WEST BASIN PHASE 2 BOARDWALK AND LAND RECLAMATION WORKS WORKS APPROVAL

ON BEHALF OF

CITY RENEWAL AUTHORITY

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ABBREVIATIONS

CRA	City Renewal Authority
NCA	National Capital Authority
WSUD	Water Sensitive Urban Design

1. EXECUTIVE SUMMARY

This West Basin Phase 2 Works Approval Report is for the following works:

- completion of approximately 500 metres of the 8.1m wide boardwalk extending north from the recently completed boardwalk at Henry Rolland Park;
- associated infrastructure works for the boardwalk, including piling and placement of capping beams;
- street lighting and street furniture for the permanent boardwalk;
- tree removal;
- demolition of the former boat hire building and jetty; and
- the associated land reclamation works between the current lake edge and the newly constructed boardwalk to a temporary level.

The boardwalk works will be completed as permanent works. The land reclamation work is permanent works but will not be completed to its final level or finish. This submission has considered and made allowance for potential future use of the reclamation area. Future treatment of the reclamation surface, as well as permanent works behind the boarwalk will, be the subject of a future works approval submissions.

There will be a consolidation period for the reclaimed land during which it will settle and be topped up. The consolidation period will extend for approximately 2 years following the completion of the land reclamation and be subject to ongoing monitoring. A separate Works Approval will be prepared and submitted for temporary landscaping and activation of the reclaimed land.

To unencumber the reclaimed land for future development a stormwater diversion is planned along Parkes Way to intercept the large diameter pipes discharging into the filled area. A PSP design for the diversion has been completed, and detail design is awaiting information from the proposed light rail extension prior to being completed. A separate Works Approval submission will be provided for the Parkes Way stormwater diversion works subject to funding.

The 8.1 metre wide boardwalk and associated street furniture are consistent with the previously approved and constructed Works Approval for the boardwalk at Henry Rolland Park, including the pre-cast slabs, street lighting and furniture.

The findings of an accessibility report conclude that the works are acceptable and "*will provide a high level of access for people with a broad range of disabilities.*"

This report addresses where appropriate previous NCA comments and the responses made by the CRA (formerly LDA).

2. INTRODUCTION

Indesco was engaged by Chincivil, acting as the CRA's Principal Contractor for the Design and construction of the West Basin boardwalk and land reclamation, in November 2017 to undertake detailed design for West Basin Phase 2.

This West Basin Phase 2 Works Approval Report covers the balance of the West Basin boardwalk and land reclamation works further to the Phase 1 work already executed. The Works Approval report describes the elements of the boardwalk and associated temporary work to enable the land reclamation work, based upon the detailed design work completed.

This submission is a revised supplementary submission to the September 2015 Works Approval for the West Basin Foreshore. These documents represent the next package of work upon which public consultation and consultation reporting have previously been completed.

The scope of West Basin Phase 2 includes the following:

- completion of approximately 500 metres of the 8.1m wide boardwalk extending north from the recently completed boardwalk at Henry Rolland Park;
- associated infrastructure works for the boardwalk, including piling and placement of capping beams;
- street lighting and street furniture for the permanent boardwalk;
- tree removal;
- demolition of the former boat hire building and jetty; and,
- the associated land reclamation works between the current lake edge and the newly constructed boardwalk to a temporary level.

The extent of works is illustrated in Figure 1, including permanent works (blue) and interim works (red) extents. The design elements for the boardwalk, including street furniture and street lighting, are consistent with the Stage 1 Boardwalk Works Approval.

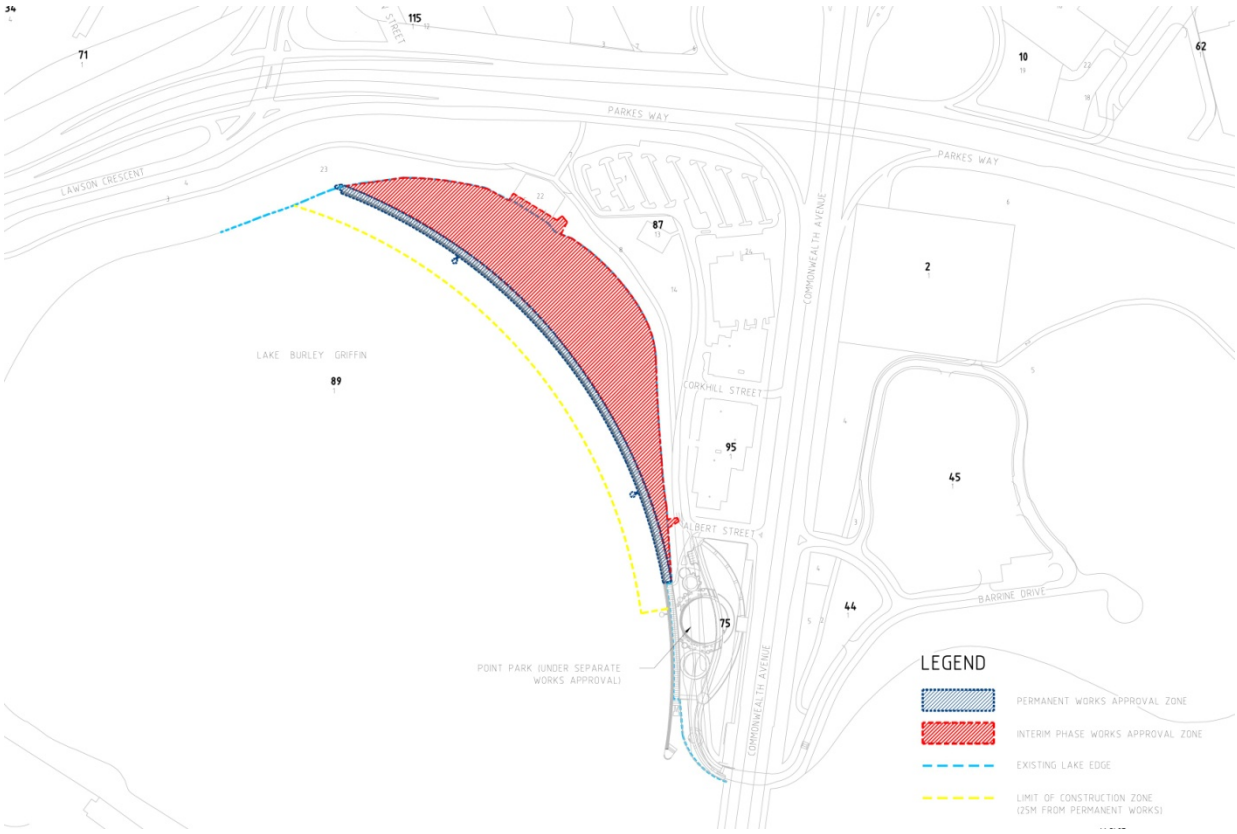

Figure 1: *The extent of the West Basin Phase 2*

3. PREVIOUS NCA WORKS APPROVAL SUBMISSIONS

3.1 BACKGROUND

Three previous NCA Works Approval submissions have been lodged with the NCA for the West Basin Foreshore. These are summarised below.

3.1.1 NCA Works Approval

In September 2015, the Territory lodged a Works Approval application with the National Capital Authority (NCA) for the West Basin Foreshore. That submission was prepared by ARUP, Jila and Hills Thallis and included Stage 1 and Stage 2 works. Stage 1 works included land reclamation and Stage 2 works included documentation of the boardwalk and Lake Edge Corridor, Henry Rolland Park, Western Park and intersection works on Commonwealth Avenue.

