivity Corridor 2

Corridor 2 covers the central peninsular foreshore edge, extending from Diddams Close east to Diddams Close west. This peninsular contains two recreation areas to the east and west, connected by the Diddams Close access road. The Lake Ginninderra Dog Park is also located within the eastern recreation area.

The overarching proposal in this corridor is the widening of the existing path (Paths 2A, 2B and 2C) to 4m allowing for increased capacity. A number of path defects will be addressed in conjunction with the path widening.

A proposal to formalise the current desire lines which connect the cycle path to the two jetty locations would create more accessible connections to these facilities.

The path area at the eastern end of the corridor adjacent to the Ginninderra Drive underpass contains the following defect issues:

- Poor drainage results in path flooding (2D) which will be resolved through path regrading and the installation of culverts and swales
- A major desire line cuts across from the main path to the connection to the bridge (2Q). This is to be formalised to become the main path route This path connection is proposed to be lit, with one new light column centrally located, one to the southern end of the new path and an existing light to the northern end of the path being converted to a double sided luminaire.
- An area of erosion adjacent to the bridge connection path (2P) causes dirt and gravel to wash across the path. This is to be remediated through stabilisation works

Additional seating is proposed in six locations along the path, with upgrade works proposed to two existing seat locations.

The design of lighting to the western underpass of the Ginninderra Drive Bridge east will be included in the DR phase of the project.



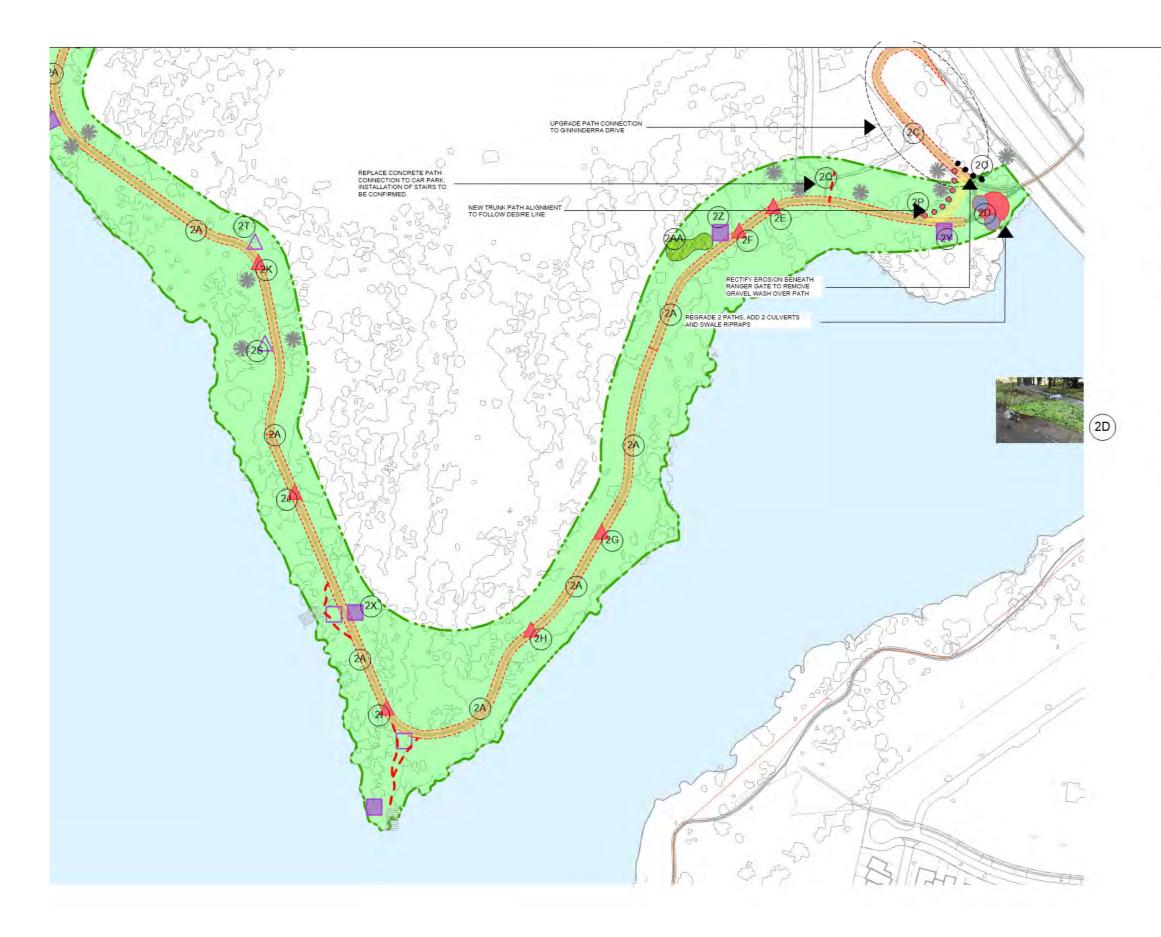
	END FOR ALL PLANS. NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING





	END FOR ALL PLANS, NOT ALL ITEMS
LISTED WILL AF	PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
\bigcirc	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING





	END FOR ALL PLANS. NOT ALL ITEMS
	PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
\bigcirc	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
000	ADDITIONAL NATIVE TREE PLANTING
9	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
带	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING



6.2.3 Connectivity Corridor 3

Corridor 3 extends between the parking areas to Diddams Close east and west. Strava data indicates that this is a route taken by walkers who potentially use this as a walking circuit connecting to the peninsular path. A 2m wide intermediate path (3A) is proposed to be constructed to the verge of Diddams Close, formalising this connection. The existing path connection to the corner of Diddams Close is to be re-aligned to provide a safe road crossing, connecting to the proposed intermediate path.



	IND FOR ALL PLANS, NOT ALL ITEMS
	PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING



6.2.4 Connectivity Corridor 4

Corridor 4 takes in the western foreshore of the lake. The following options have been proposed to increase path capacity within the southern portion of corridor 4:

- Provide a separated path (4Y) which follows the alignment of an existing gravel track to the west of the foreshore community path
- Provide a second separated path (4X) which again follows an existing dirt track to the east of the foreshore community path. Lighting is not proposed to this new path. It is considered that this path is an optional route, with the adjacent lit path able to be taken if required.
- Increase the width of the existing path to 4m to cater for increasing demand

The following additional path connections are proposed to improve connectivity with adjoining residential areas:

- An additional connection path (4Z) is proposed which provides a path connection to Joynton Smith Drive. Lighting is proposed to this path connection.
- An additional connection path (4AC) is proposed to connect the lake path to the existing crossing point at the intersection of Joynton Smith Drive and Coulter Drive, providing additional access from Florey and the Belconnen Bikeway. Lighting is proposed to this path connection.

A number of path defects have been identified, to be remediated through path and adjacent surface regrading and the installation of culverts.

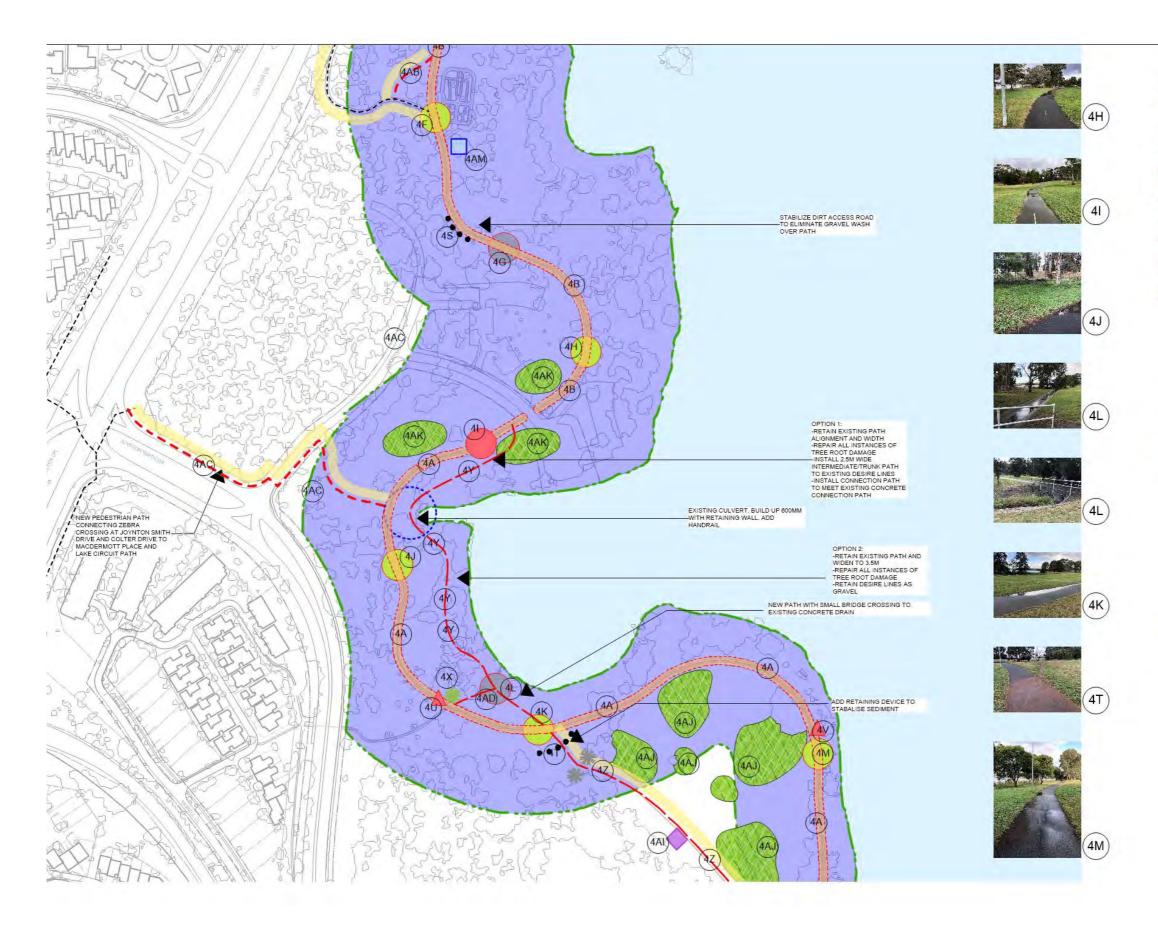
A number of additional seating opportunities have been identified, primarily to the north of the corridor, along with additional tree planting

The site of the previous Lake Ginninderra Water Police headquarters, located to the north of Emu Inlet, is currently a vacant site. This block of land is currently under the control of the Suburban Land Agency. The SLA have indicated that there are plans to develop this site. This proposed development creates potential conflicts with this project proposal to locate a new path connection between Emu Inlet and the lake circuit path to the north of the Lake Ginninderra Sea Scouts hall. This proposed path connection is not to be included within this project scope. For future TCCS and SLA coordination to complete the foreshore path link.



	END FOR ALL PLANS, NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
\bigcirc	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
桊	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
Δ	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING





	END FOR ALL PLANS, NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
••••	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
0	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
000	ADDITIONAL NATIVE TREE PLANTING
9	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING





	END FOR ALL PLANS. NOT ALL ITEMS
LISTED WILL AF	PPEAR ON THIS SHEET
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
000	ADDITIONAL NATIVE TREE PLANTING
9	ADDITIONAL DECIDUOUS TREE PLANTING
*	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT



6.2.5 Connectivity Corridor 5

Corridor 5 extends from Lake Ginninderra College around Emu Bank to the Lake Ginninderra Sea Scouts Hall. This corridor includes the urban area of Emu Bank and interface with the Belconnen Town Centre. As such it is a zone of high usage intensity, with numerous destinations within the corridor adjacent to the path.

The foreshore path in the south of the corridor is located adjacent to the Emu Bank developments and the hard edge of the lake. The path width in this area is adequate. The connection path (5A) is proposed to be widened to 4m. Paths (5B and 5C) are also proposed to be widened to 4m.

The existing connection path to Emu Bank (5F) is currently inadequate in width and is impacted by foliage of adjacent vegetation. It is proposed to widen this path along with remediating the vegetation incursions.

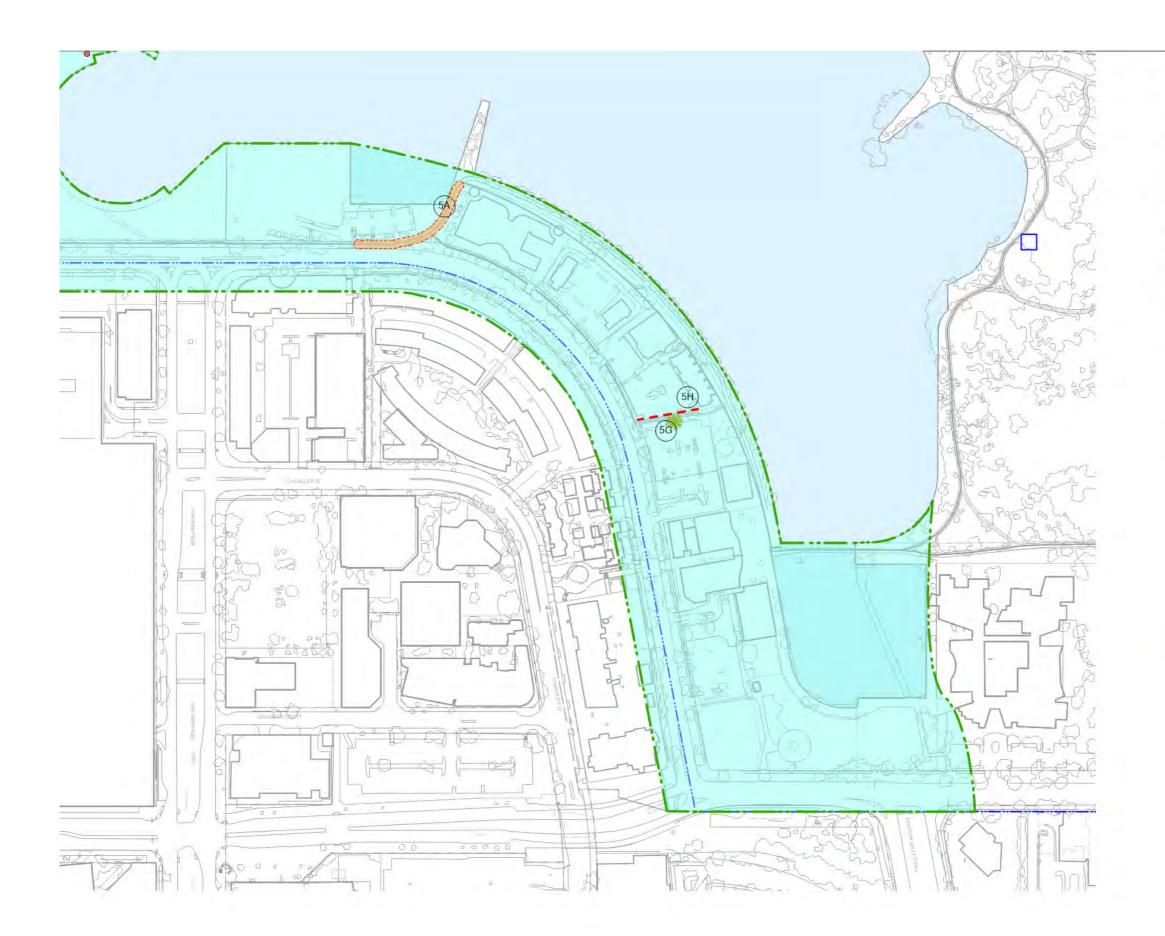
A safety issue has been identified to the corner of Emu Bank and Beissel Street with an existing retaining wall impacting site lines of cyclists using the path at this corner. It is proposed to remodel the retaining wall and relocate the sign on top of it to alleviate this issue.

The current upgrade and extension to the Belconnen Arts Centre includes a new path connection which extends from the end of the Emu Bank foreshore path to the edge of Emu Inlet. This path includes a boardwalk connection to the front of the Arts Centre, which is currently under construction. The proposal to link into this path at the end of Emu Inlet, providing a continuous connection between the Sea Scouts Hall to the Emu Bank Foreshore path without interacting with the road at any point, is to be considered at a later date following the development of the ex Water Police site, as described in Section 6.2.4 above.



COMMONIEGE	ND FOR ALL PLANS, NOT ALL ITEMS
LISTED WILL AF	PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
9	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING





LEGEND COMMON LEGE	END FOR ALL PLANS, NOT ALL ITEMS
LISTED WILL AF	PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
•••••	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
0	ADDITIONAL DECIDUOUS TREE PLANTING
	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING



6.2.6 Connectivity Corridor 6

Corridor 6 is the Ginninderra Drive section of the path, from the western bridge connection to the east. This section of the lake path necessitates path users to travel directly adjacent to the busy traffic environment of Ginninderra Drive.

The path to the western bridge has a w beam guard rail edging the path the interface of which is a series of sharp steel plates, perpendicular to the path creating a safety issue. It is proposed to provide a cycle appropriate barrier to the edge of this guard rail, a PD1 rail or similar.

The path to the eastern bridge has a series of light poles in the centre of the path which cause conflict between path users travelling in opposing directions. There are both long and short-term options to resolve this issue. The long term option is a low-level bridge as noted in Corridor 1 above and has been put forward as a proposal to consider. This option provides the greatest pedestrian and cyclists connectivity and comfort as it avoids the need to climb the hill to move across the existing bridge. It also provides an opportunity for an additional destination for the lake as a whole with potential for interaction with the water below and dedicated viewing or fishing spots. As a short term option, an on/off road cycle slip lane is proposed at the eastern end of the eastern bridge. This will allow cyclists to enter the lake circuit path network or leave the path network and access the on-road cycle lane. There is an existing on/off cycle slip lane to the western end of the east bridge. Appropriate signage and line marking is to be installed which indicates the start and end of cycle lanes.