In response to that submission, the NCA highlighted a number of detailed matters that were required to be addressed in further design development by the Territory. Works Approval was not granted for this submission.

3.1.2 NCA Works Approval Supplementary submissions Phase 1 Boardwalk

In February and March 2016, Supplementary Submissions for Works Approval were prepared by Indesco and submitted to the NCA. The revised scope of works comprised:

- Henry Rolland Park, being the southern 200 metres of West Basin between Albert Street West and the Commonwealth Avenue bridge abutment;
- Signalised Commonwealth Avenue intersections with Albert and Corkhill Streets to facilitate the removal of Barrine Drive within Henry Rolland Park;
- The interface of Henry Rolland Park with Commonwealth Park and including the area of Barrine Drive beneath Commonwealth Avenue Bridge; and
- Temporary works to facilitate the connection of newly constructed work to existing infrastructure.

Works approval for this submission was granted by the NCA on 18/05/16 (WA20108), and only works to construct the boardwalk commenced in October 2016 and were completed in June 2017.

3.1.3 NCA Works Approval Supplementary submissions Henry Rolland Park

In March 2017, the Territory lodged a Supplementary submission Works Approval in response to the requirement to redesign the previously approved Henry Rolland Park works to include a temporary (approximately 5 years) shared zone. The requirement for the shared zone resulted from the ACT Government commencing planning and design works on Light Rail Stage 2A and Stage 2B from Civic to Woden. These works will impact Commonwealth Avenue and future intersections with Albert and Corkhill Streets, which have been deferred pending the design of the light rail.

Works approval for this revised submission was granted by the NCA on 10/05/17 (WA 10056) and works to construct Henry Rolland Park commenced in July 2017 and were completed in April 2018.

3.1.4 West Basin Review

The ACT government is currently undertaking a review of the proposed development in the West Basin area. A consultant team comprising of Indesco, Hames Sharley and others are working on a spatial master planning for the area, which is now named Acton Waterfront Redevelopment. The planning review is expected to be completed in 2020.

3.1.5 Parkes Way Stormwater Diversion Works Approval Submission

To unencumber the reclaimed land for future development a stormwater diversion is planned along Parkes Way to intercept the large diameter pipes discharging into the filled area These works have been completed to PSP status and have undertaken initial consultation with TCCS. Detailed design will progress to include information from Light Rail Stage 2A. The stormwater diversion works will be submitted as a separate Works Approval subject to funding. The PSP alignment is included within this Works Approval submission for information purposes only. Stormwater will be managed by temporary works during the Phase 2 work until the stormwater diversion is constructed.

3.1.6 Temporary Landscaping and Activation

On completion of the land reclamation works there will be a period during which settlement of the fill will occur, this is expected to be for a period of approximately 2 years. The settlement will be monitored to determine when further development can occur above the rock fill. During this time the reclaimed land will be subject to temporary landscaping and activation, these temporary works will permit the settling ground to be topped up. These temporary activation and landscape works will be subject to a separate Works Approval. Concept designs of the temporary works are included within the Phase 2 Works Approval drawing set for information purposes only.

3.2 RESPONSE TO NCA COMMENTS

The NCA provided two formal responses to the initial Works Approval application (2015 submission). The first was provided by the Director of Development Assessment and Heritage on 12 November 2015. These comments dealt specifically with Henry Rolland Park. The second set of comments dealing more broadly with the entire application were provided on 15 December 2015.

Included in Appendix 2 is a combined table of comments and responses to the NCA queries raised in relation to this submission. The CRA (formerly Land Development Authority) responses are also provided and, where relevant, applicable responses have been added for this current Works Approval Submission.

The responses are tabulated in the chronological order received.

4. LAND RECLAMATION

4.1 FILLING

The boardwalk will extend into Lake Burley Griffin up to 80 metres from the existing eastern side lake edge. Existing boundaries will be redefined to reflect the new lake edge. Behind the boardwalk, land reclamation works will be undertaken using a wet filling technique, due to the filling being below lake level.

A wet fill technique involves tipping granular material into the lake to displace the water and create a landform. The rock infill material up to water level will be predominantly rock sized from 5mm to 75mm. Rock of this size should allow piles to be driven through the fill, subject to piling technique used, for later stages of work. The rock that faces Lake Burley Griffin will comprise rock 200 to 700mm in size to provide armouring from the smaller fill material and protect against erosion. Any rock utilised below water will be tested to ensure that it is free from any possible chemical leachate.

As the rock will be up to 5m under water it will not be possible to compact during construction until it reaches the final level. The reclaimed area of land will be monitored for settlement. Further construction should not proceed until settlement has been assessed to have significantly completed, a period expected to be approximately 2 years. Settlement in the region of 100mm is expected for the majority of areas, although this may be higher in the alignment of the old Molonglo River. The top layer of fill will be periodically topped up to maintain a free draining surface and account for any settlement. Management of the reclaimed area post-construction is discussed in section 3.1.6 of this report.

The rockfill material is free draining, therefore the top surface of the rock will be graded horizontally at a level of approximately +300mm above lake level (556.223m).

A geotechnical report is included in Appendix 4 which outlines site constraints, different land reclamation methods and discussions on the advantages and disadvantages of each method. The wet fill method is the adopted method by the project team for the land reclamation. The report includes a table that outlines the advantages and disadvantages of this method.

4.2 STORMWATER DIVERSION

The option of using a large pipe / culvert along Parkes Way to divert upstream pipes has been considered and developed into a PSP design. The pipe diversion option presents a permanent solution to convey the stormwater that currently traverses West Basin and the proposed land reclamation area.

The stormwater diversion works are the subject of a separate Works Approval submission; refer to section 3.1.5 of this report, which may be undertaken during the construction of Phase 2 of the boardwalk.

4.3 TREE REMOVAL

The land reclamation works that match back into the existing lake edge will require approximately 120 trees to be removed as site reshaping will substantially impact on the root zone of the trees. Some of these trees are rated as High and Medium value and will be removed.

The tree survey for the Acton Waterfront area was renewed in March 2020. The 2020 survey of existing trees to be removed as part of this work is shown in Appendix 3. Of the trees to be removed tree 1053 and 1054 are rated High urban amenity value and tree group 19 is rated as High urban amenity value, no trees to be removed are rated as Exceptional. All other individual trees and tree groups to be removed are either rated medium or poor. A more detailed description of the High or Exceptional value trees follows.

The full updated 2020 tree survey report and appendices is included in Appendix 7.

4.3.1 Tree group 19

Tree group 19 is rated as High value. A large group of C. cunninghamiana and P. nigra (River Sheoak & Black Poplar). Three of the trees, numbered 1060, 1061 and 1055 are planted within six meters of the existing lake edge. The changing of the ground level around the base of these three trees will require that they are removed.

4.3.2 Tree 1053

A Eucalyptus mannifera (White brittle gum). The tree is within the worksite in an area that will be required to be used as access for trucks and heavy plant taking materials to the lake for filling purposes.

4.3.3 Tree 1054

A Eucalyptus mannifera (White brittle gum). The tree is within the worksite in an area that will be required to be used as access for trucks and heavy plant taking materials to the lake for filling purposes.