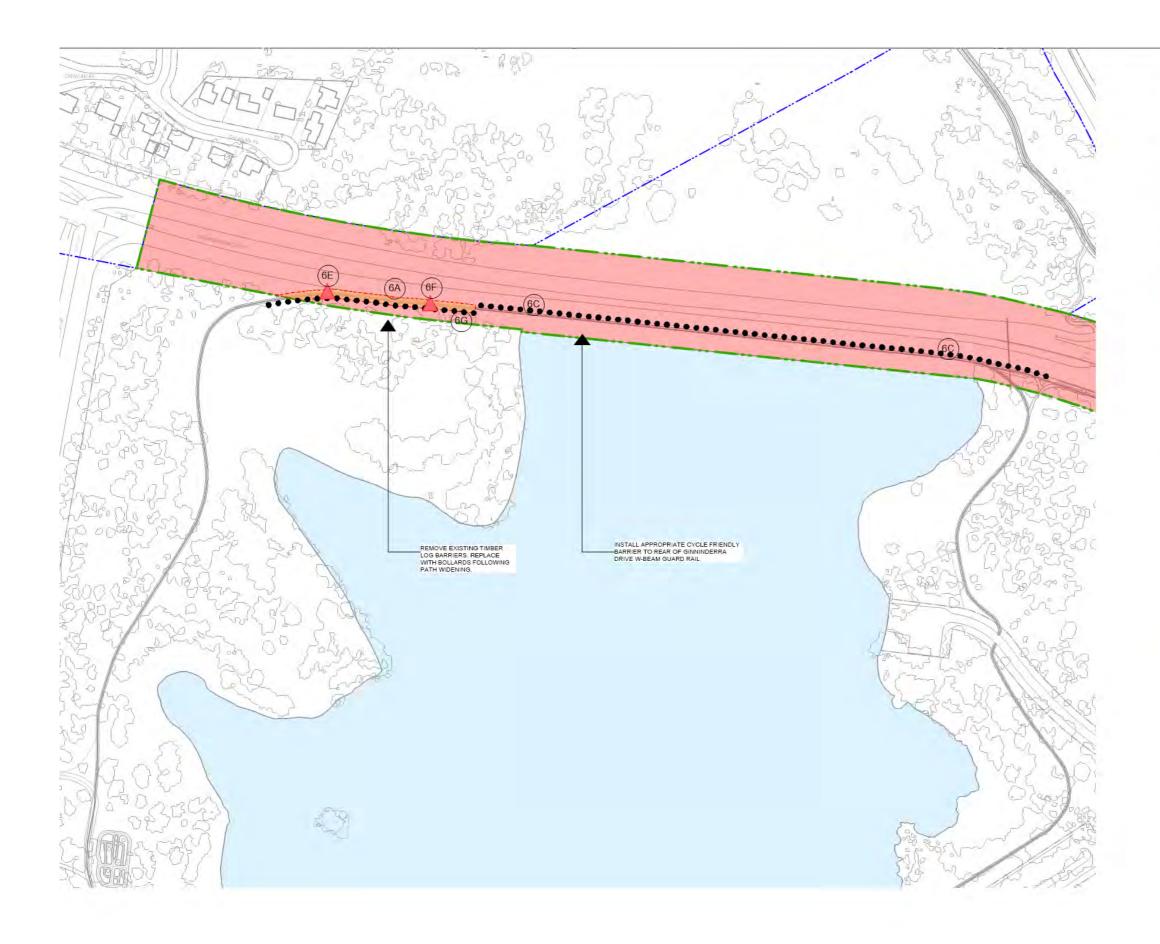
In addition to this there are a number of medium term options which could be explored including utilisation of existing road width as additional path or relocating the lighting and changing the light type to be fixed to the side of the bridge.

The following are the safety issues in the corridor directly associated with the road interface:

- The path to the western bridge has a w beam guard rail edging the path the interface of which is a series of sharp steel plates, perpendicular to the path creating a safety issue. It is proposed to provide a cycle appropriate barrier to the edge of this guard rail, a PD1 rail or similar.
- The path to the eastern bridge has a series of light poles in the centre of the path which cause conflict between path users travelling in opposing directions. A low level bridge as noted in Corridor 1 above, has been put forward as a proposal to consider. In addition to this there are a number of options which could be explored including utilisation of existing road width as additional path.

The path connection to the western bridge contains a number of path defects and a safety issue which has been identified of the existing log barrier directly adjacent to the edge of the path (6F).

The path connection to the eastern bridge also requires rectification of defects and the installation of an on-road off ramp to enable access to the lake path network. An off-road on ramp is also proposed to allow path users to access the on-road path.



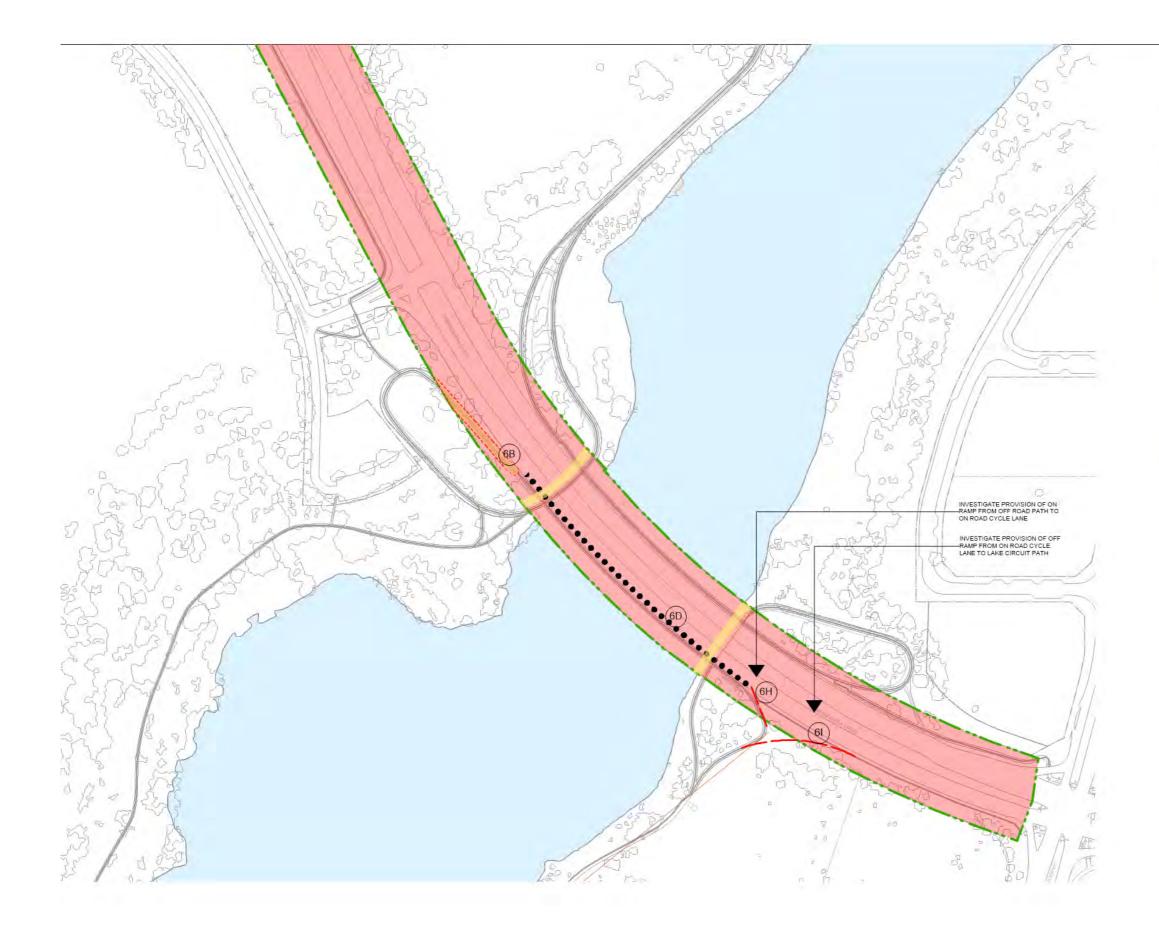
D FOR ALL PLANS. NOT ALL ITEMS
ITE BOUNDARY
ONNECTIVITY CORRIDOR
DDRESS SAFETY CONCERN
IEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE HARED PATH CONNECTION
IEW 3.5M WIDE SHARED PATH
IEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
IEW 2.0M WIDE INTERMEDIATE PATH
EPLACE AND WIDEN EXISTING TRUNK PATH TO 4M VIDTH (DEPENDENT ON LOCATION)
ETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH DEPENDENT ON LOCATION)
RAINAGE DEFECT REQUIRING PATH REMOVAL AND EGRADING
RAINAGE DEFECT REQUIRING CULVERT NSTALLATION (225H X 300W REINFORCED CONCRETE IOXED CULVERT)
RAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
ATH DAMAGE AND CRACKING TO BE REMEDIATED
XISTING PATH TO BE REGISTERED IN ASSET NATABASE
DDITIONAL NATIVE TREE PLANTING
DDITIONAL DECIDUOUS TREE PLANTING
DDRESS VEGETATION INCURSION TO PATH
EMOVE DEAD TREE
ROPOSED DRINKING FOUNTAIN
XISTING DRINKING FOUNTAIN
ROPOSED SEAT
XISTING SEAT
XISTING SEAT REQUIRING UPGRADE WORKS
ROPOSED LIGHTING





LEGEND	
	END FOR ALL PLANS. NOT ALL ITEMS PPEAR ON THIS SHEET
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
Δ	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING





LEGEND	$ \longrightarrow $
	END FOR ALL PLANS. NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
••••	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
*******	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
\bigcirc	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
000	ADDITIONAL NATIVE TREE PLANTING
9	ADDITIONAL DECIDUOUS TREE PLANTING
	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING



6.2.7 Connectivity Corridor 7

Corridor 7 extends from the eastern Ginninderra Drive underpass to include the path connections to Evatt and McKellar.

Strava data has identified these paths as being used regularly by weekday cycling commuters. The overarching proposal in this corridor is the provision of lighting to the path connections. Through FSP Stage investigations, the project Electrical Engineer identified a number of issues with the proposal to provide lighting within the vicinity of this 132kV sub-transmission line, which extends between Gundaroo Drive and the west of William Webb Drive. These issues include column height and location restrictions, the requirement of an Earth Potential Rise (EPR) study and the requirement of an Electromagnetic Radiation (EMR) study. A meeting was held with TCCS Roads Maintenance, Streetlight Assets, 09.06.21, to discuss these issues. The outcome of this meeting was that the design of lighting for this section of path should not proceed as part of this project.

A number of path defects have also been identified in this corridor, including two instances of gravel wash across the path, tree root damage and a drainage issue to the northern section.

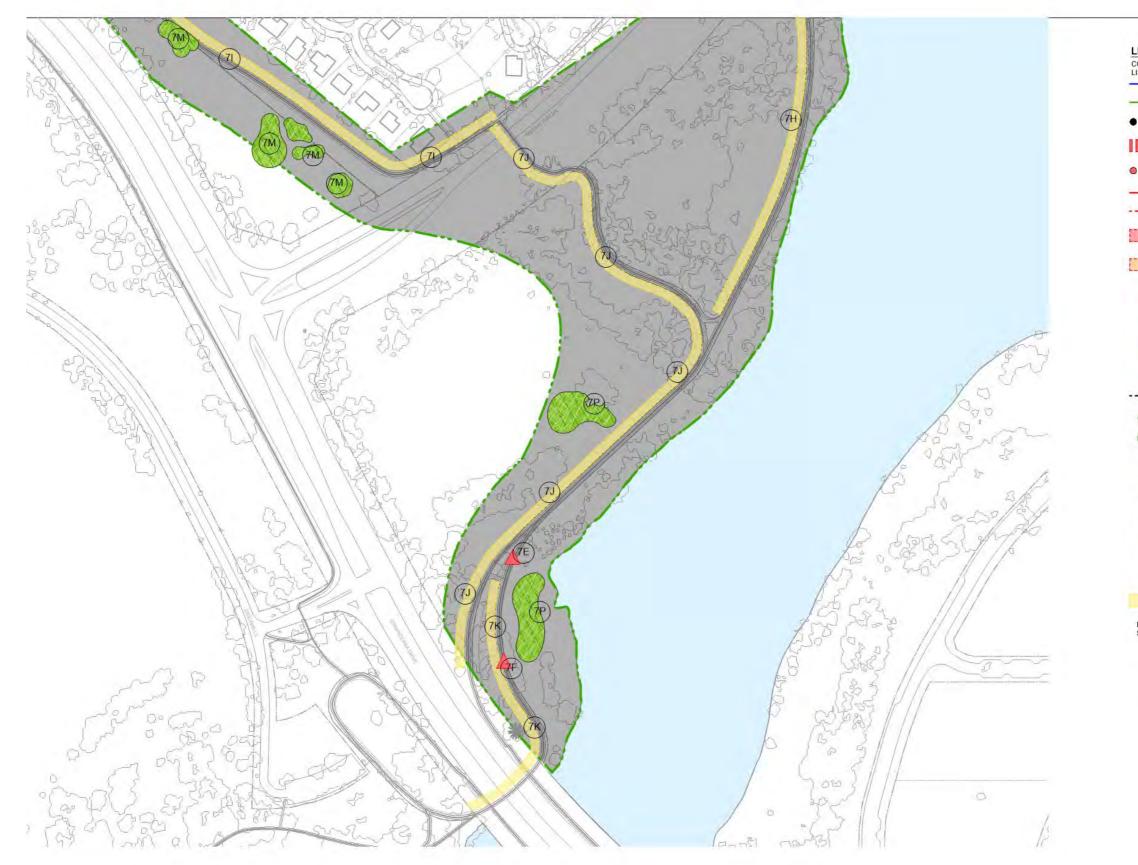
Construction works are currently underway for the duplication of Gundaroo Drive, which borders the project site at this Corridor. These duplication works include an on road cycle lane to the southern traffic lane, and new bus stop locations. These duplication works have minor impacts on the project site, with path connections proposed to link into the project path within Corridor 7 and associated path lighting. Coordination with Gundaroo Drive works is to be included within the final DR submission.



LEGEND	
	END FOR ALL PLANS. NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
\bigcirc	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
9	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS

NOTE: ALL PATHS TO BE LIFTED OR GRADED EITHER SIDE REQUIRE A CONCRETE STRIP.





	END FOR ALL PLANS. NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING

NOTE: ALL PATHS TO BE LIFTED OR GRADED EITHER SIDE REQUIRE A CONCRETE STRIP.





	END FOR ALL PLANS. NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING

NOTE: ALL PATHS TO BE LIFTED OR GRADED EITHER SIDE REQUIRE A CONCRETE STRIP.





	END FOR ALL PLANS. NOT ALL ITEMS
	SITE BOUNDARY
	CONNECTIVITY CORRIDOR
	ADDRESS SAFETY CONCERN
	NEW LOW LEVEL BRIDGE PROVIDING 3.5M WIDE SHARED PATH CONNECTION
	NEW 3.5M WIDE SHARED PATH
	NEW 2.5M WIDE INTERMEDIATE/ TRUNK PATH
	NEW 2.0M WIDE INTERMEDIATE PATH
	REPLACE AND WIDEN EXISTING TRUNK PATH TO 4M WIDTH (DEPENDENT ON LOCATION)
	RETAIN AND WIDEN PATH TO 3.0M-3.5M WIDTH (DEPENDENT ON LOCATION)
•	DRAINAGE DEFECT REQUIRING PATH REMOVAL AND REGRADING
•	DRAINAGE DEFECT REQUIRING CULVERT INSTALLATION (225H X 300W REINFORCED CONCRETE BOXED CULVERT)
0	DRAINAGE DEFECT REQUIRING ADJACENT GRASS SURFACE REGRADING
	PATH DAMAGE AND CRACKING TO BE REMEDIATED
	EXISTING PATH TO BE REGISTERED IN ASSET DATABASE
	ADDITIONAL NATIVE TREE PLANTING
	ADDITIONAL DECIDUOUS TREE PLANTING
٠	ADDRESS VEGETATION INCURSION TO PATH
*	REMOVE DEAD TREE
	PROPOSED DRINKING FOUNTAIN
	EXISTING DRINKING FOUNTAIN
	PROPOSED SEAT
	EXISTING SEAT
\triangle	EXISTING SEAT REQUIRING UPGRADE WORKS
	PROPOSED LIGHTING

NOTE: ALL PATHS TO BE LIFTED OR GRADED EITHER SIDE REQUIRE A CONCRETE STRIP.



7.0 Priority Areas

The project brief identifies three priority areas for upgrade works which have been noted through community requests and TCCS site investigations.

These priority areas are:

- Location 1; John Knight Memorial Park Foreshore path
- Location 2; Central Peninsula to Diddams Close playground
- Location 3; Western Foreshore including park and path to Ginninderra Drive

Through the assessment process the identified areas in all three locations are included within the upgrade sites.

7.1 Methodology

In order to provide a systematic approach to the prioritisation of all proposed upgrades and additions of assets the following methodology has been developed to assess and rank improvements in order of priority. This prioritisation of upgrades will assist with any future value management exercise if required.

7.2 Corridor Priority Ranking

The compiled asset data has been used to produce mapping of assessment criteria within each corridor. The condition, function and safety of the paths and condition and function of all other assets within each of the connectivity corridors has been rated and mapped. Each of these maps has rated the criteria from 1 to 5, 1 being very good, 5 very poor.

The intensity of usage has also been mapped, using a combination of the recreational areas and destinations mapping information, available Strava data and site observations. Again, the intensity of usage map has ranked the usage from 1 to 5, 1 being low, 5 being high.

The following outlines the criteria which forms the basis for the rankings and how each criteria is rated:

Path Safety

Considers the number of defects within a corridor, including drainage issues, path edge defects, tree root incursions, and noted safety issues. The existing limitations of the path capacity is also considered a safety issue, with increased usage creating more potential points of conflict. The total number of defects within a corridor has been totaled, with the resulting figure used to determine ranking.

Lighting

Provision of lighting is considered both a safety and amenity issue. Noted and assessed separately. The provision of lighting within a corridor has been ranked as either present or not present.

Path Condition

Considers the average condition rating of all paths within a corridor. The assessment of condition has been taken from the compiled asset data ratings, with the average within a corridor being used to determine ranking.

Path Function

Considers the average function rating of all paths within a corridor. The assessment of function has been taken from the compiled asset data ratings, with the average within a corridor being used to determine ranking.

Usage Intensity

Considers the usage and visitation intensity of a corridor. Areas of high usage generally correspond with areas identified as recreational areas and destinations. These areas see an increase in usage of both the lake circuit path and adjoining amenities, creating potential for conflict between different user groups when using the path. The assessment of usage intensity has been taken from mapping of recreational areas and destinations, strava information and site observations.

Accessibility and Connectivity

The identification of missing path connections and existing path connections which require upgrades which will improve the accessibility of the lake circuit path for the community. The presence of missing or poor path connections within a corridor has been ranked as either present or not present.

Previously Identified Priority Areas

Previously identified through community requests and TCCS site investigations. Corridors have been ranked as either being previously identified as priority area or not.

All Other Asset Condition

All other assets, which includes seating, signage, drinking fountains, and tables, considers the average condition rating of other assets within a corridor. The assessment of condition has been taken from the compiled asset data ratings, with the average within a corridor being used to determine ranking.

All Other Asset Function

Considers the average function rating of other assets within a corridor. The assessment of function has been taken from the compiled asset data ratings, with the average within a corridor being used to determine ranking.

The combination of the ranking totals of each criteria within each corridor has then been totalled, giving a figure which provides an indication of the ranking of priority of each corridor.