5. BOARDWALK

5.1 LANDSCAPE CHARACTER AND SENSE OF PLACE

This boardwalk and land reclamation defines the geometric and linear space of Henry Rolland Park to the south and opens out into a plain abutting the back of the proposed concrete boardwalk. Its character is more open and expansive than the adjacent Henry Rolland Park. The simple landscape elements address the anticipated Acton Waterfront development.

5.2 BOARDWALK DESIGN INTENT

This stage of works includes approximately 500 metre continuation of the boardwalk from the first stage of construction at Henry Rolland Park. The alignment of the boardwalk is consistent with the original works approval submission in 2015 and the style of the boardwalk already constructed at Henry Rolland Park.

The continuation of the boardwalk includes 8100mm x 2000mm pre-cast concrete panels cantilevered 2700mm beyond the lake edge. There are three panel types and these accommodate a mixture of light poles and furniture, consistent with the approved and constructed boardwalk at Henry Rolland Park.

5.3 HARD FINISHES

The following palette of hard finishes is consistent with the existing section of boardwalk approved and constructed.

5.3.1 Boardwalk

The boardwalk is created with high quality pre-cast concrete panels. Each panel is 8.1 m long and 2 metres wide. The outer 2700mm margin uses a ‘cooler’ coloured bluestone exposed aggregate finish illustrated in **Figure 3.** The darker coloured margin has lines of 6mm full-depth saw cuts that allow flickers of light to penetrate the structure from the water below. A grooved 300mm wide tactile paver in a contrasting charcoal colour is set flush with the pavement surface and 600mm in from the lake edge. A similarly contrasting 300mm high x 2000mm long pre-cast seating element with a honed finish, replaces the grooved insert on every sixth panel, to further define the edge and provide informal seating at the water's edge.

The inside 5400mm section of the pre-cast panel incorporates an acid wash finish as illustrated in **Figure 4**.

Figure 3: Quarried basalt stone exposed aggregate and saw cuts give a contrast to the 2700mm wide margin

Figure 4: Acid wash finish concrete gives a contrasting colour to the inner 5400mm of the pre-cast lake edge promenade.

5.4 BOARDWALK FURNITURE

The following summarises the proposed key furniture for the boardwalk.

The furniture is consistent with the NCA approved and recently constructed boardwalk at Henry Rolland Park.

5.4.1 Seating

Park furniture will be Street Furniture Australia (SFA) Boulevard suite as illustrated in **Figure 6.** The frequency of seating has been reduced from that used on the first phase of works.

Figure 6: SFA Boulevard furniture suite.

5.4.2 Lifebuoy cabinet

Figure 7: Lifebuoy cabinet

5.5 LIGHTING

The light poles are the 6 metres high VIC Pole type with round tapered columns and the WE-EF luminaire as illustrated in **Figure 8**. These are consistent with the existing boardwalk light poles.

LED light fittings that meet Australian Standards for light distribution and cut off will be used. The central path and the waterfront promenade will each be illuminated to AS 1158 Category P2 which allows for 3.5 Lux horizontal average and 0.7 Lux vertical point minimum.

A copy of relevant street lighting documentation is included in the Appendix.

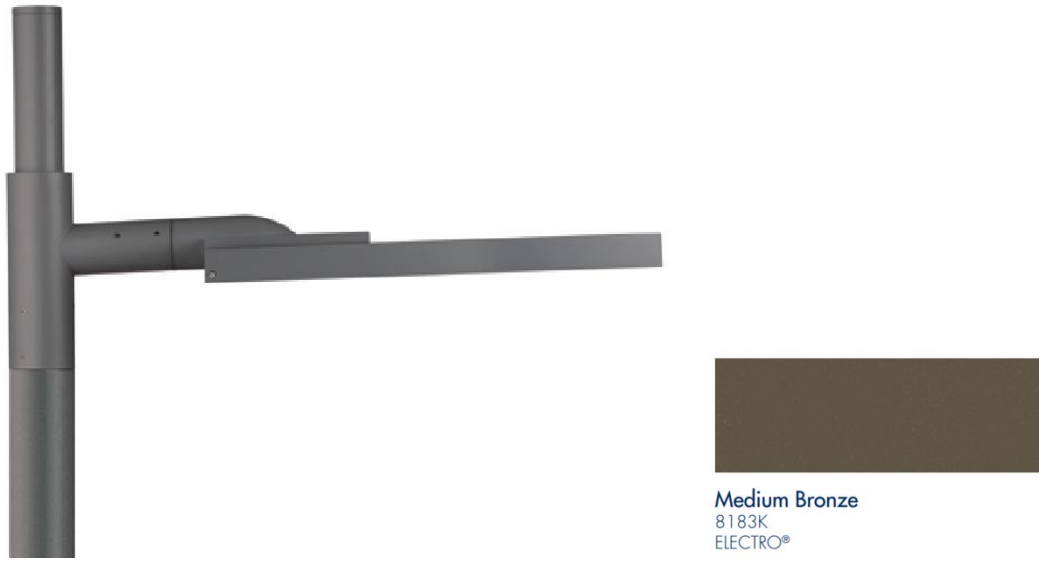

Figure 8: WE-EF VFL540-SE LED Luminaire on VIC Pole tapered steel poles finished in Dulux Powdercoat Medium Bronze 906-8183K.

5.6 ACCESSIBILITY REPORT

An accessibility report is attached under Appendix 5.

In summary, the report concludes,

"We are of the opinion that the proposed design for the West Basin Phase 2 Boardwalk Works meets the intent of the applicable Australian Standards to the degree necessary for this type of amenity and without constraining the enjoyment and movement through the space of all users. The design as proposed in the reviewed drawings will provide a high level of access for people with a broad range of disabilities."

5.7 PLANTING PLAN

5.7.1 Tree Selection

No new tree permanent planting is proposed for the scope of works. Tree planting will be part of the future Acton Waterfront development. The current temporary landscape treatment concept plan for the reclaimed area, considers using the area as a tree nursery for future planting at the location.

5.8 IRRIGATION

No permanent irrigation infrastructure is proposed for the Phase 2 scope of works, however, there are irrigation pumps installed in Phase 1 to service the Phase 2 area.

As part of the previously approved Henry Rolland Park works, the irrigation well intake pipe will be extended under the boardwalk into its final location.

5.9 WATER SENSITIVE URBAN DESIGN (WSUD)

No WSUD treatments are proposed for this submission. The proposed works do not affect the existing water quality at West Basin.

5.10 PARKING

The proposed temporary traffic arrangements for the construction phase will entail a loss of approximately 124 parking spaces. This will be made available again once works have been completed

5.11 FUTURE BUILDING WORKS

Specific points in the geotechnical advice provided in Appendix 4 outlines foundation restrictions associated with future building works constructed wholly or partly with the lake reclamation works. The following points are noted:

- Future buildings along the lake edge corridor will either be a raft-type slab construction or piled foundations. The rockfill size, 5-75mm, has been selected as it should permit piling of foundations through the rock fill, subject to the appropriate piling technique being used. Settlement in the location of raft foundations will have to be monitored prior to construction.
- Future multistorey buildings behind the lake edge corridor, that are wholly, or partly, in the land reclamation will likely need to be piled and include a tanked basement construction if constructed below the lake water level. Depending on the basement levels of these buildings, sheet piling will be considered as part of future building works.

6. UTILITIES SERVICES MASTER PLANS

The work area which this supplementary report covers does not significantly impact existing services due to the construction works. The work extent also does not prevent further servicing of the remainder of the Acton Waterfront development.

6.1 EXISTING SERVICES

The anticipated impact on existing services due to Phase 2 works are described below.

6.1.1 Sewer

There is no significant sewer infrastructure in the work area. The only sewer in the area services the existing public toilets behind the jetty building, these toilets will be demolished as part of the works and a temporary public provision made available.

6.1.2 Water Supply

The works do not affect existing water supply infrastructure.

6.1.3 Stormwater

To unencumber the reclaimed area the large diameter pipes discharging from Parkes Way are planned to be intercepted in Parkes Way and diverted around the fill area. A PSP design for the permanent stormwater diversion has been prepared and discussed with the ACT Government. General endorsement of this study has been received from TCCS and Roads ACT. The stormwater diversion works will be the subject of a separate Works Approval submission subject to funding. Prior to completion of the stormwater diversion, stormwater flows through the land reclamation area will be managed..

Local drainage systems that are still connected to existing pipes will be allowed to filter through the rock-filled media of the reclamation area. Stormwater structures with grated covers are proposed at the existing pipe outlets to allow surcharge during large storm events and for maintenance access as required.

6.1.4 Electrical Services

The works do not affect existing street lighting infrastructure except for a connection to be made.

The works do not affect existing electrical infrastructure.

6.1.5 Communications

The works do not affect existing communication infrastructure.

6.1.6 Gas

The works do not affect existing gas infrastructure.

6.2 PROPOSED NEW SERVICES

The provision of new services for the site is currently being reviewed as part of the West Basin Review being undertaken by the CRA.

6.3 CONSTRUCTION STAGING

The works forming the scope of this supplementary report will be covered under one phase, and includes the following details:

6.3.1 Site works duration:

The duration of construction is 18-24 months excluding settlement time of fill.

6.3.2 Staging of Works

The sequence of works forming this Works Approval submission is listed below. Works to provide temporary landscaping and activation will progress on completion of step 15.

- Step 1 - Site establishment utilising the identified compound area
- Step 2 - Establishment of silt curtains and other environmental controls.
- Step 3 - Clearing, grubbing and tree removal in the work area.
- Step 4 – Install boardwalk support piles from a barge from south to north.
- Step 5 – Fill from lake edge to completed back row of support piles from south to north
- Step 6 – Place rock armour around boardwalk support piles and form a working platform for beam placement.
- Step 7 – Adjust pile heights.
- Step 8 – Fill of circular hollow section piles with concrete.
- Step 9 – Place pre-cast concrete pile cap beams (note end pile caps will be cast in-situ)
- Step 10 – Place stormwater outlets.
- Step 11 – Complete rock armour around beams.
- Step 12 – Place cantilever pre-cast planks.
- Step 13 – Install electrical conduit - progressively as slab placement progresses.
- Step 14 – Install street lighting and street furniture.
- Step 15 – Monitor settlement and top up fill as required.

Further detail and aspects of the construction are detailed in the sections below:

6.3.3 Temporary Traffic Management

The arrangements for temporary traffic management are summarised:

- The location of the site compound and stockpile area is in the existing off-street car park between Corkhill Street and Albert Street.
- Barrine Drive Remains Open to vehicular, cyclist and pedestrian traffic;
- Truck movements from the site compound across Barrine Drive will be under traffic controller “stop / slow” control.
- Cycle path diversion forms part of this Phase 2 work.
- No construction access through Henry Rolland park will be permitted.

6.3.4 Wet fill placement details

The land reclamation works require the placement of a wet fill. The wet fill will be a suitable rock and filling and compaction of the wet fill will be undertaken from the lake edge out towards the boardwalk.

Preliminary geotechnical advice is included in the Appendix for the likely wet fill specification as follows:

- Infill material between the rock armour and the existing lake edge will be 5 to 75mm in diameter.
- Larger sized rock for rock armour (200 to 700mm in size) to be placed fronting Lake Burley Griffin.

A total of up to 80,000 cubic metres of wet fill is required for this interim phase land reclamation works.

6.3.5 Boardwalk works

The boardwalk works include the following sequence:

Piling works: include the piling activity from a barge and sequenced from south to north. The piles will be approximately 16m long circular hollow section steel piles driven to bedrock. For additional strength

and to provide durability the piles will be filled with concrete. The piles are proposed to be at 10m longitudinal spacing to maintain a consistent separation and alignment to the recently constructed boardwalk at Henry Rolland Park.

Wet fill works: Following the piling works the wet fill will be pushed out from the current lake edge towards the piles. The rock armour will then be placed on the front of the fill around the piles

Stormwater outlet works: Sheet piles will be installed to form the locations for future stormwater outlets from the development.

Pile capping beams and boardwalk panels: The precast concrete capping beams will be installed between the piles to provide continuous support to the boardwalk slabs. The capping beams and piles will be set back 2.4m from the lake edge of the boardwalk to allow these panels to be cantilevered over the lake and consistent with the setback for the boardwalk at Henry Rolland Park.

Boardwalk lighting and furniture works: The lighting and boardwalk furniture will be installed once the boardwalk panels are in place.

6.4 ENVIRONMENTAL MANAGEMENT DURING CONSTRUCTION

A project-specific Construction Environmental Management Plan (CEMP) will be prepared prior to construction works commencing. This will be submitted to Environment ACT for their review.

A concept sediment and erosion control plans are included within the drawing set. A summary of the environmental control measures to be applied in the project are:

- Installation of two silt curtains in the lake to contain turbid water within the construction zone.
- Monitoring of noise and vibration from piling operations.
- Diversion of clean water overland flows upstream of the works away from the worksite.
- Use of silt socks to prevent turbid water from entering stormwater drains.
- Use of silt fence to manage overland flow exiting the worksite.