Corridor	Path Safety	Lighting	Path Condition	Path Usage	Path Connectivity	Identified Priority Area	Other Asset Condition	Total	Ranking
1	5	-	3	5	1	1	4	19	1
2	5	-	4	4	-	1	2	16	2
3	1	-	0	1	1	1	0	4	6
4	4	-	2	4	2	1	3	16	2
5	1	-	1	5	-	-	4	11	3
6	1	-	4	2	-	-	1	8	4
7	1	1	2	2	-	-	1	7	5

Table 1

7.3 Individual Asset Priority Ranking

In addition to identifying the overall priority of the connectivity corridors, individual recommendations for upgrades of assets within each corridor has also been ranked to determine prioritisation. This ranking has been undertaken on the basis of whether the upgrade is based on the following, in order of priority:

Safety: safety of the community using the asset being the number one priority **Lighting**: provision of adequate and safe lighting to all paths which are assessed as requiring lighting

Condition: poor condition of the path affects both safety and amenity for path users Connectivity: improving accessibility and corridor functionality for the community Comfort: improving amenity through the provision of supporting assets in good condition

Traffic light colour coding indicates which of the above criteria the upgrade recommendation falls within.

Corridor	1	2	3	4	5	6	7
Asset	1A	2A	3A	4A	5A	6A	7A
	1B	2B	3B	4B	5B	6B	7B
	1C	2C		4C	5C	6C	7C
	1D	2D		4D	5D	6D	7D
	1E	2E		4E	5E	6E	7E
	1F	2F		4F	5F	6F	7F
	1G	2G		4G	5G	6G	7G
	1H	2H		4H	5H	6H	7H
	11	21		41	51	61	71
	1J	2J		4J	5J		7J
	1K	2K		4K			7K
	1L	2L		4L			7L
	1M	2M		4M			7M
	1N	2N		4N			7N
	10	20		40			70
	1P	2P		4P			7P
	1Q	2Q		4Q			7Q
	1R	2R		4R			7R
	15	2S		4S			
	1T	2T		4T			
	1U	2U		4U			
	1W	2V		4V			

1V	2W	4W	
1X	2X	4X	
1Y	2Y	4Y	
1Z	2Z	4Z	
1AA	2AA	4AA	
1AB	2AB	4AB	
1AC	2AC	4AC	
1AD	2AD	4AD	
1AE	2AE	4AE	
1AF	2AF	4AF	
1AG	2A.2	4AG	
1AH		4AH	
1AI		4AI	
1AJ		4AJ	
1AK		4AK	
1AL		4AL	
1AM		4AM	
1AN			
1AO			
1AP			
1AQ			
1C.2			

Stakeholder Consultation 9.0

Government Stakeholder presentation/comments 9.1 received

The preliminary feasibility and priority report was delivered in a virtual presentation to government stakeholders on 30th April 2021. This presentation outlined the project background and objectives, the process of asset audit and assessment, the key upgrade recommendations and the methodology for prioritising upgrade works. Preliminary costing information associated with upgrade recommendations was also included.

The presentation was circulated to all participants to allow for review and comment. Comment was received from the following:

Urban Treescapes, TCCS. Comment provided in principle support for the proposed path works. Urban Treescapes wish to collaborate to ensure impact on existing trees is limited and highlighted the potential requirement for Tree Management Plans for individual trees. Also noted the requirement for spacing of individual proposed trees to be indicated on Landscape drawings.

Roads ACT, TCCS. Comments provided noted the proposed tree planting with the secondary spillway of Lake Ginninderra will require negotiation with TCCS Dams Team. Also noted the potential issues associated with the proposal of a low level pedestrian bridge.

Pedal Power Consultation 9.2

Targeted stakeholder engagement was undertaken with Pedal Power to provide information on the project and discuss issues concerning the existing assets within the site. The consultation was undertaken on the 21st of April, with two members of Pedal Power attending. Pedal Power raised a number of issues including path widths, safety, connectivity and signage to the path network. Refer to Appendix 2 for the minutes of this consultation. These issues have addressed with the proposed PSP design.

10.0 Key Risks and Issues

The following have been identified as issues which may impact the current design and programmed delivery of the project.

- proposal to install lighting to the path connection linking into Evatt within Connectivity Energy will be necessary to understand the compliance requirements around lighting path.
- The staging of works to allow pedestrian access to continue through the site will require phase of the project.
- point.
- to this block is practical.

 Existing services within the project area are yet to be identified and accurately located. The process of obtaining Dial Before you Dig information has been initiated however, due to the large scale of the site area, the decision was made to suspend these investigations until the design progressed to a point where more targeted service information could be requested. Through initial investigations the Electrical Engineer has identified potential issues with the Corridor 7 as there is an existing 132kV overhead sub-transmission line above and adjacent to sections of this path. The Electrical Engineer has advised that consultation with Evo beneath the transmission line. A similar situation occurs to lengths of the path parallel to Gundaroo Drive, where an existing 11kV power lines are located adjacent to sections of the

further investigation and consultation with TCCS. This will be undertaken during the FSP

A proposed path connection has been discussed which would connect Macdermott Place to the Coulter Drive/John Cleland Crescent intersection, formalising an existing desire line and providing an alternate pedestrian connection into Florey. This proposal requires further study into the provision of a signalised intersection which would provide a safe crossing

Block 29, Section 149, Belconnen is the site of the former Lake Ginninderra Water Police headquarters. The former building has been demolished and this site is currently vacant. The Suburban Land Agency are the managing authority of this block. Study is required into future development proposals for this site to ensure the proposed path connection adjacent