6.5 DRAWING LIST

Drawing Number	Title	Revision
6617-01-000	COVER SHEET	
6617-01-001	DRAWING SCHEDULE	M
6617-01-002	NOTES LEGENDS AND ABBREVIATIONS	J
6617-01-003	LOCALITY PLAN AND SHEET LAYOUT	J
6617-01-004	GEOMETRY AND SETOUT PLAN	J
6617-01-005	WORKS APPROVAL ZONES PLAN	J
6617-01-006	STAGING PLAN	J
6617-01-007	GENERAL ARRANGEMENT AND CHAINAGE PLAN	J
6617-01-008	GENERAL ARRANGEMENT PRE LANDSCAPE TREATMENT	D
6617-01-009	CONCEPTUAL PERSPECTIVE	D
6617-01-010	CONSTRUCTION DETAILS PLAN SHEET 1 OF 2	K
6617-01-011	CONSTRUCTION DETAILS PLAN SHEET 2 OF 2	K
6617-01-012	UTILITIES PLAN SHEET 1 OF 2	J
6617-01-013	UTILITIES PLAN SHEET 2 OF 2	J
6617-01-014	STORMWATER SPECIAL STRUCTURE PLAN AND SECTION	J
6617-01-015	DEPTH CONTOURS PLAN	J
6617-01-018	TYPICAL CROSS SECTION	D
6617-01-020	TYPICAL CROSS SECTIONS SHEET 1 OF 2	K
6617-01-021	TYPICAL CROSS SECTIONS SHEET 2 OF 2	J
6617-01-022	PEIR SETOUT PLAN	G
6617-01-030	DEMOLITION PLAN - OVERALL SHEET 1 OF 2	J
6617-01-031	DEMOLITION PLAN - OVERALL SHEET 2 OF 2	J
6617-01-032	DEMOLITION PLAN BUILDING AND JETTY	J
6617-01-033	DEMOLITION PLAN HYDRAULLIC SERVICES	J
6617-01-034	DEMOLITION PLAN UTILITIES AND SERVICES	J
6617-01-035	REINSTATEMENT PLAN	J
6617-01-040	LONG SECTION	K
6617-01-060	GRADING PLAN	K
6617-01-090	TREE MANAGEMENT PROTECTION PLAN NOTES	J
6617-01-091	TREE MANAGEMENT PROTECTION PLAN SHEET 1 OF 2	K
6617-01-092	TREE MANAGEMENT PROTECTION PLAN SHEET 2 OF 2	K
6617-01-300	TRAFFIC CONTROL DEVICES SHEET 1 OF 2	J
6617-01-301	TRAFFIC CONTROL DEVICES SHEET 2 OF 2	J
6617-01-350	EROSION AND SEDIMENT CONTROL CONCEPT PLAN NOTES	J
6617-01-351	EROSION AND SEDIMENT CONTROL CONCEPT PLAN PILING WORKS	J
6617-01-390	BOARDWALK PANEL TYPE SUMMARY SHEET 1 OF 2	C
6617-01-391	BOARDWALK PANEL TYPE SUMMARY SHEET 2 OF 2	C
6617-01-402	BOARDWALK PANEL DETAIL WITH STREET FURNITURE	K
6617-01-403	GRAB RAIL DETAIL PLAN	K
6617-01-405	LIFE BUOY CABINET DETAIL PLAN	K
6617-01-406	MISCELLANEOUS BRASS COVER PLATES DETAIL PLAN	J
6617-01-407	LIGHT POLE DETAILS	E

Drawing Number	Title	Revision
6617-01-412	STEP LADDER DETAIL PLAN	E
6617-01-413	CONCRETE SEAT DETAILS	E
6617-01-414	BENCH SEAT DETAILS	E
6617-01-500	GENERAL ARRANGEMENT CONCEP TEMPORARY LANDSCAPE TREATMENT	D
6617-01-501	TYPICAL CROSS SECTION LANDSCAPE TREATMENTS	D
6617-01-600	GENERAL NOTES	5
6617-01-601	PROMENADE PLANS - KEYPLAN	5
6617-01-602	PROMENADE PLANS - SHEET 1 (ZONE 2A)	5
6617-01-603	PROMENADE PLANS - SHEET 2 (ZONE 2B)	5
6617-01-604	PROMENADE PLANS - SHEET 3 (ZONE 2C)	5
6617-01-605	PROMENADE PLANS - SHEET 4 (ZONE 2D)	5
6617-01-606	PROMENADE PLANS - SHEET 5 (ZONE 2E)	5
6617-01-607	PROMENADE ELEVATIONS & SECTIONS SHEET 1	6
6617-01-616	PROMENADE CONNECTION DETAILS - SHEET 2	5
6617-01-625	PROMENADE CONNECTION DETAILS - SHEET 3	5
6617-01-627	TYPICAL PANEL REINFORCEMENT PANEL TYPE 1	5
E171676-1	ELECTRICAL SERVICES LOCATION PLAN	A
E171676-2	ELECTRICAL SERVICES PROPOSED EXTERNAL LIGHTING SHEET 1 OF 2	A
E171676-3	ELECTRICAL SERVICES PROPOSED EXTERNAL LIGHTING SHEET 2 OF 2	A
E171676-4	ELECTRICAL SERVICES SINGLE LINE DIAGRAM	A

APPENDIX 1

Works Approval 2 Drawing Set

APPENDIX 2

Previous NCA response tables

Appendix 1 – Response tables to NCA Comments

TABLE: Response to comments raised by NCA in covering e-mail to comments dated 12 November 2015

Ref	Area	Page / Dwg No.	Section Ref	NCA Comment	LDA Response	Drawing Ref or Report Section
WA001	All			**Boundary/curtilage of the works for Point Park** A plan showing the proposed boundary for works to be approved needs to be provided.	ORIGINAL RESPONSE: Boundary drawings showing the extent of the Works Approval and also the location of temporary interface works to connect new infrastructure to existing are included within the drawing set. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.** **This Supplementary Works Approval 2 submission includes the boundary of the works.**	5750-C010 - GEN

WA002	All			**Plans** There are no contour plans, demolition plans.	Contour / grading plans for the Point Park and the area forming this supplementary Works Approval submission are included in the revised drawing set. Demolition plans are included in the revised drawing set for the area forming the supplementary works approval **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **This Supplementary Works Approval 2 submission includes site contours on the civil drawings and a demolition plan.**	5750-C0290 – Grading 5750-C410 – Demo to 5750-C413-Demo

WA003	All			**Site Servicing** The extent of the servicing to be constructed as part of the Point Park package needs to be shown and articulated in plans and text. What extent of the water main, shared trench (electricity, gas, telco). See also comment below on Commonwealth Avenue. NCA would like a briefing from the engineering consultant on services including services that impact on Commonwealth Avenue, the lake wall or lake ie. stormwater pipes into the lake/irrigation extraction	Site serving drawings specific to the scope of works for Point Park and the area forming the supplementary Works Approval submission are in included in the drawing set. The supplementary Works Approval report also addresses the approach to site servicing. In summary: Sewer – the works do not require or impact any sewer infrastructure. Water – Potable water feed for irrigation required. Protection of existing assets in construction zone. Stormwater – Separate systems for road drainage from Commonwealth Ave and the Point Park Area. Electrical Utilities – Diversion of electrical conduits to west verge of Commonwealth Ave. Severn way along south verge of Albert St via sub to make temporary connection at Barrine Drive. One-way cable relocated out of median to west verge of Commonwealth Ave. Communications – Fibre Optics to be relocated from median to east verge of Commonwealth Ave. Gas – No gas assets impacted. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this**	5750-C200-HYD to 5750-C203-HYD & 5750 –C210-Util to 5750-C214-Util Section 8

WA004	All			**Connection to Menzies Walk/Barrine Drive closure** The drawings do not show the connection to Menzies Walk, changes with closure of Barrine Drive. These need to be included.	Concept design for these works are being undertaken by Oxigen on behalf of the NCA. The works approval shows a transition area which will be updated to incorporate this work once this has been completed. These works are not planned to take place until the closure of Barrine Drive in 2017 **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **This Supplementary Works Approval 2 submission includes connections to the existing shared paths and matching to lake edge levels.**	Section 7.6
WA005	All			**Commonwealth Avenue** Drawings will need to be updated to reflect Oxygen's latest designs for the intersection and Commonwealth Avenue verge. Location of services proposed for all Stage A works that are within the Commonwealth Avenue road reservation need to be review and coordinated with NCA.	The intersections for Albert Street and Commonwealth Avenue and for Corkhill St and Commonwealth Ave have been updated to reflect the current intersection layout within the latest Oxigen design drawings. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	5750-C300-INT & 5750-C304-INT Section 7.0