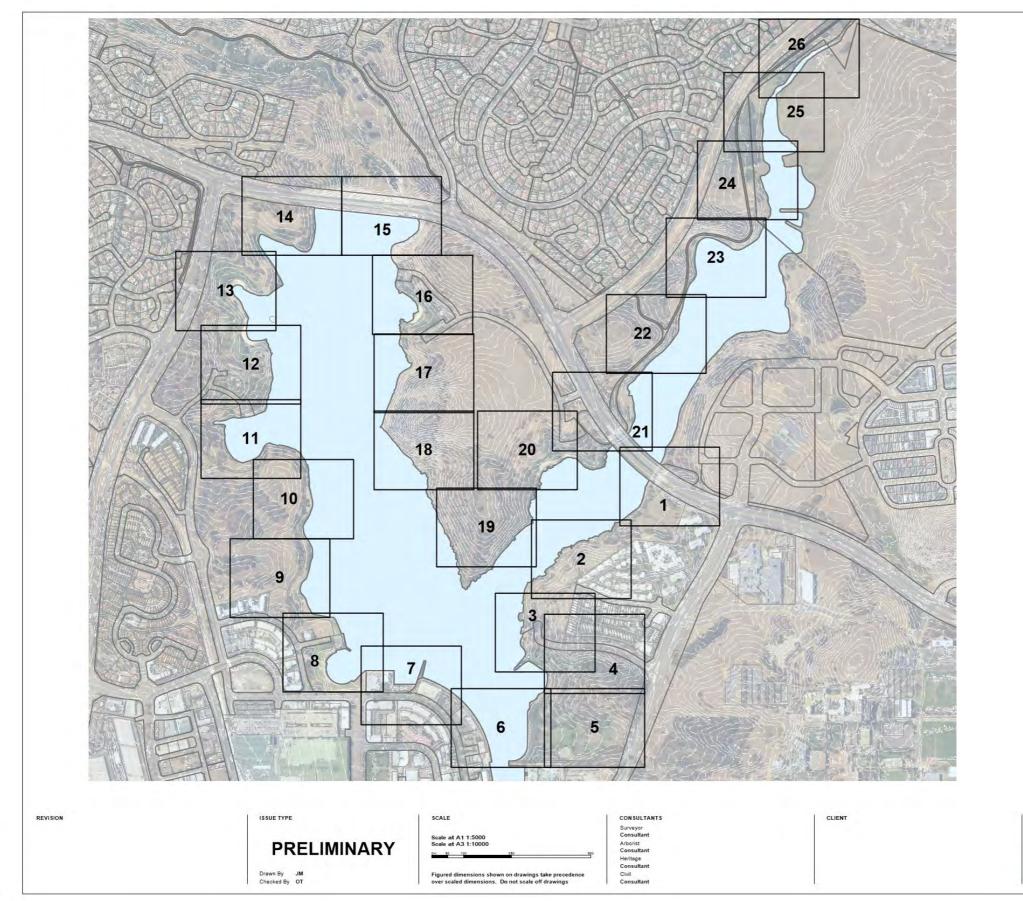
11.0 Attachments

1. Asset Location Drawings

2. Minutes of the Pedal Power Consultation Session



Asset Location Drawings



Asset Location Plan

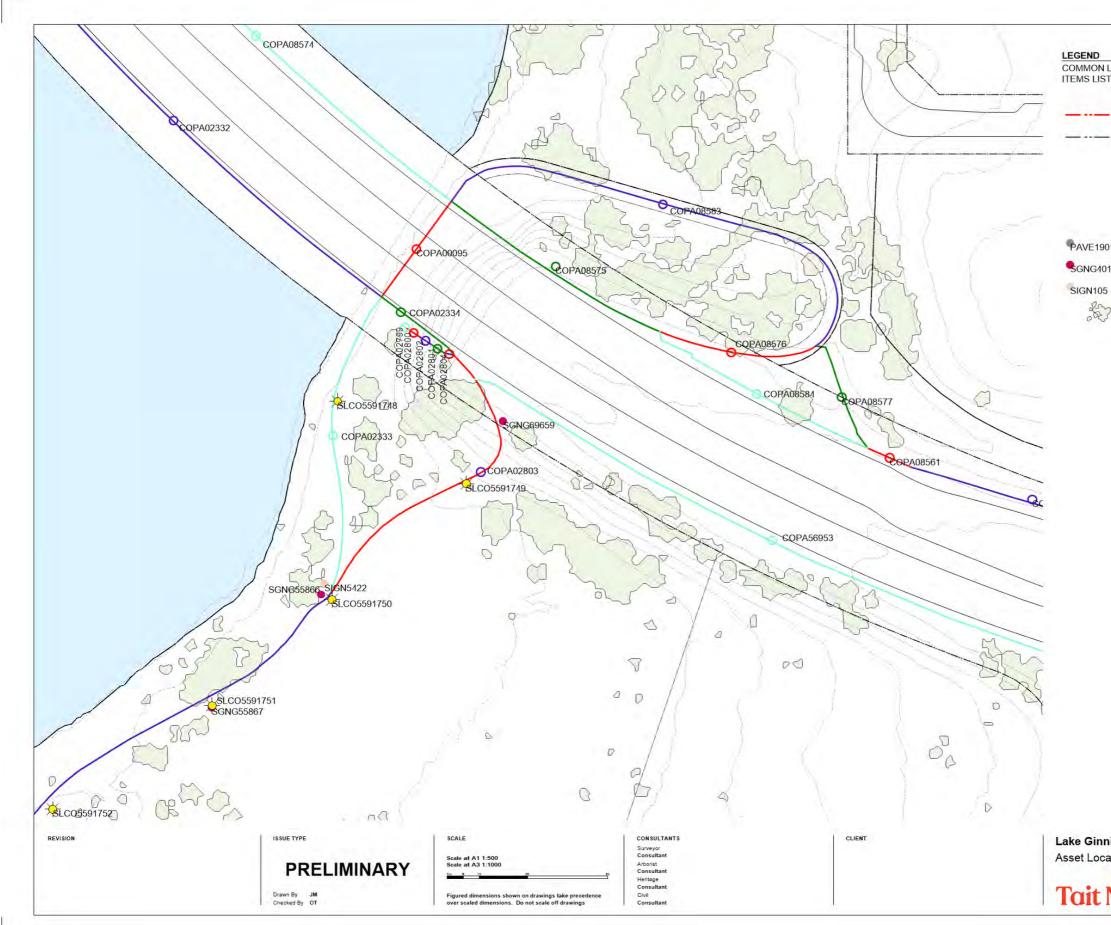


REVISION

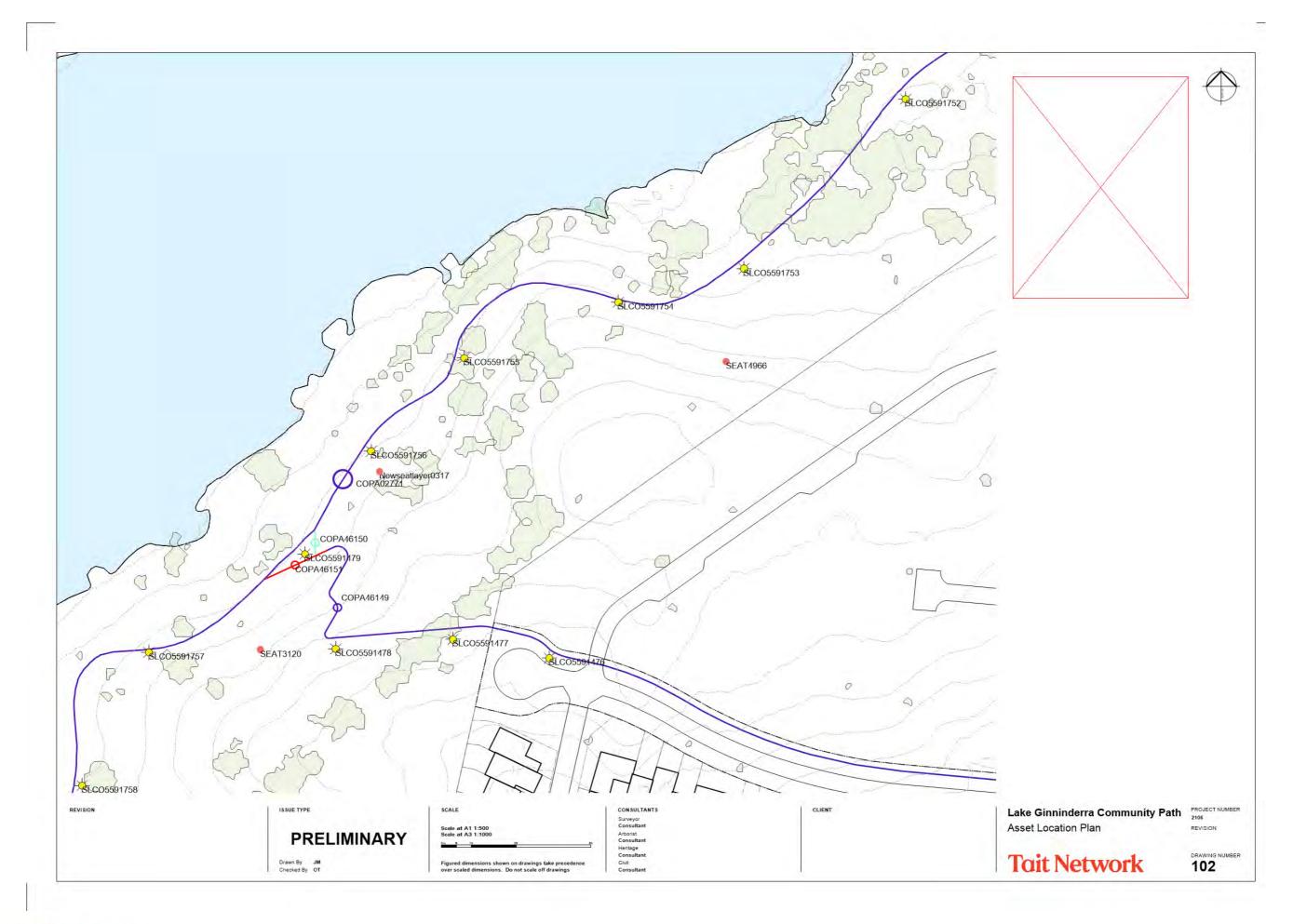
 \bigcirc

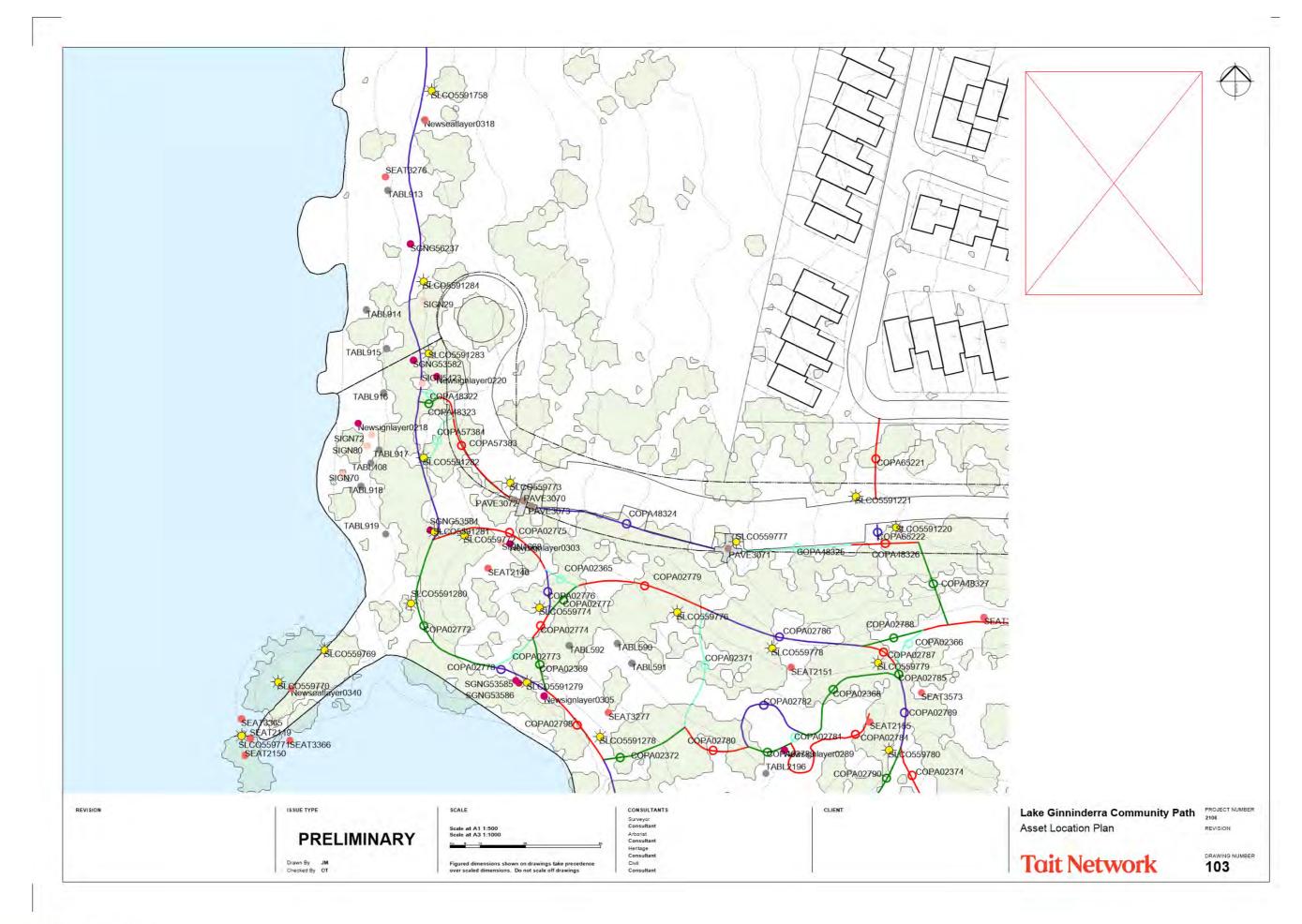


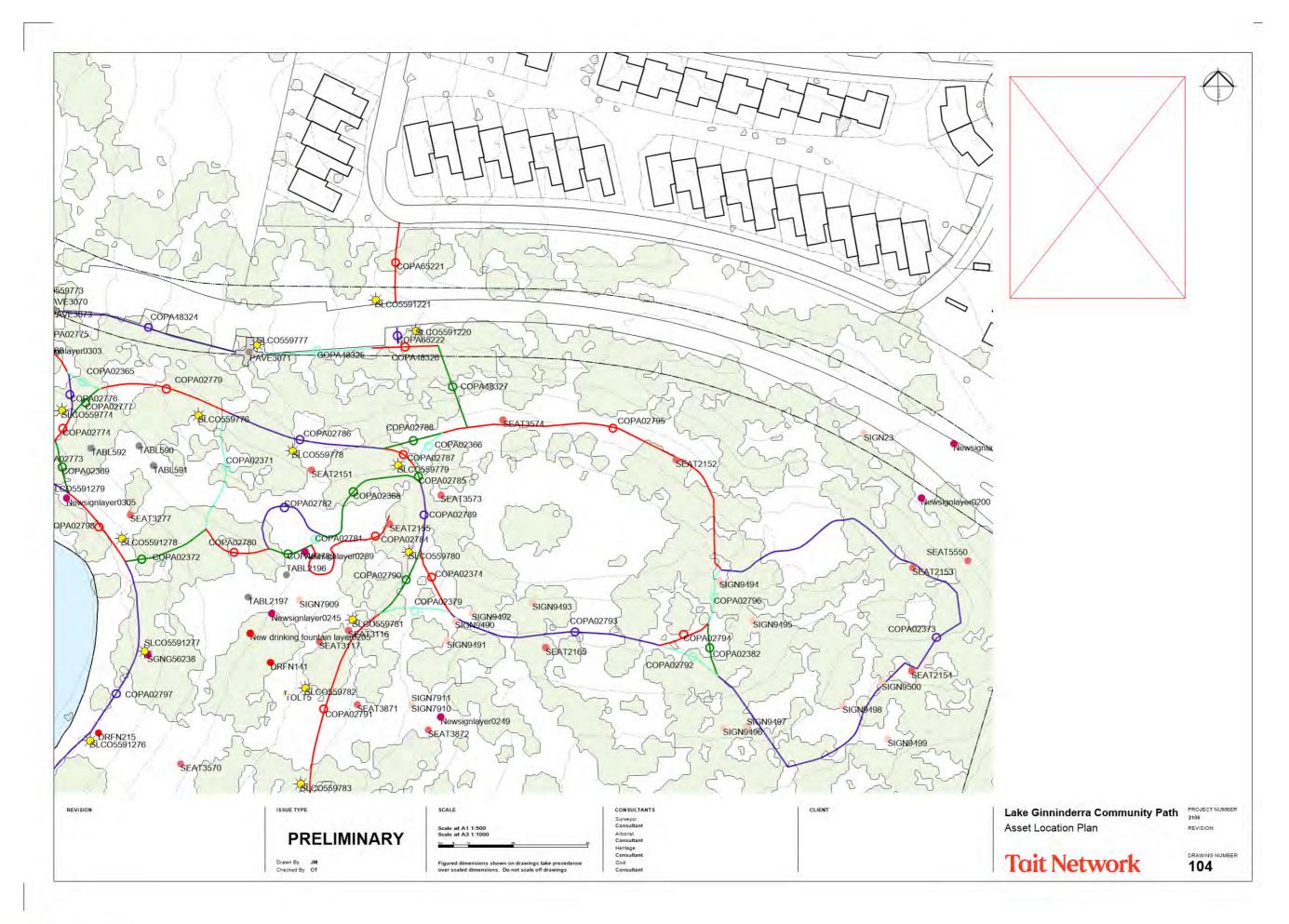


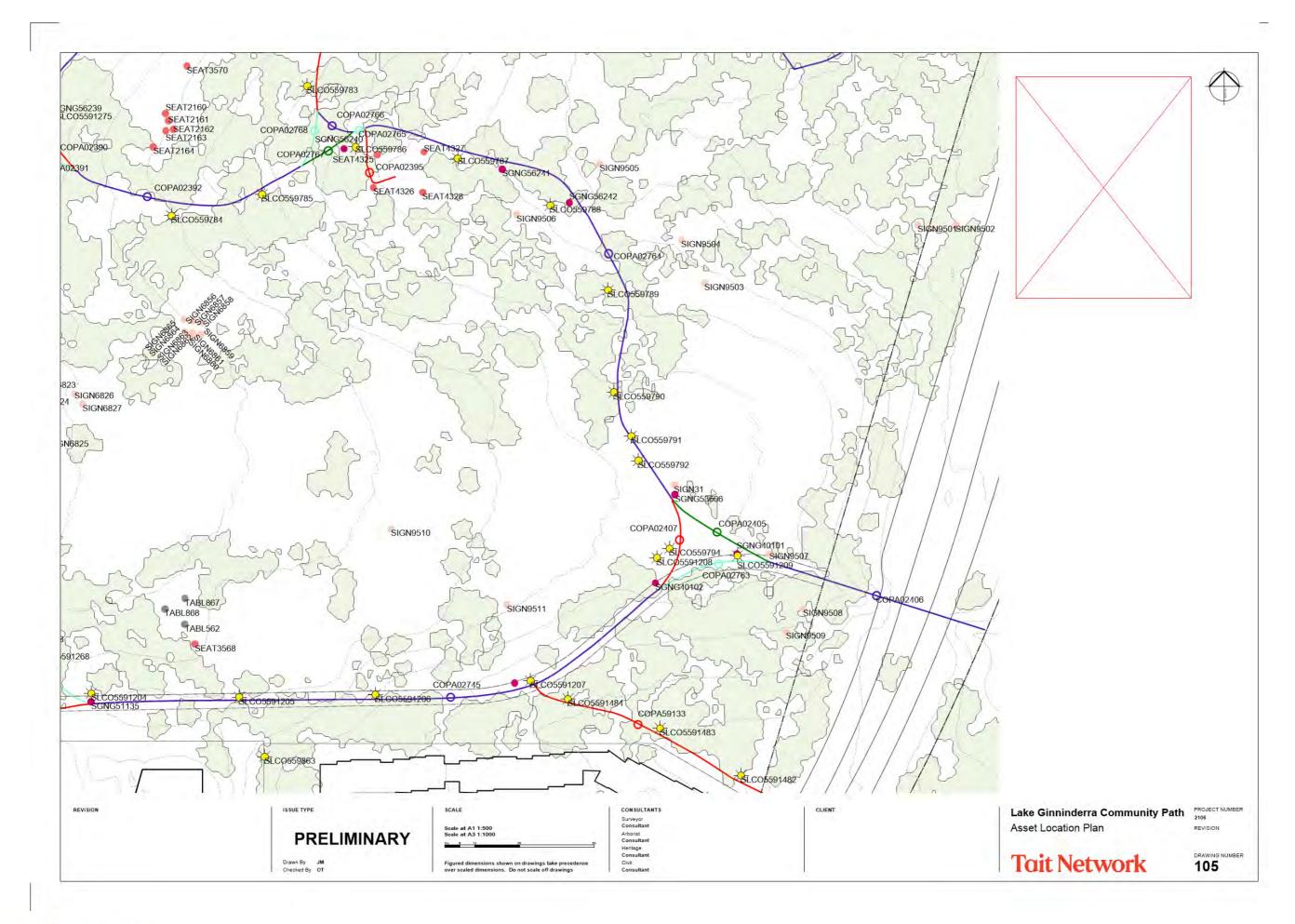


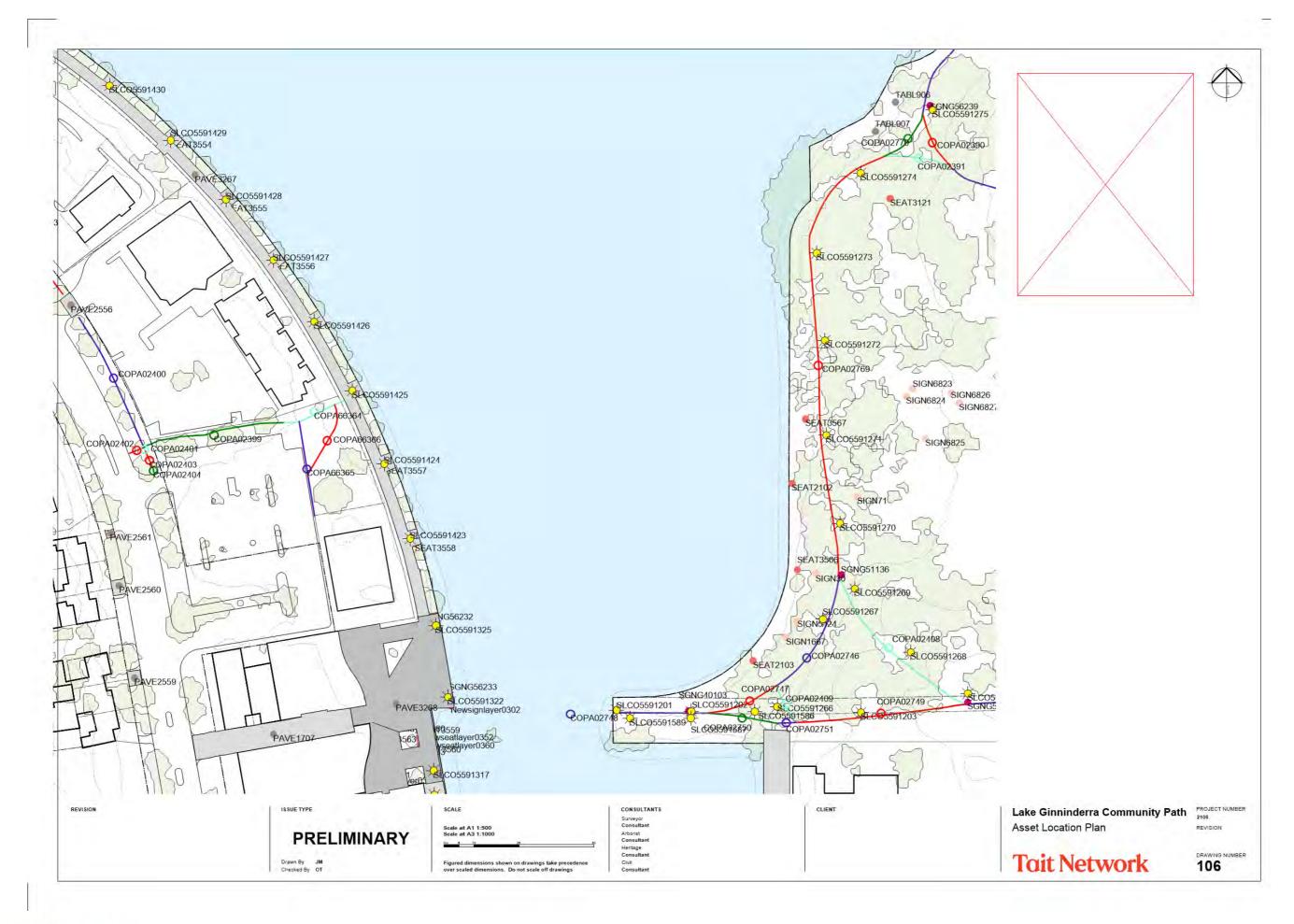
	ASSESSMENT AREA B	
	1M CONTORS	JUNDART
	FOOT/BIKE PATH	
	WATER REFILL	
	STREETLIGHT	
	SEAT	
1	GROUND HARDSCAPE	
113	SIGNAGE	
10	LANDSCAPE SIGNAGE	
	TREE CANOPY	
	rra Community Path Plan	PROJECT NUMBER 2106 REVISION

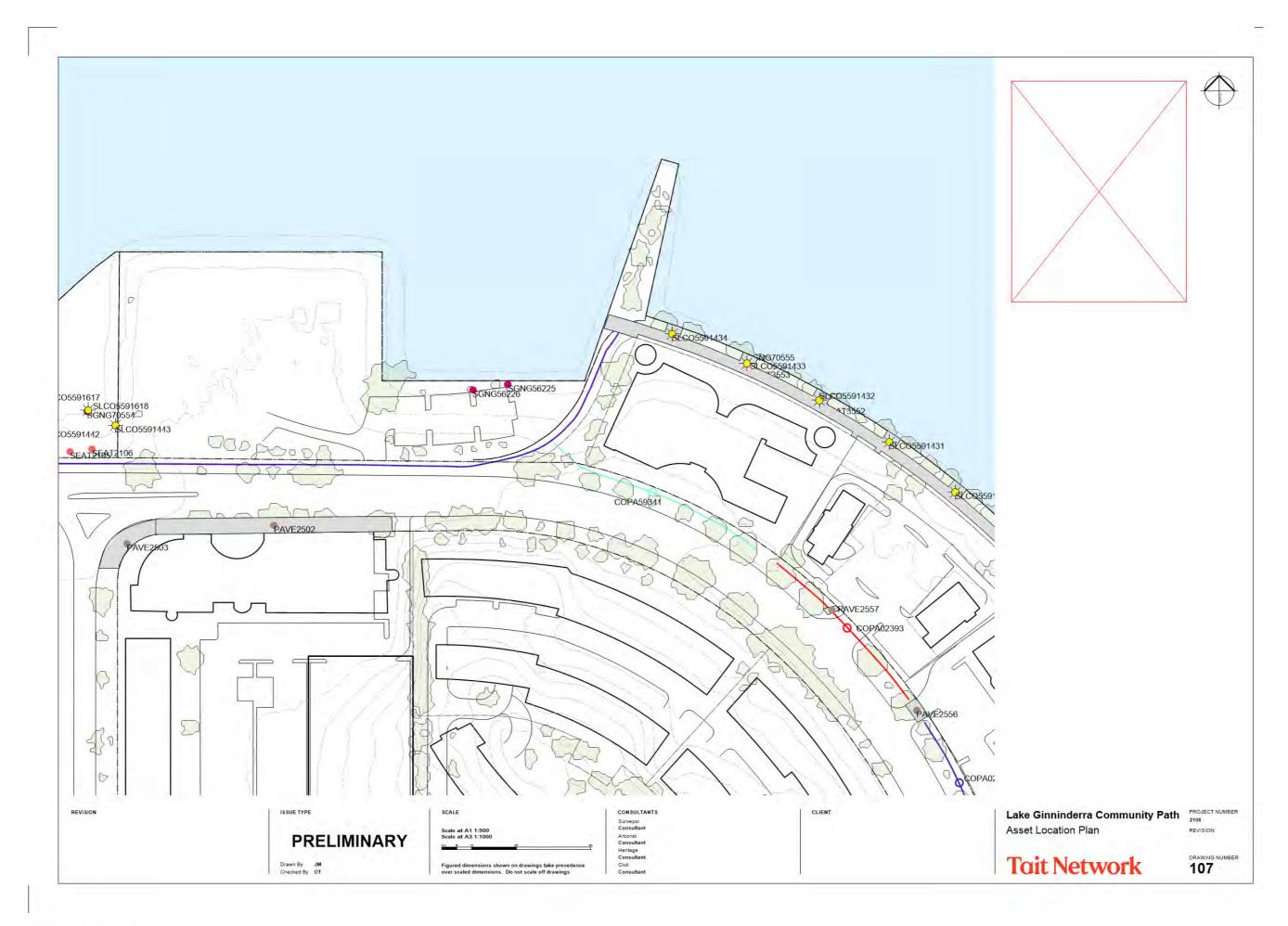


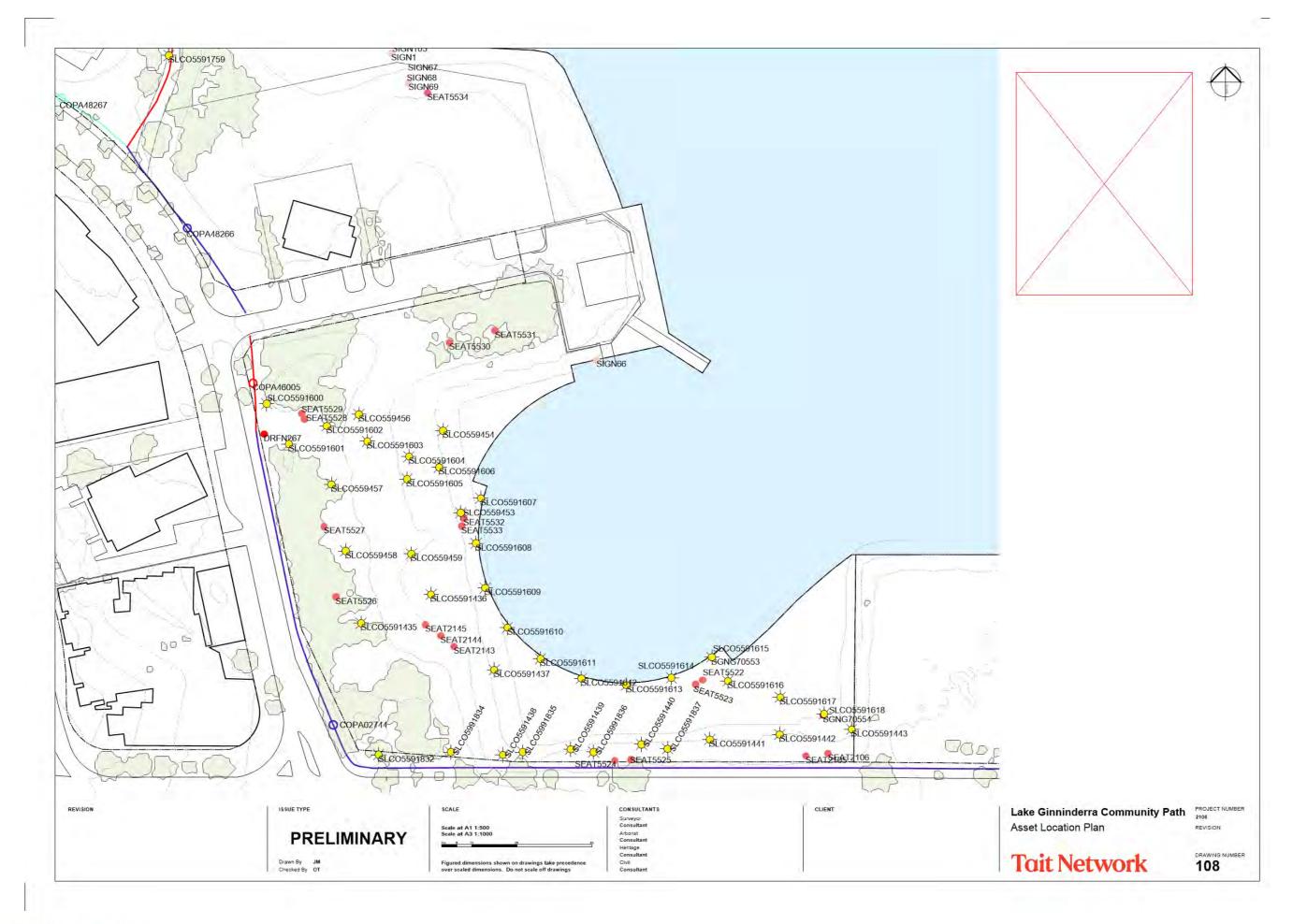


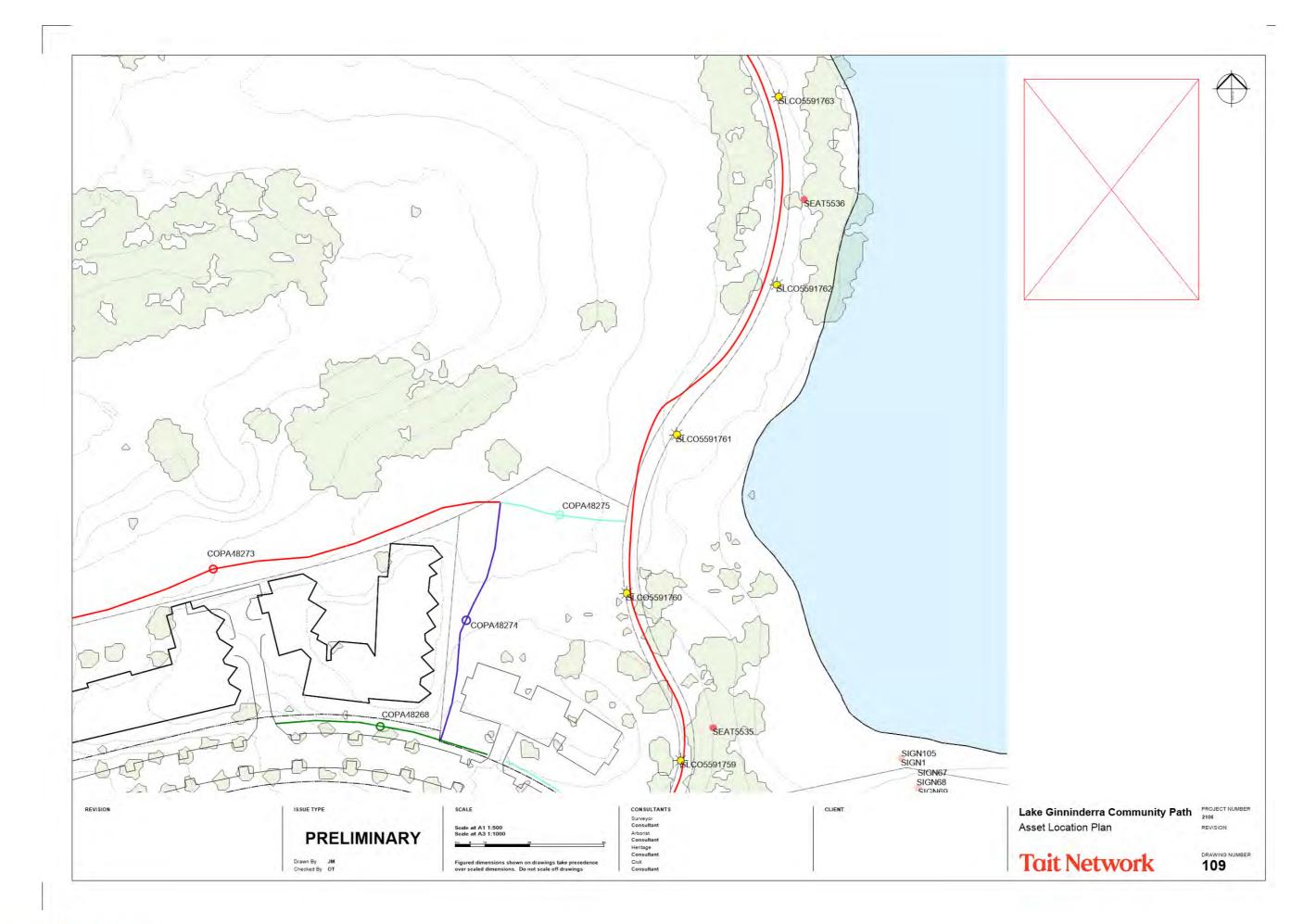


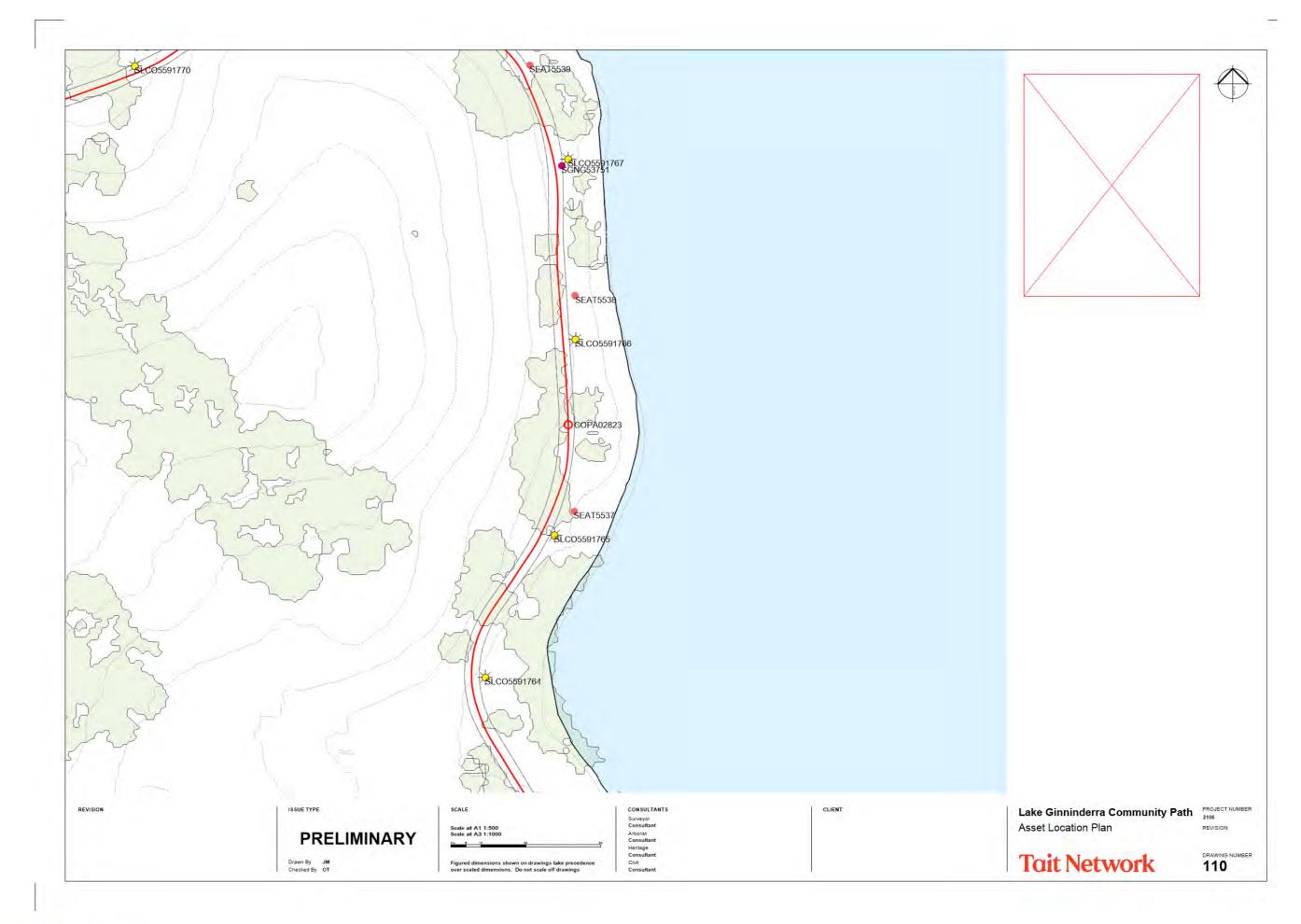


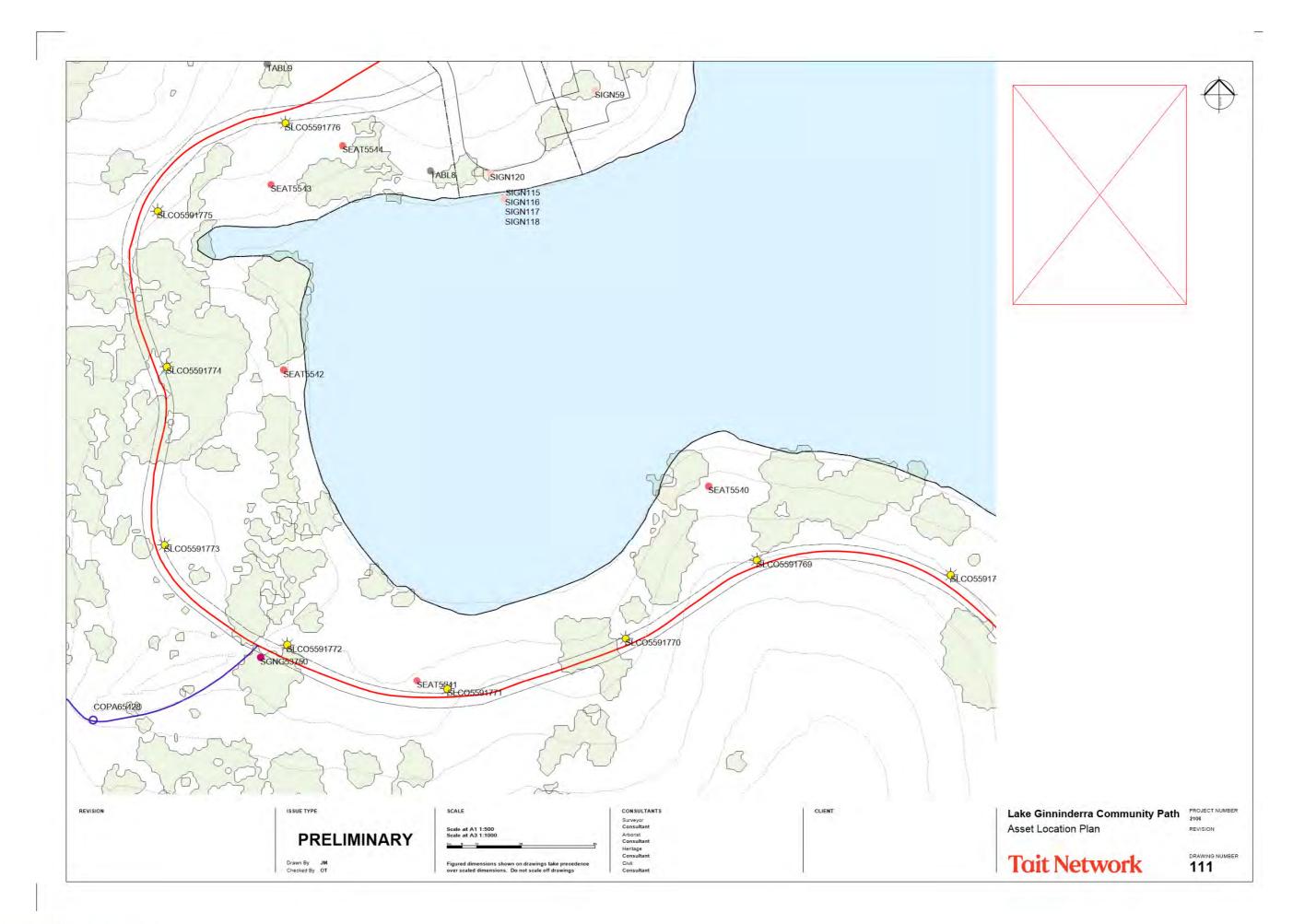


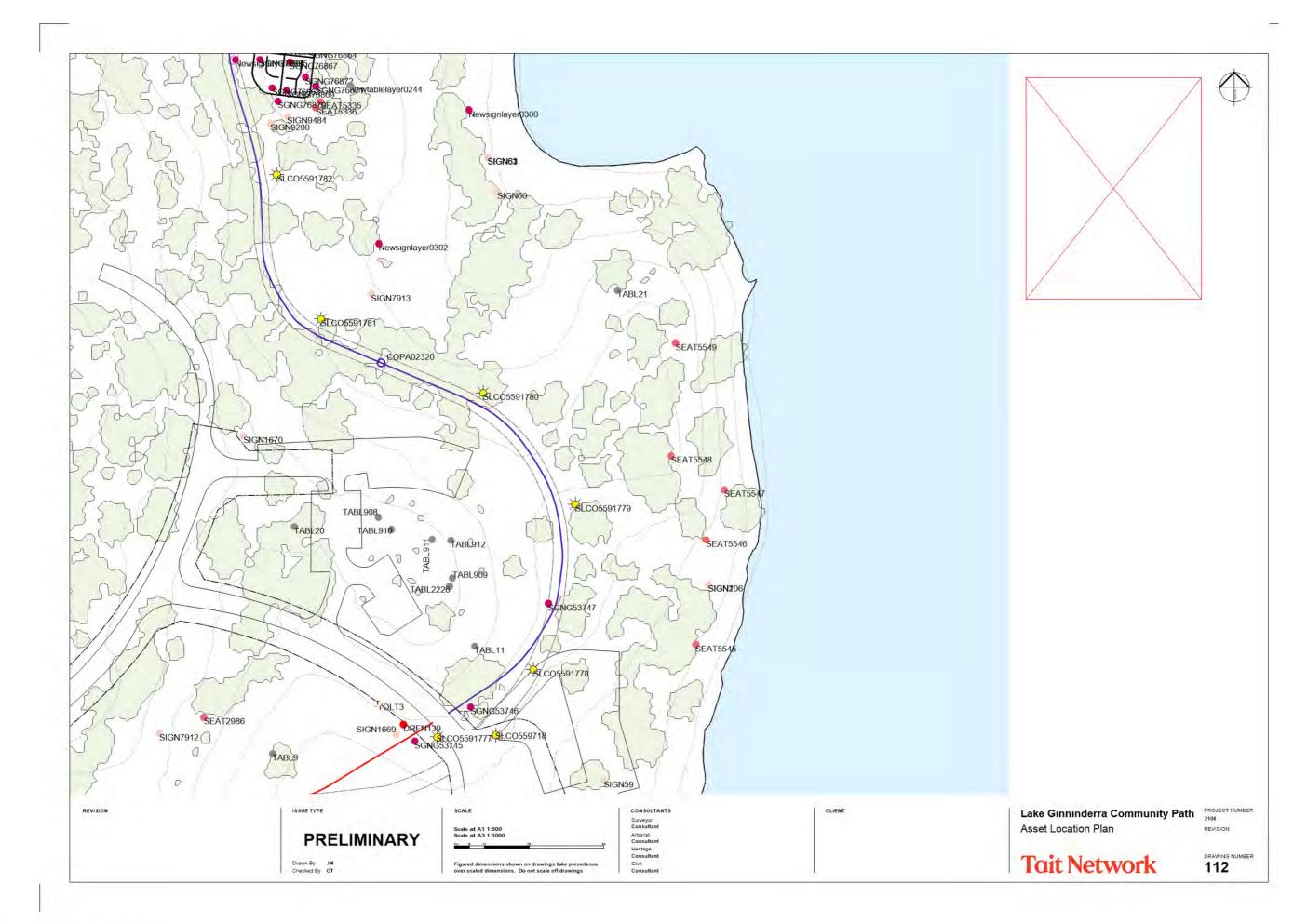


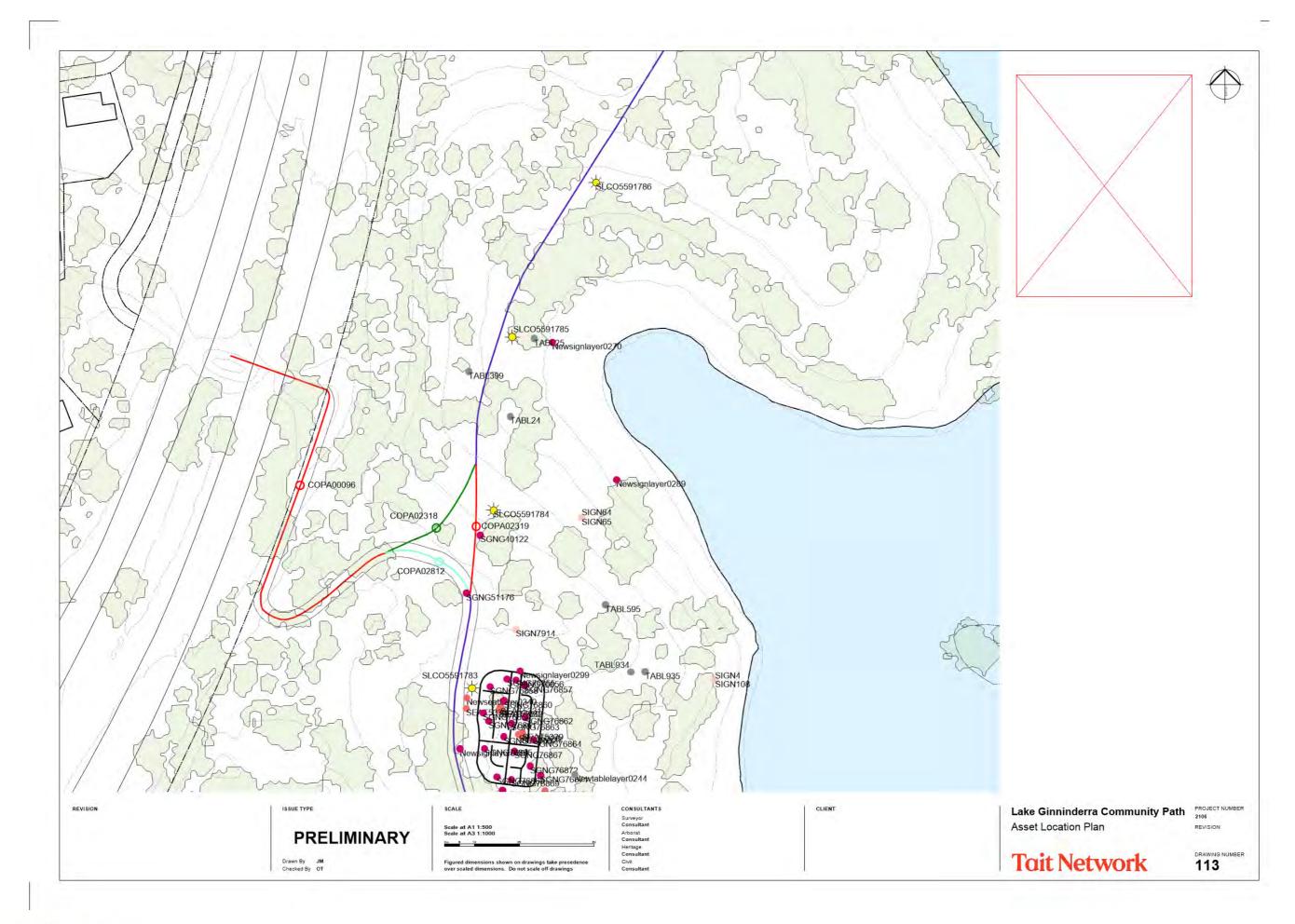


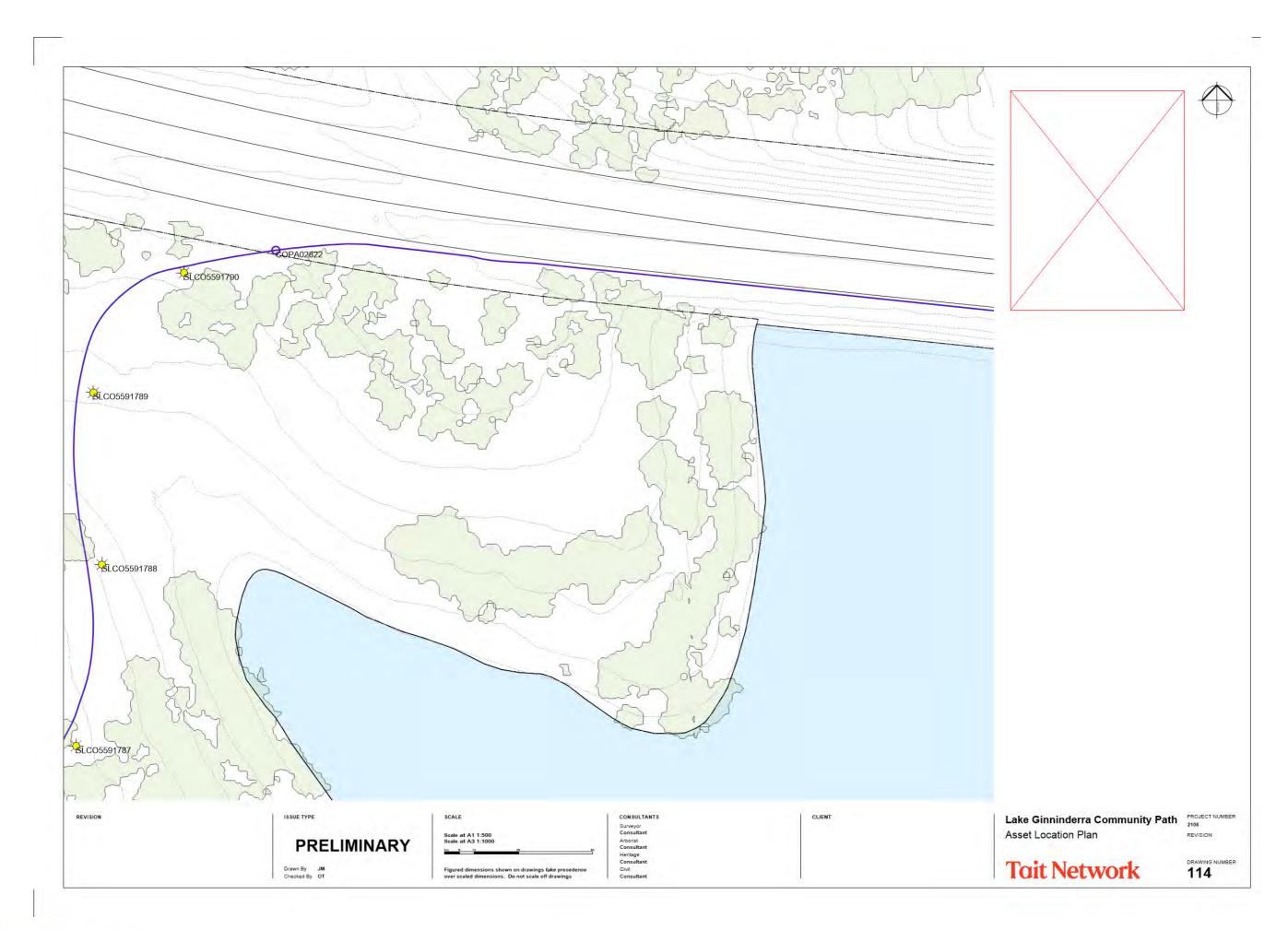


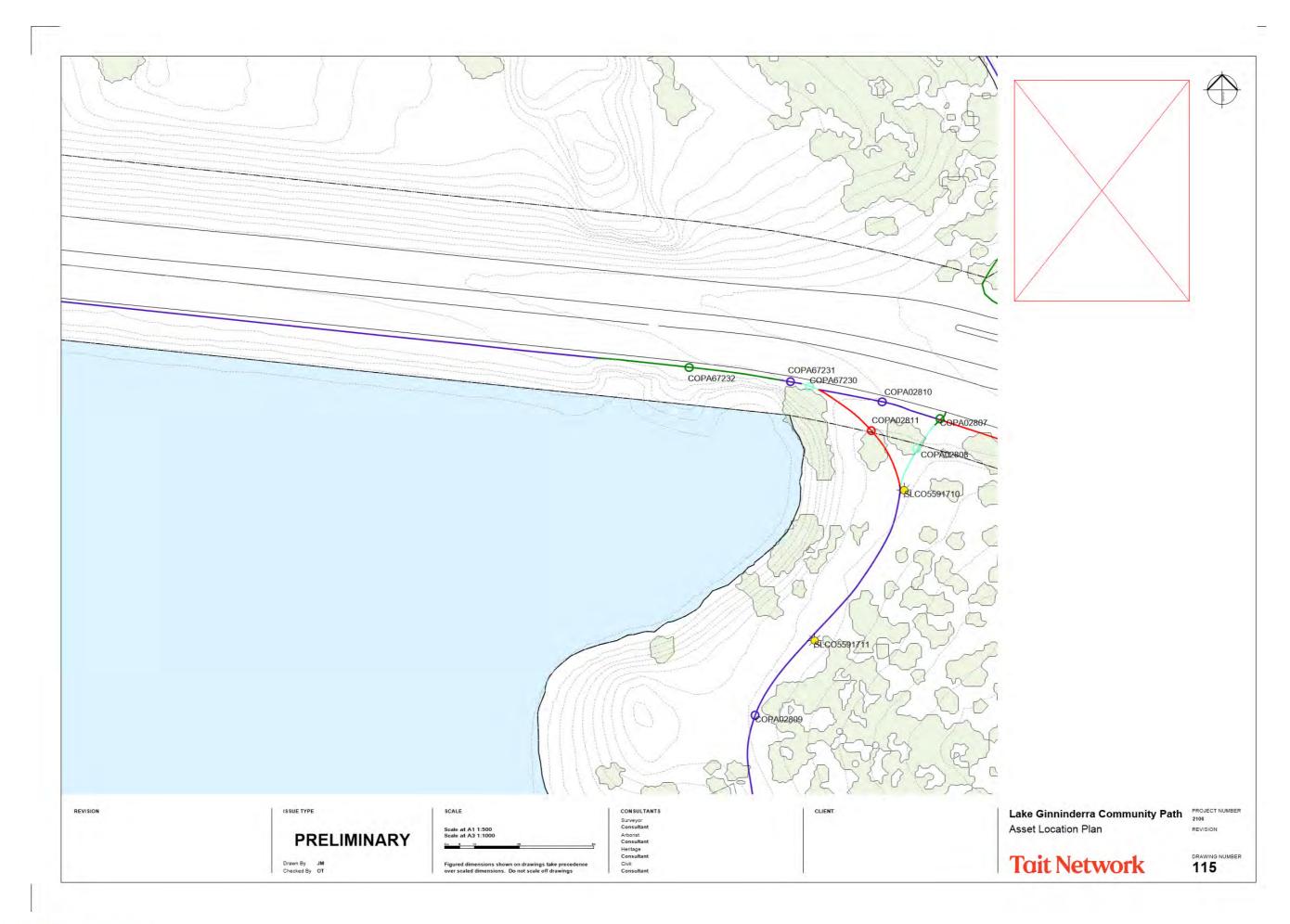


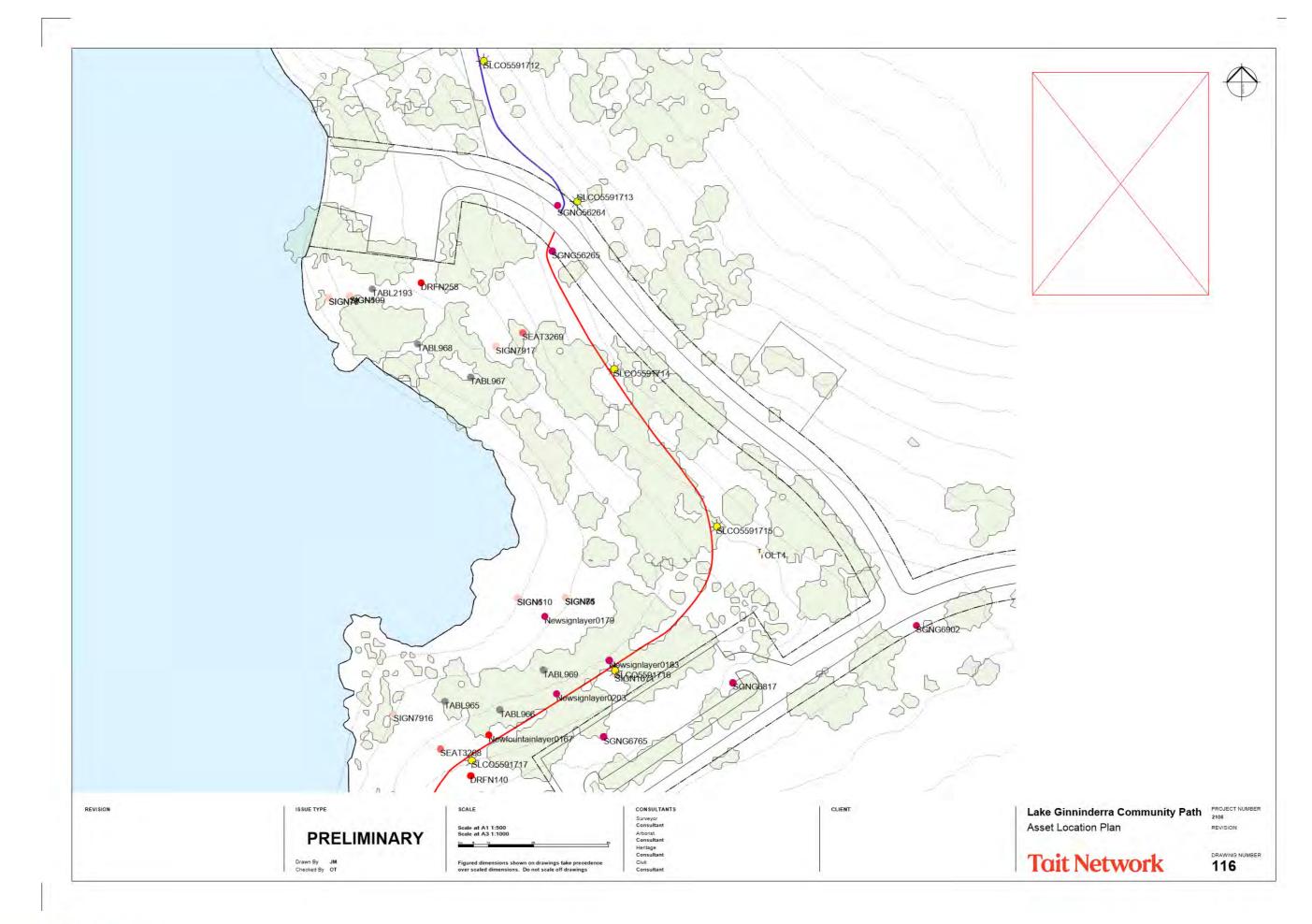


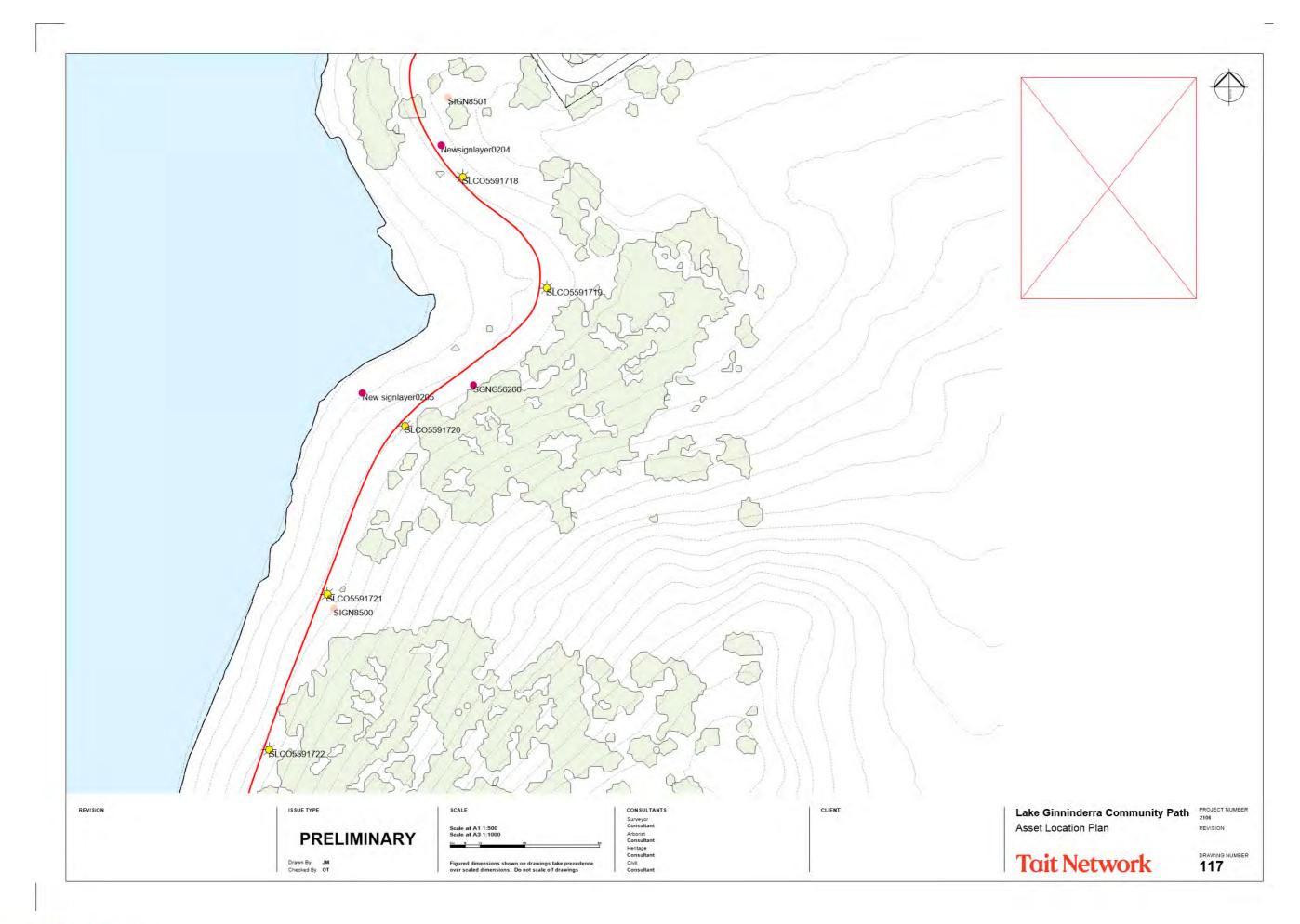


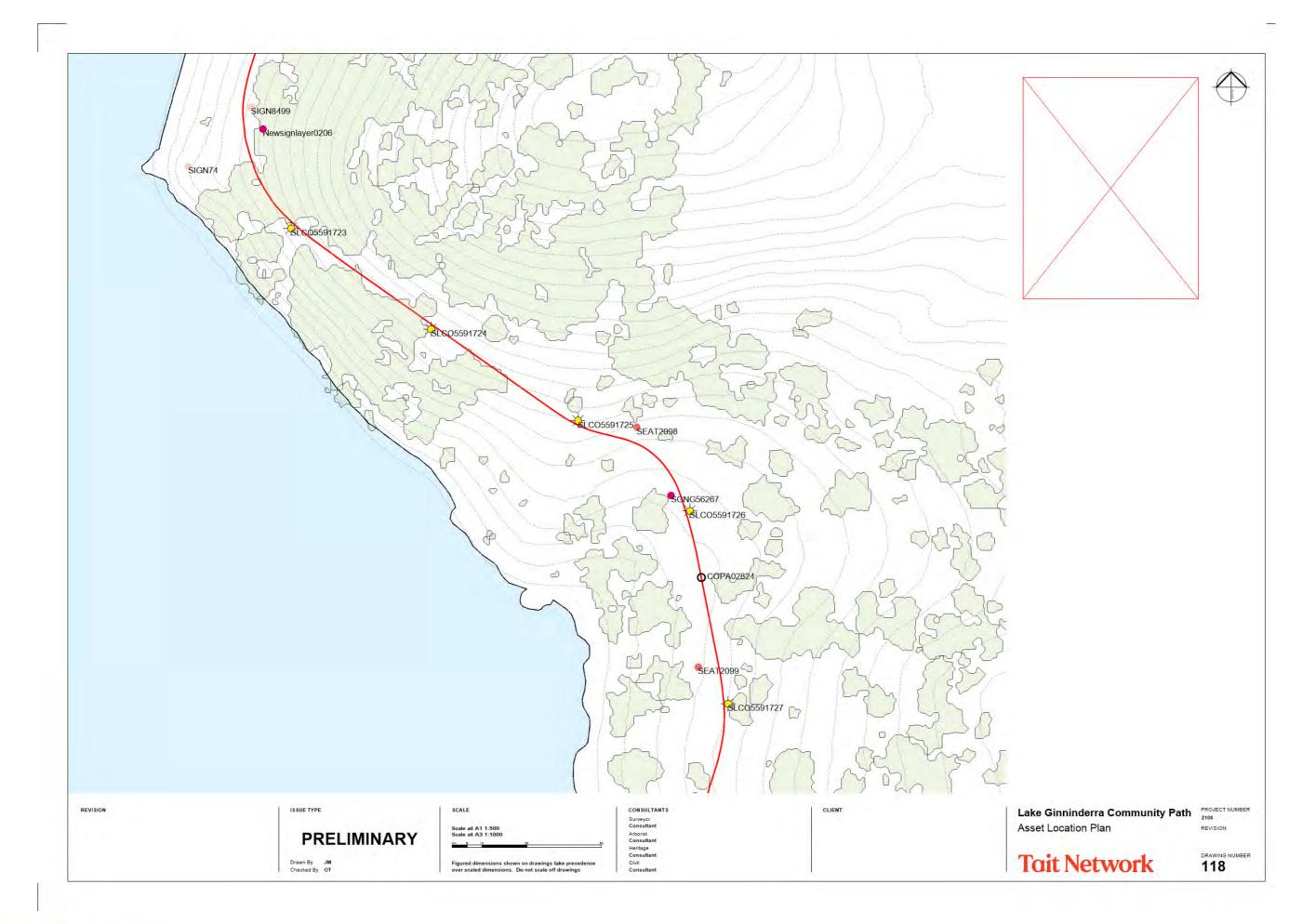


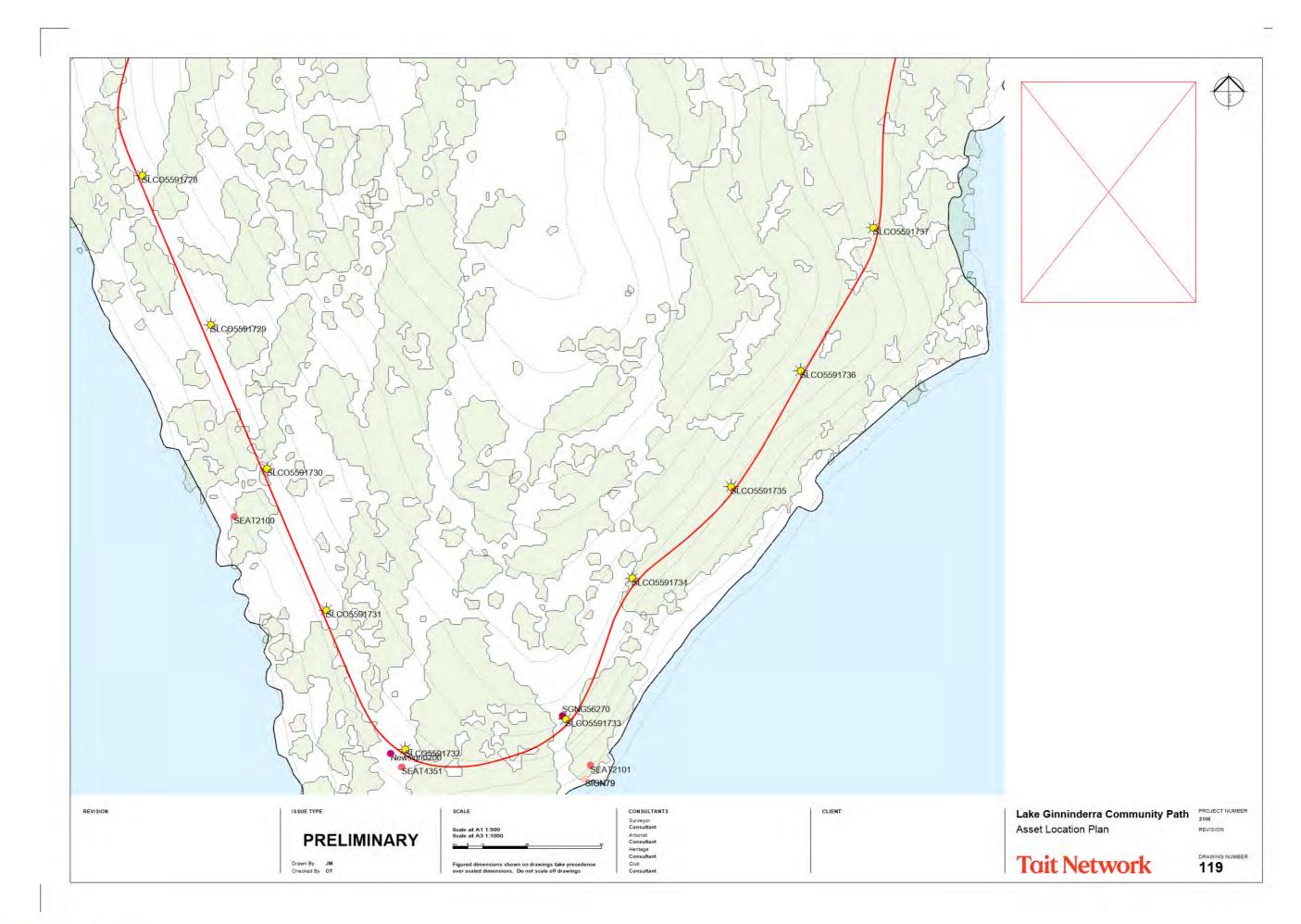


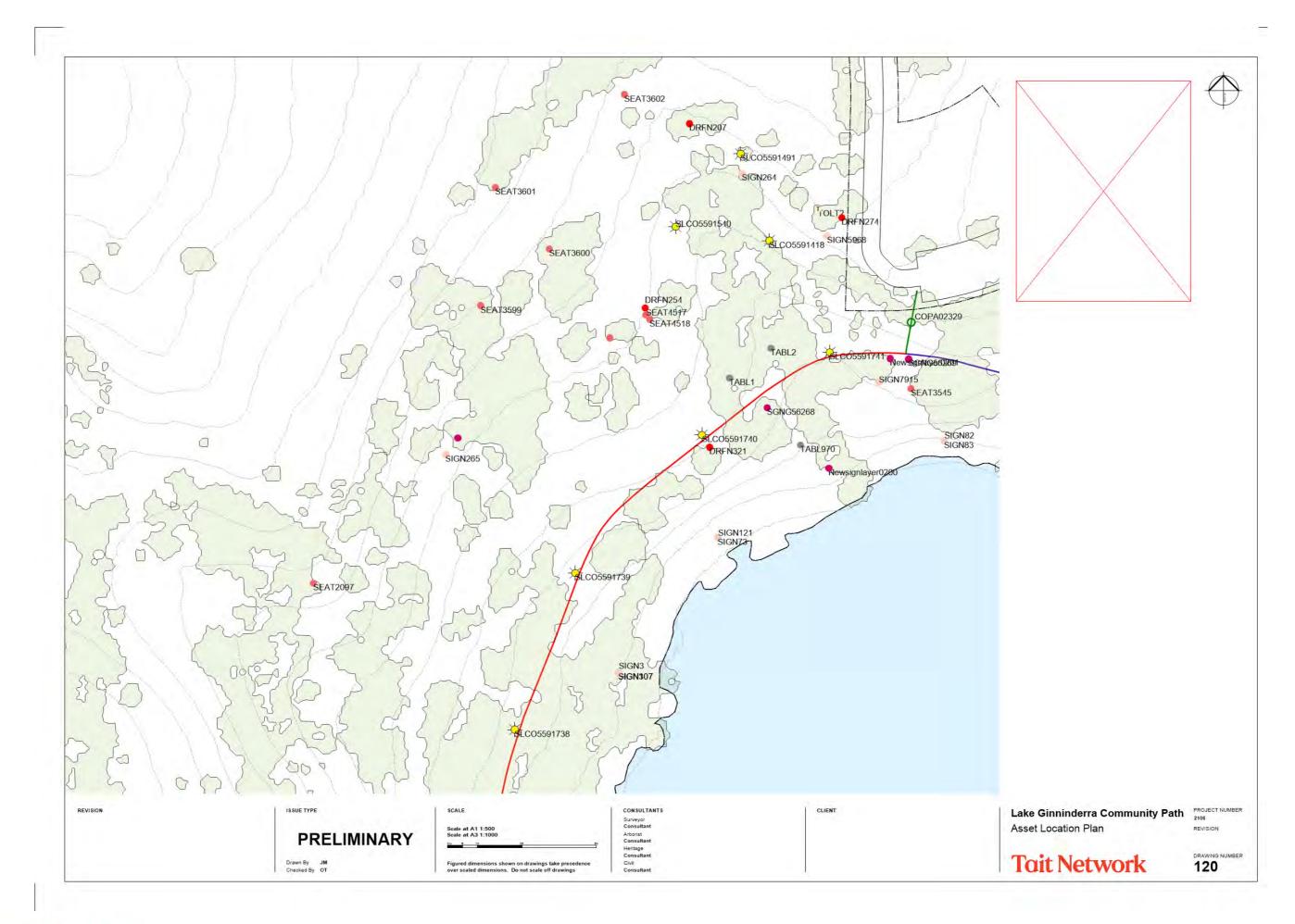


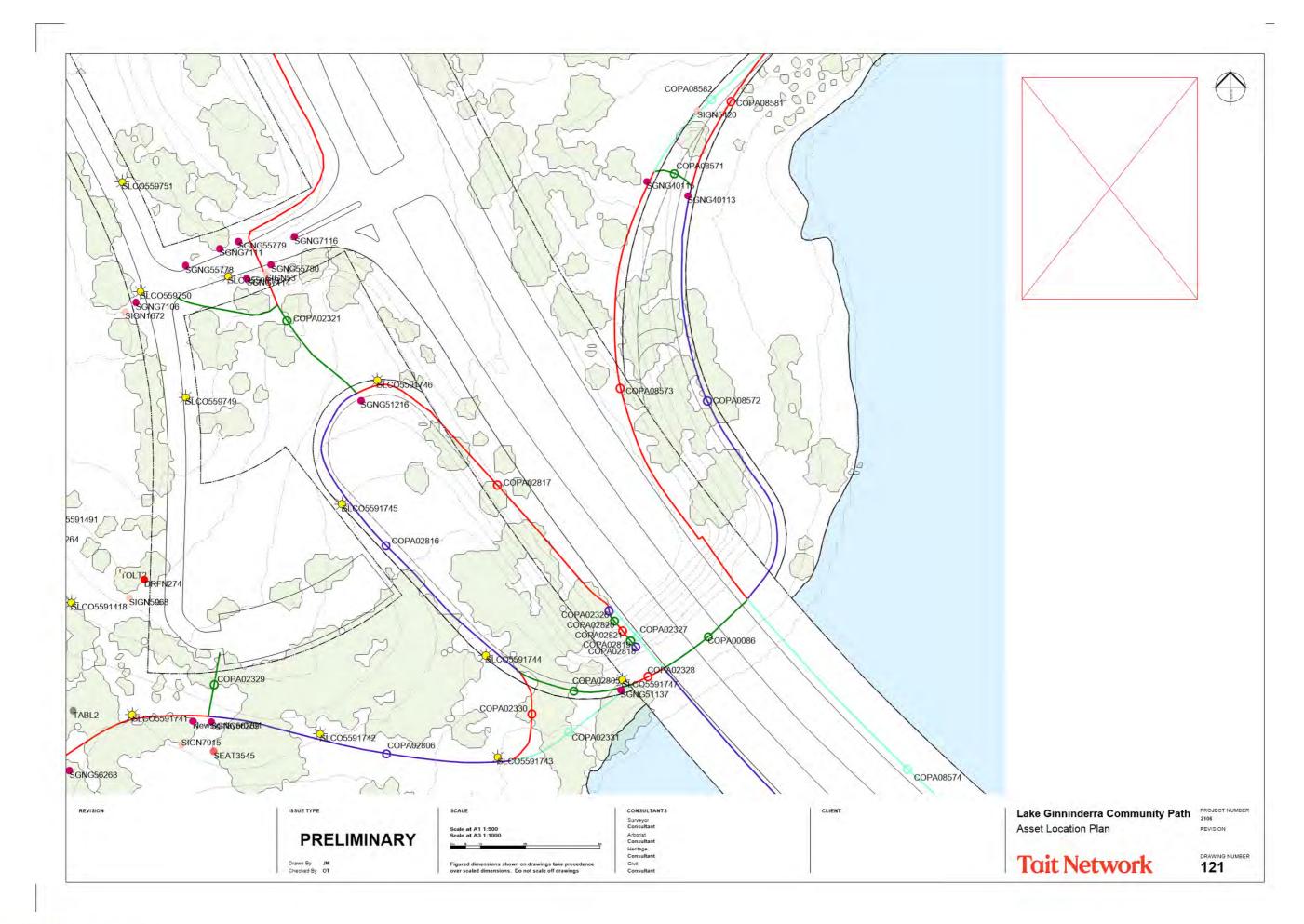


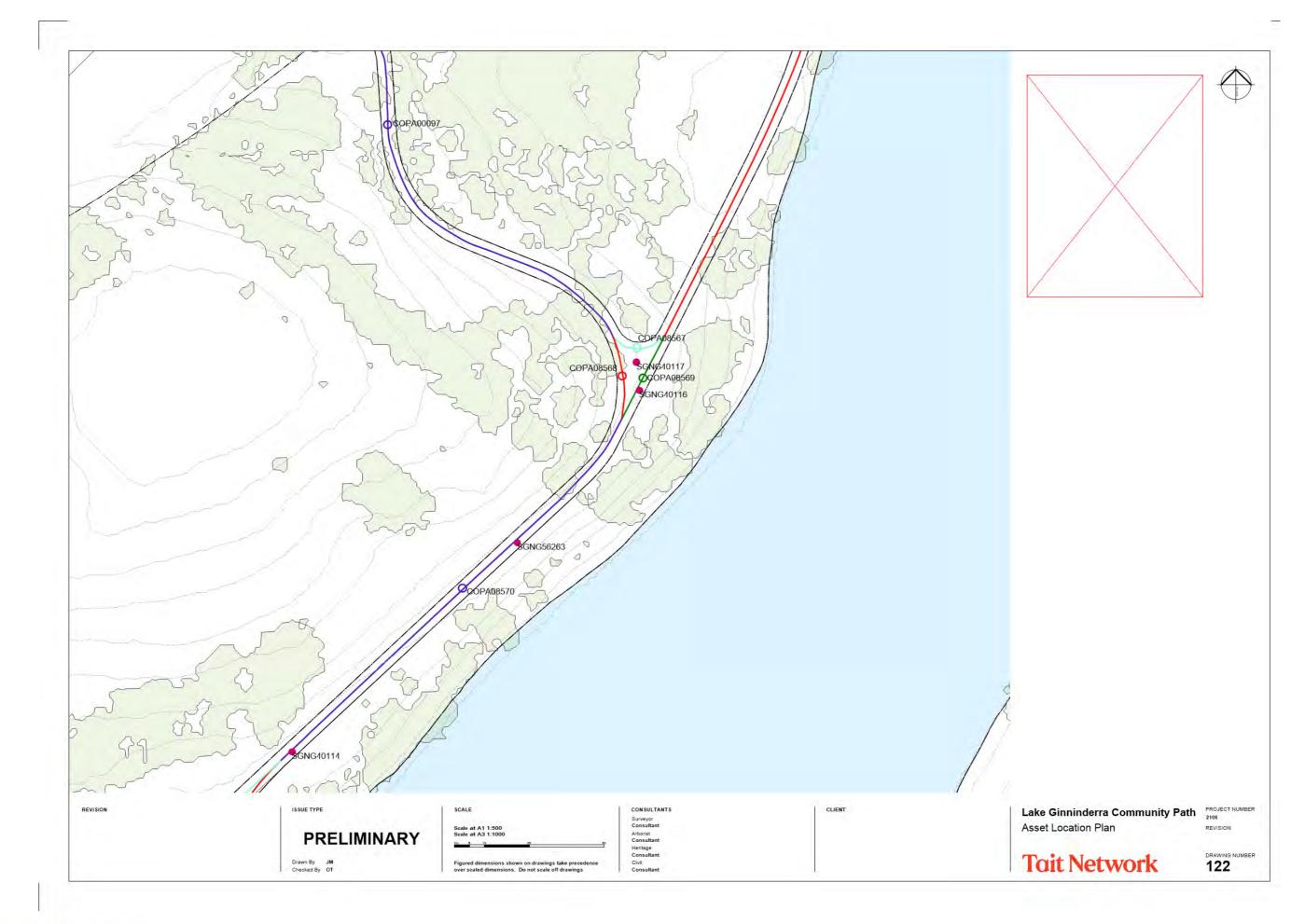


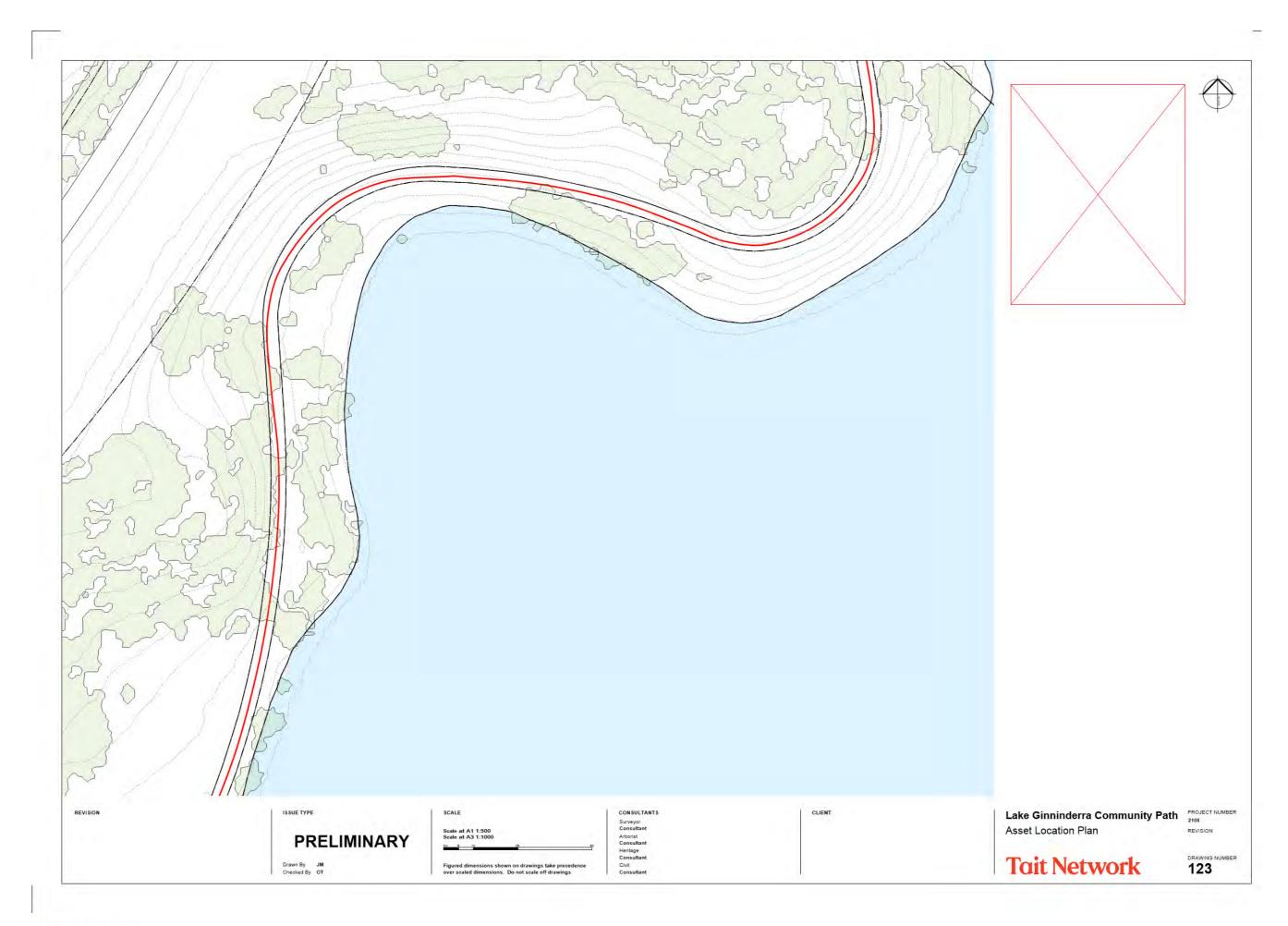


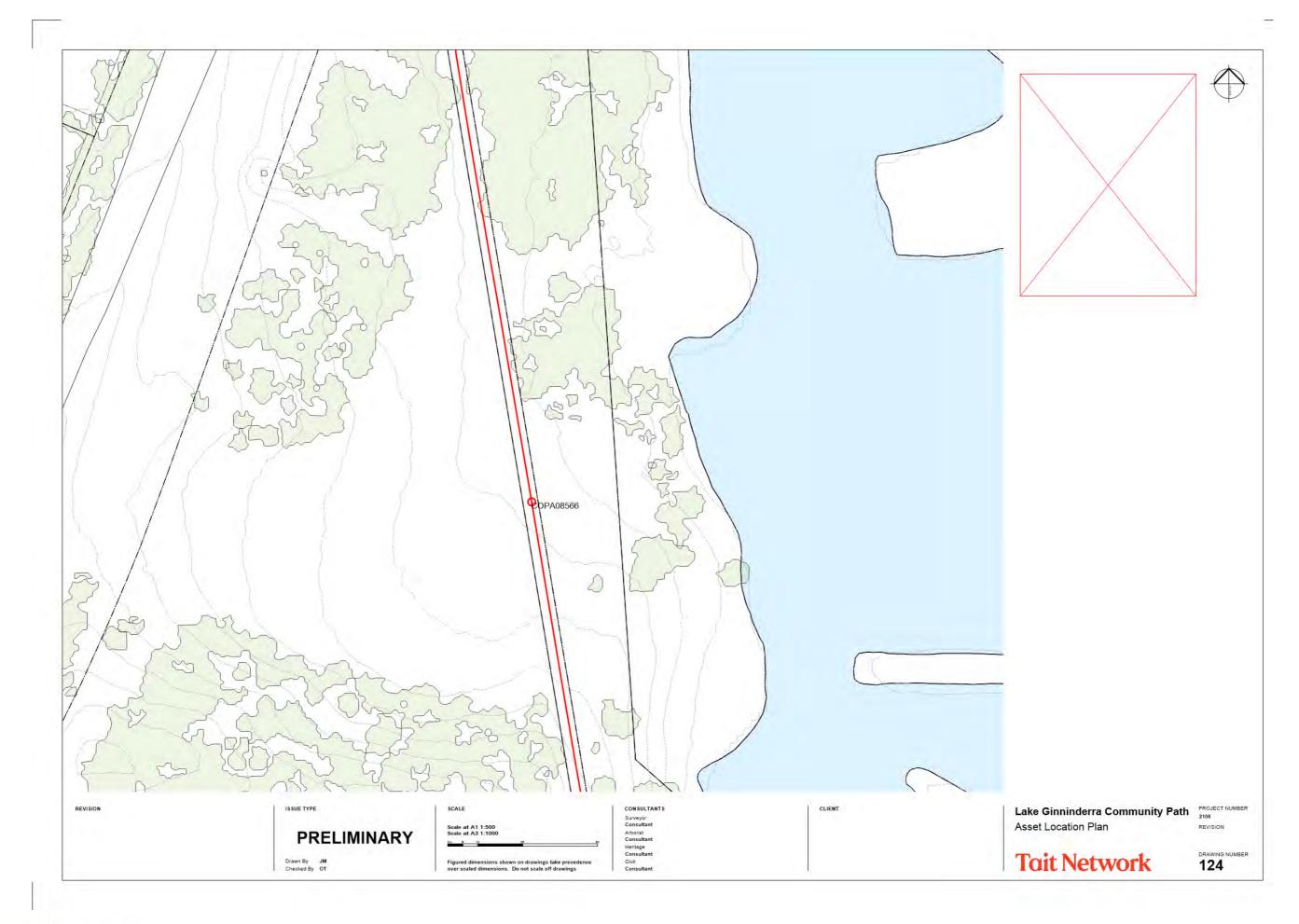


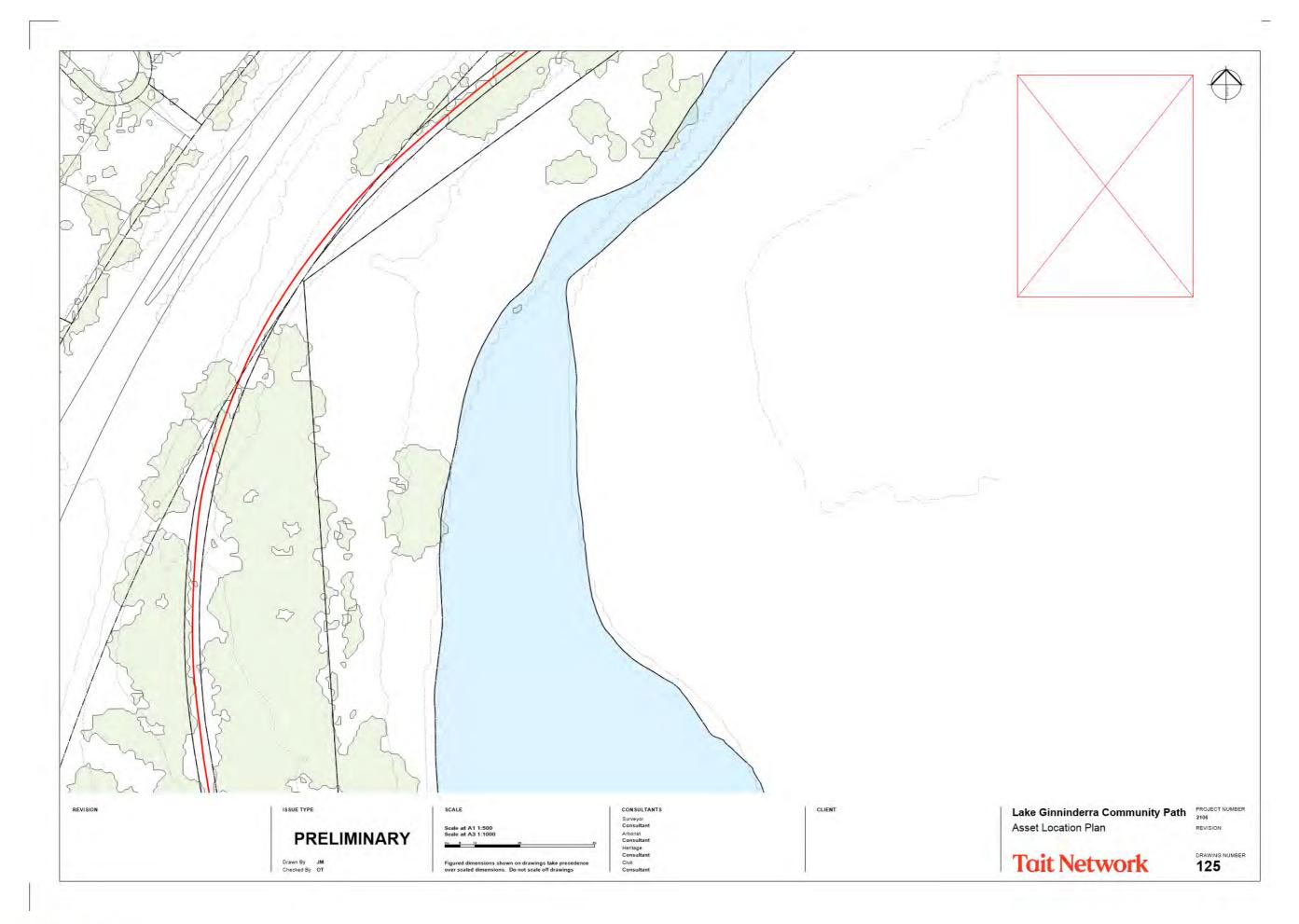


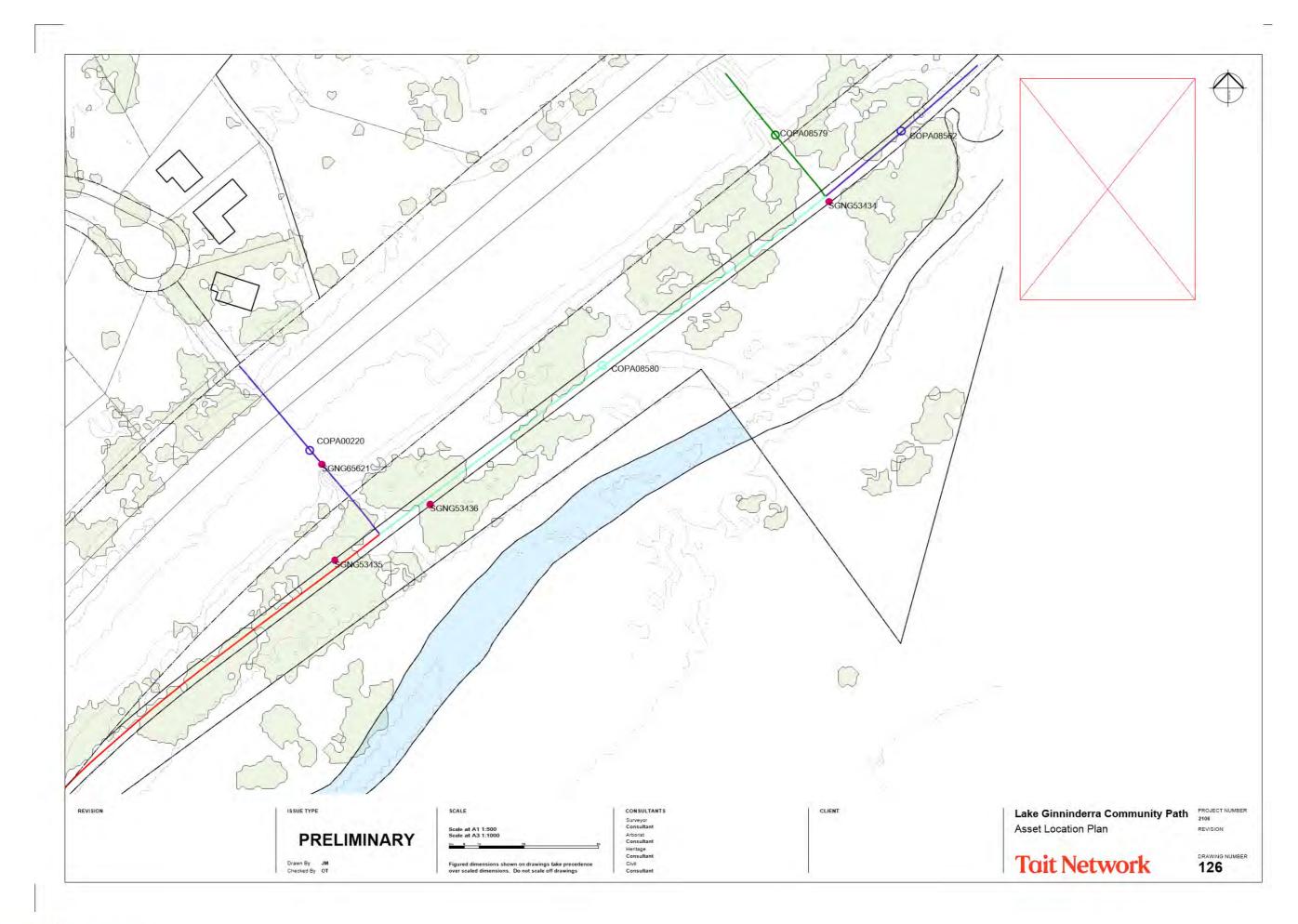












Attachment 2

Minutes of the Pedal Power Consultation Session

Meeting Minutes

Project:	21 06 Lake Ginninderra Community Path Meeting Minutes
Purpose:	Pedal Power Engagement
Date:	21 April 2021 at 3:00pm
Venue: Attendees:	Tait Network Office; 10 Hobart Place, Canberra, ACT, 2601
	2



Apologies:

ltem	Discussion	Action
1	Overview of Project	
1.1	welcomed all into meeting.	All Note
1.2	 shared agenda for session: 1. Brief overview of project. 2. Pedal Power to share local knowledge of path network. 3. Tait Network to share overview of preliminary project findings. 	All Note
2	Pedal Power Information Share	
2.1	 Frequency of Use shared how he uses the network regularly to meet up with friends. added that they use the path network multiple times a week, often used on their way to meet with friends at various cafes. 	All Note
2.2	 Path Widths queried what an optimum shared path width is for cyclists and pedestrians. and shared how a narrow path for cyclists is anywhere between 1.5m – 2m wide. Optimum path width being 3m for a shared path and 2.5 for bikes use only. noted difficulty of navigating many users on narrow paths including small children on bikes. 	All Note