WA006	All			**Furniture/ Play** Whilst the Materials Palette Report and the Works Approval Report refer to furniture, play and adult fitness equipment in Point Park, the drawings submitted do not show any of these elements - furniture, park benches, bins, water bubblers, exercise, play equipment, tactiles. There is no signage shown in the plans, identification, locational, bike path etc	A materials palette with addresses the items with Point Park and the area forming this supplementary works approval is provided with this submission. This materials palette is cognisant of the Commonwealth Ave. materials palette and also of the overall palette for the West Basin development. Furniture will be sourced from Street Furniture Australia and will be the same range used for Constitution Avenue. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **This Supplementary Works Approval 2 includes details of furniture along the boardwalk.**	Section 6.4/6.5

WA007	All			**Tree Assessment Report** There does not appear to be any response in the documentation provided to the trees identified as High value (exceptional in main works area) in the Tree Assessment Report. What consideration was given to their possible retention in the design? The tree management plans do not include any tree reference numbers	Discussion as to the high value trees impacted by the area forming this supplementary Works Approval submission is included within the report. A stand of high value trees has been retained. In general, the works do not permit the retention of the existing trees. Tree planting undertaken by the project will be in excess of the amount of tree removal. Tree management plans have been updated to ensure that reference numbers can be read. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **This Supplementary Works Approval 2 submission includes details of tree removal, including tree identification numbers.**	Section 4.2 5750-C420-TMP to 5750-C423-TMP
WA008	All			**Pavilions** Unclear if one is included in the Point Park work. General comment is that the design and scale of the Pavilions should be reviewed.	The pavilions do not form part of this works approval submission and will be part of a future submission. This works approval submission shows temporary works in the location of the pavilion. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	5750-C011-Detail to 5750-C014-Detail

WA009	Other (E-mail 12/11/15)	General		**Consultation Report** I provided Mel and Ian a copy of all submissions received during consultation (on 27 October) and once a written response from LDA is received on the issues raised, I will complete the NCA's consultation report for stage 1A works for consideration by our board.	The response to the consultation report is included in the supplementary Works Approval report. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	Section
WA010	Works Approval Report for Works Package 2 – Point Park	47	4.10.1	There is no discussion as to the design treatment and integration of Barrine Drive once closed. This needs to be addressed both in the report and the works approval drawings.	Concept design for these works are being undertaken by Oxigen on behalf of the NCA. The works approval shows a transition area which will be updated to incorporate this work once this has been completed. These works are not planned to take place until the closure of Barrine Drive in 2017 **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	Section ??

WA011	West Basin Foreshore Materials Palette	General		How is disabled access accommodated in the design? For example, use of tactile indicators and specified routes.	An accessibility report into for the works forming the supplementary Works Approval submission has been commissioned and included in the supplementary report. The drawings reflect the recommendations from the accessibility consultant **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **Tactile indicators are consistent with the previous constructed Works Approval for Phase 1.** **This Supplementary Works Approval 2 includes an accessibility report.**	Section ??

WA012	West Basin Foreshore Materials Palette	4		Please explain philosophy behind choice of materials palette.	A materials palette with addresses the items with Point Park and the area forming this supplementary works approval is provided with this submission. This materials palette is cognisant of the Commonwealth Ave. materials palette and also of the overall palette for the West Basin development. The material palette has been chosen to provide a high quality and enduring set of materials that can be applied across the 55m extents to define travel paths, varying speeds, crossing/interchange spaces within a comprehensive set. • Concrete for its Canberra legacy – the quality of concrete achieved in Canberra's array of public buildings has been above that of other Australian cities. • Bluestone and similar for their civic values and tie-back to civic. Limestone and sandstone to link the surrounding geology. • Timber to soften and allow places to sit upon the other materials when Canberra is particularly hot or particularly cold. Each of these materials is arranged in a number of ways, particularly the concrete, with varying saw-cuts to dictate speed, density of use, frontage to structures and in particular warn pedestrians and cyclists of points of cross-over across the street and around the arc – particularly at the waterfront interfaces **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **This Supplementary Works Approval 2 includes a materials palette that is consistent with the Phase 1 Works Approval**	Section ??

WA013	West Basin Foreshore Materials Palette	7		General comment – Many of the trees which are being proposed are quite small with limited canopies. Given the exposure of the site, it would be preferable to have more trees incorporated with larger shade canopies to provide more site amenity. Some of the species being proposed such as Eucalyptus pauciflora do poorly in the Canberra climate and should be substituted with another species.	The revised Works Approval drawings and supplementary report include changed tree species to address the comment raised. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA0014	West Basin Foreshore Materials Palette	14		Bespoke benches – potentially hard to source and service as the project ages. Off the shelf products encouraged.	Benches and street furniture to be sourced from Street Furniture Australia and will be of the same style as the furniture used for Constitution Avenue **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **This Supplementary Works Approval 2 includes a materials palette that is consistent with the previous constructed Works Approval for Phase 1.**	

WA015	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	General		Please provide drawings with details of the proposed elements, including construction details for paving, retaining walls, fixing of furniture, kerbs, barriers, handrails etc	Detailed design for fixings will be developed during the detailed design of the works. The design of the boardwalk and jetty structures maximise off site works to minimise on site fixing. A rebated has been formed in to slabs to permit the fixing a furniture an achieve a flush finish. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **This Supplementary Works Approval 2 submission includes the boundary of the works.**	
WA016	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5050	Lighting Column	Lighting – what colour poles, detail/ colour of luminaire. Is any in ground or furniture/wall integrated lighting proposed for Point Park? None is shown.	Light columns are an elegant tapered steel marketed by Thorn Lighting as the Urba range. The proposed columns are similar in style to those proposed to be used along Commonwealth Avenue **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **Lighting is consistent with the previously constructed Works Approval for Phase 1.**	Section 6.7
WA017	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5107 - All Drawings	General arrangement Sheet 7 of 9	Commonwealth Avenue and Albert Street design to be updated with latest Oxygen plans – Gwen to provide.	West Basin Point Park Drawings and Commonwealth Ave Drawings have been integrated into a single base. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	Complete drawing set

WA018	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5107	Sheet 7 of 9	The circular coloured area is noted as P12 deco granite.	The drawing has been updated **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	5750-C110-Detail to 5750-C113-Detail
WA019	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5107	Sheet 7 of 9	Is the location for waterfront pavilion in Point Park – it is located part over the current lake wall edge. Either detailed drawings of pavilion should be provided or legend provided of landscape for the space, not left blank	The pavilions do not form part of this works approval submission and will be part of a future submission. This works approval submission shows temporary works in the location of the pavilion. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	5750-C011-Detail to 5750-C014-Detail
WA020	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5107	Sheet 7 of 9	Light in P10 appears to be a cycling hazard	The drawing has been updated **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	5750-C110-Detail to 5750-C113-Detail