2.3	 Dangers Along Path shared that the steel edges flanking edges of paths in John Knight Park are extremely dangerous/deadly for road and hybrid bikes. This has worsened overtime as the soil adjacent to the path washes away creating a lip and then a depression that catches bicycle tyre causing the cyclist to fall. shared that the face of the ARMCO vehicle barrier rails on one of the bridges are very sharp and a hazard for cyclists. 	All Note

	 flagged that on Ginninderra Drive going East there are power poles in the middle of the path, which causes great conflicts and danger being so close to the road between path users. noted the banana rails used along Ginninderra Drive are a safety concern for cyclists, noting that they restrict movement and make it difficult to maneuver around them. Flagging that banana bars are now universally acknowledged as dangerous. Better solution is to have bars/rails at least 1.6m wide apart to fit two mountain bike handlebars next to one another (mountain bike handlebar used as reference as they have the largest width handlebars). Another suggestion is the Hydraulic bollards that pop up when cars come close. queried if cars driving on paths/crashing onto paths are considered an issue along the Ginninderra path network. and both shared that cars have not been observed as an issue along path network. shared how dogs walking on a long lead separated from their walker make it extremely difficult and dangerous to pass by on a bike. Water Wren are also known to fly across the path super quickly causing a hazard. 	
2.4	 Path Network Issues Grade of East bridge is very steep and the path network should be redirected further to the East to connect with recent path upgrade. Transitions on East side of West bridge has very large bump. Connection to boat ramp in Section 12 (near 11) is bumpy with debris at connection. Section 12 is very damp and dangerous with leaf litter on path causing a slippery and hazardous surface. Section 12, 13, 14 have Gum Trees constantly dropping bark all over the path, causing a damp and uneven surface. Gueried if and use Fix My Street tool to report issues in paths. and shared they do not use this tool. moted that there are often issues trying to go around people walking two abreast on the path network. Section 17 just before the underpass junction, there is lots of silt washing off the road onto the path from both sides, noting that there is a steep turn into the underpass which gets quite dark at night. flagged this area as steep and ambiguous that often causes confusion and hazards to occur. Mand noted that his nighttime cycle route is along the back of Cook, along ANU where the path is better lit. moted that blonk Knight Park feels very dark after hours. Also flagging that the large Eucalyptus Trees block sight views through this area. In onted that John Knight Park has no sense of hierarchy, which causes conflicts and danger. The area gets very congested but due to no real separation of children playing down near water and cyclists and pedestrians using path, it causes many conflicts and dangers to all. 	All Note

	 Shared how a dedicated cycle path through the park would be ideal but where it could go is not clear with all the paths being lined with nearby trees. Shared vision for a path to run up along raised areas (on other side of trees) of the park with signalized crossing points for pedestrians. Shared the connection to ANU from Lake Ginninderra is very poor. Shared the path along the front of the Belconnen Arts Centre is very poor quality. 	
	Signage Along Path Network	
2.5	 Using Price Weight Content of the term of term of the term of term of the term of the term of term of term of the term of term of term of term of the term of the term of term of the term of term of the term of ter	All Note
3	Project Team Information Share	
3.1	shared findings from preliminary site investigations undertaken including site audits of infrastructure, condition of paths and where priority areas have been identified. Sharing that priority areas will inform the prioritisation of works completed.	All Note
3.2	Priority Area 1 - John Knight Park	All Note

	 Increased seating and rest points required for Kangara Waters residents. 	
	 Improving the volume of seats. 	
	 Identified where tree roots are affecting paths, intense activity points, path crossing points, damp and low path points, insufficient path widths. 	
	• shared we will pick up the steel edge comments to supplement our data.	
	Priority Area 2 – Eastern Edge	
	 Lack of path connections to boat ramps. 	
	• shared these boat ramps are often used for fishing and for taking	
	kayaks out on the lake.	
	 Identified tree root damage and water damage. 	
	Area is heavily treed.	
	Priority Area 3 – Western Foreshore to Ginninderra	
	Lack of seating	
	Landscape treatments	
	Tree root damage	
	Low points	
	Narrow paths	
	Road crossings and leaf litter	
	Zone of intense activity.	
	Priority Area 4 – Two Bridges	
	 No shoulder and Armco barriers identified as dangerous. 	
	• Light poles are located on path over the bridge, obstructing path movements.	
	Priority Area 5 – Emu Bank	
	 Concrete unit pavers along Emu bank are loose and dangerous trip hazards, particularly at Western end. 	
4	Next Steps	
4.1	thanked and for coming into the office to discuss project and shared that the meeting minutes will be circulated to and along with sketch of drawing for reference along with the project team.	All Note
4.2	Meeting ended at 4:30pm.	All Note