WA021	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5107	Sheet 7 of 9	The bike racks in P10 do not have the symbol for bike racks shown in the legend	The drawing has been updated **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	5750-C110-Detail to 5750-C113-Detail
WA022	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5107	Sheet 7 of 9	Albert Street entry to be 12m wide – drawings not reflecting this. Also question the presence of parking along this side street and use of asphalt. As a main entry to West Basin, paving material should be consistent with what's used along the boulevard.	The permanent construction of Albert St, other than its intersection with Commonwealth Avenue does not form part of this supplementary Works Approval request. The intersection for Albert St will be constructed as per the Oxigen design with Albert St. using the materials identified. Temporary works will link the remainder of Albert St. to Barrine Drive. These works will meet TAMS specification. It is acknowledged that the width of Albert St. will be 12m of final materiality to be submitted in a future Works Approval submission will be cognisant of the Commonwealth Avenue work. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA023	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	Potential location for shade structure. Either detailed drawings of shade structure should be provided or legend provided of landscape for the space, not left blank.	Details of the proposed shade structure in Point Park are included with this supplementary Works Approval submission **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA024	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	Drawings to show what the design of the lake edge will be before Works Package 1 is built?	The scope of works forming the supplementary Works Approval submission will take the lake edge works in the area indicated to completion. In other areas the existing lake edge wall will be retained. Sheet piles will be used to reclaim land and form the permanent lake edge wall. This sheet pile wall will be set back beneath the boardwalk and will not be readably visible on completion of the works. The all sheet piles will be fully visible in the temporary condition while the works proceed. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **This Supplementary Works Approval 2 submission includes the details of the existing Lake edge.**	

WA025	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	SW1 – not in legend	The drawing has been updated **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA026	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	The section of P12 has small brown rectangles in it noted as W6 sandstone walls is this correct?	The drawing has been updated **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA027	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	What is the intention for the areas of circular soft fall?	It is intended that this will be an informal play area for children utilising timber set in the ground at different height levels together with a climbing activity structure. Refer to photograph for intention of play area. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA028	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	No codes for the southern feature area with brown circular elements.	The drawing has been updated **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA029	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	What are the details of the exercise pod?	Examples of the style of exercise equipment are provided in the report. The equipment will be of a similar style to that recently installed at Lake Tuggeranong by the ACT Government. The equipment will be a mixture of cardio and strength conditioning (e.g cross trainer and chin up bar). Final details of the proposed fitness equipment will be provided in a future submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	Section 6.4
WA030	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5108	Sheet 8 of 9	What are the details of WL the storm water feature treatment?	The WSUD bed has been removed. The report contains a response to the issues of WSUD. Remaining in this area are a stand of existing trees and the landscaping will integrate these trees into the new Point Park. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	Section 6.10

WA031	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5109	Sheet 9 of 9	Connection to Menzies Walk/Treatment of Barrine Drive. The detail regarding what happens with the old portion of Barrine Drive – and how it ties back into Point Park as well as RG Menzies Walk – is unresolved and needs further detailing. Drawings do not show detail of materials, design, lighting transition.	Oxigen has been commissioned by the NCA to provide a design report for the interface between RG Menzies Walk and Point Park, including the area beneath Commonwealth Avenue bridge and stairs. The layout of Point Park at the interface point will be adapted to incorporate the outcomes of the design study. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA032	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	CCW-DRG-5157/8/9		Alignment of path and stairs from Commonwealth Avenue may need to change to reflect 12.5m verge not 5m verge to Commonwealth Avenue	Oxigen has been commissioned by the NCA to provide a design report for the interface between RG Menzies Walk and Point Park, including the area beneath Commonwealth Avenue bridge and stairs. The layout of Point Park at the interface point will be adapted to incorporate the outcomes of the design study. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA033	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	DGA-DRG-5107		Details of storm water discharge into lake/penetration of lake wall	The location of the SW discharges is shown on the hydraulic services plan. There are 2 discharge points. One permanent will be beneath the boardwalk through the sheet pile retaining wall. The sheet pile wall will be cut for the penetration. The pipe will be surrounded by concrete to make the penetration watertight. This detail will be 2.4m recessed from the edge of the boardwalk and submerged beneath water. The other temporary discharge will be from the Commonwealth Ave SW catchment and will be directed to the WSUD Basin north of the Pavilion building pad at Albert St. This WSUD basin is not constructed as part of this work stage and the final connection will be made as part of later works. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The locations of the stormwater discharges from the existing outlets are detailed in this submission. As stated in the report a permanent diversion of the stormwater drainage will form a separate Works Approval submission**	

WA034	City to the Lake – West Basin Foreshore Stage 1A Works Approval Drawings	DGA-DRG-5109		Details of WSUD	WSUD is discussed in detail in the supplementary report. Currently the Point Park area (currently car park) and Commonwealth Avenue catchment south of AIbert St. combine into a single direct discharge. The 2 catchments will be separated into 2 discharges. Commonwealth Ave to discharge into a future WSUD basin and Point Park directly discharging into the lake. The Point Park area will have a significant reduction in hard surfaced area with car parking being replaced by a permeable grassed surfaces. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **WSUD provisions are not included as part of the Phase 2 Works Approval submission. Provision for stormwater outlets for future WSUD provisions are detailed. WSUD requirements will be detailed as part of the current Acton Waterfront Review.**	
WA035	Landscape Planting Plan	General		Re-consider the use of Eucalyptus cinerea. These species may not provide sufficient amenity and shade along the main waterfront road when planted at 16m centres. Check availability.	**The scope of this submission is not applicable to this previous NCA comment.**	
WA036	Landscape Planting Plan	General		Please consider including more larger (deciduous) shade trees into the design for shade, amenity and scale reasons.	The supplementary Works Approval drawings and report include changed tree species to address the comment raised. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA037	Landscape Planting Plan	LLU-DRG		General comment – Many of the trees which are adjacent to the boardwalk, the play area in Western Park and the pavilions are small trees with limited tree canopies. Given the exposed nature of these areas, it would be good to incorporate taller shade trees to provide more pedestrian amenity.	In relation to Point Park the supplementary Works Approval drawings and report include changed tree species to address the comment raised. Areas outside this submission will be addressed in future submissions. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA038	Landscape Planting Plan			Please provide a summary schedule of species, numbers, specified height, caliper of trees, and pots sizes.	This detail will be provided as the detailed design works progress. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA039	Architectural detail plan and elevation pavilion Type 1	AGN-DRG-5031		These pavilions seem very tall (8m) – is the scale appropriate and necessary to the nature of the waterfront? Many of the nearby trees will be substantially shorter than these buildings (ie Sapium sebiferum).	The pavilions do not form part of the Works Approval and will not be constructed as part of this initial project. Temporary landscaping will be provided at this location. The edge wall stops short of the structure location so as not to limit future design options for foundation and wall design **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA040	Irrigation	General		Please indicate detail and location of controllers and metering.	Controller and metering will be installed beneath the new stairs from Commonwealth Avenue **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA041	Irrigation	LLU-DRG-6107/8/9		Limited irrigation provided to the G2 Grassland area, is this appropriate?	Irrigation will be provided appropriate to all grassing areas and plant types to maintain the high quality finish to the park. Detailed irrigation plans will be developed in detailed design. Provision of ring main indicated in supplementary drawings **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA042	Irrigation	LLU-DRG-6201		What extent of irrigation will be constructed for Point Park. Where will the pump room be?	Irrigation will be provided appropriate to all grassing areas and plant types to maintain the high quality finish to the park. Controller and metering will be installed beneath the new stairs from Commonwealth Avenue **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA043	Civil Hydraulic and Drainage	General		Please provide details on the design and timing of the WSUD bio-retention structures.	No WSUD structure will constructed in the works forming the Point Park project. Future WSUD structures will be detailed in submissions appropriate to the stage of works. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **Previous response is satisfactory and this submission is for Supplementary Works Approval 2.**	
WA044	Civil Hydraulic and Drainage			Please confirm that surface storm water is treated prior to entering the lake prior to treatment. If a GPT or similar is located upstream, please indicate.	**<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **WSUD provisions are not included as part of the Phase 2 Works Approval submission. Provision for stormwater outlets for future WSUD provisions are detailed. WSUD requirements will be detailed as part of the current Acton Waterfront Review.**	
WA045	Civil Hydraulic and Drainage	DGN-DRG-5107	Sheet 7 of 9	Need to coordinate this drainage infrastructure with the Commonwealth Ave PSP	Coordinated drainage included in this submission **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA046	Services Masterplans General Arrangement	UGA-DRG-5106	Sheet 6 of 10	Inconsistency of land use in triangle of land between future pavilion and boardwalk. Needs clarification. In Section M CCW-DRG-5308 adjacent the Pavilion, there is water between the existing lake wall and the boardwalk structure. In UGA-DRG-5106 there are trees and grass shown in this area. Agreed at meeting 19/1/16 that area is to be water. Extent of new Boardwalk to extend to where the new wall line leaves the existing wall. Drawings to be revised	To be constructed as part of future stage. Drawings have been updated to be consistent. In this stage of works there will be no water at this location. Boardwalk extended by several panels beyond departure point from existing wall to provided temporary connectivity with Barrine Drive. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **Service requirements for the Phase 2 land reclamation works are included on the Works Approval drawings. Service requirements will be detailed as part of the current Acton Waterfront Review.**	
WA047	Services Masterplans General Arrangement	UGA-DRG-5106	Sheet 6 of 10	Check placement of lights on Albert Street in relation to water main.	Street lighting positions reviewed **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA048	Services Masterplans General Arrangement	UGA-DRG-5106	Sheet 6 of 10	Servicing along Albert will need to be modified to reflect width of 12m rather than 6.6m	Servicing positions changed and Albert Street shown as 12m **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA049	Services Masterplans General Arrangement	DRG-5109	Sheet 9 of 10	Coordinate placement of sewer line in Commonwealth PSP work	The sewer connection for West Basin does not fall into the scope of this Supplementary Works Approval submission and will be addressed in a future submission. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.** **Service requirements for the Phase 2 land reclamation works are included on the Works Approval drawings. Service requirements will be detailed as part of the current Acton Waterfront Review.**	
WA050	Other	LLU-DRG-7010	Tree Management Plan	There is no tree numbers on the plans to show which trees are being retained to reference to the tree assessment report.	The required information has been shown for the scope of works covered by this Supplementary Works Approval report. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **This Supplementary Works Approval 2 submission includes details of tree removal, including tree identification numbers.**	
WA051	Other	WGA-DRG-0102	Water	Check location of water main in relation to Albert Street design. Different location to that shown in UGA-DRG-5106	**Water main base updated to be consistent** **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA052	Other	LLU-DRG-0102	Landscape Master Plan	These drawings show completely different layout to Point Park (called Eastern Park) from the other drawings and the general arrangement plan.	Supplementary drawings revised to be consistent **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA053	Other	SEGA-DRG-0102	Sewage	Status update required on sewage storage tank location	Provision for a storage tank will not be made within point park. The location and size are not appropriate for this location. A pumped sewerage solution is most likely to be used. Storage provision for the West Basin development, if required using a pumped solution, will be provided elsewhere in the development, most likely this will be in a fill / reclamation area to minimise excavation. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

TABLE: Response to comments raised by NCA in covering e-mail to comments dated 15 December 2015

Ref	Area	Page / Dwg No.	Section Ref	NCA Comment	LDA Response	Drawing Ref or Report Section
WA054				**Consistency and Readability of Plans** All the drawings need a thorough review for consistency, readability and accuracy. We have identified key issues in the attached table however, there are significant inconsistencies in the drawings that need correcting. There would be considerable value in the next level of documentation being undertaken by the original landscape architects (Jila/Hill Thalis) to ensure design quality and consistency.	The drawings for the supplementary submission have been prepared on a single base to endeavour to ensure consistency with all drawings. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA055				**Materials selection** The General Arrangement Plans (CCW-DRG-5103 to 5107) highlight the high number of pavement materials used in the cross section from the northern verge to the edge of the pedestrian space. It is recommended that the materials be rationalised as there are too many	The supplementary submission rationalised the materials used and provides additional details. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

				different pavement materials. The cycleway itself is shown as a range of pavement types including P1, P1 (different colour and markings), P3, P11 all within a small section. Cobbles on the bike path may pose a safety issue to cyclists.		
WA056				**The Cycle Path** The consultation as well as the NCA's own review has identified issues with the design of the cycle path. Issues include separation from cars and pedestrians, delineation of the path, design to minimise conflict at entry/exit points. Key conflict points do not appear well addressed in the design for example the connection point of the Commonwealth Avenue path to the shared path (corner is off alignment, light pole in space, pedestrian conflicts	On road cyclists will be encouraged to utilse Albert St for access to reduce conflicts on the footpaths within Point Park. This will be achieved using structures at the Belvedere. Tactiles will be in place at key intersections to warn pedestrians. Furniture and light poles will be placed at the rear edge of the front 2.7m of the promenade to discourage cyclists from the slow movement area at the lake edge. Position of light poles has been reviewed. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA057				**Lake reclamation and new lake wall** Information on source of landfill and quantity. Need civil drawings on lake wall	In relation to works covered by the Supplementary Report further detail has been provided on the lake edge construction. It is anticipated that this construction method will be utilised for the full extent of the lake edge. For Point Pak the volume of material imported is anticipated to be less than 5000m3. This is likely to be sourced from quarry overburden material.	

WA058				**Boardwalk and lake wall** There are a lack of drawings on the boardwalk and lake wall including civil drawings. The general arrangement drawings refer to BA and BB on the boardwalk, however, there is no reference to what this is. The architectural drawings have no materials referenced on them. During consultation the Canberra Yacht Club and others requested tie up points along the entire boardwalk at set intervals. A concept sketch was included (previously provided to LDA).	More detailed information is provided on the promenade and walkway to the Griffin Marker. This includes details of materials to be used. Provision has been made in the wet dock to have a buoyant structure to provide ready access to the water. A grab rail will be shown installed below the boardwalk cantilever structure as a safety feature in case of falls into the lake. This will double as a tie up point for yachts. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **This Supplementary Works Approval 2 submission includes the boundary of the works.**	
WA059				**Flood Risk Assessment** No hydraulic modelling has been carried out during concept design. Assessment of flood risk to the proposed works should be included.	The 1:100 flood line has been shown on the hydraulic services plan. The impact of flooding under the Point Park scope of works is minimal. Detailed hydraulic modelling of the upstream catchment to Stage will to occur during design development for future Works Approval submissions. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **This Supplementary Works Approval 2 submission includes the boundary of the works.**	
WA060				**Heritage assessment** As previously advised by the NCA (see email to Nathan of 24 November 2014) the impact of all works to West Basin is	Attached to this document is a report prepared by Cultural Heritage Management Australia entitled *City to the Lake – West Basin Project – Stage 1 Indigenous Heritage Assessment.* The Point Park project does not impacts and sites identified on the report. A unexpected finds	

				to be assessed. Information on the impact on Indigenous and natural heritage values are also to be provided. The demolition of the boat house should also be assessed.	procedure will be put in place for the project. The boat house is not within the scope of this project. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **This Supplementary Works Approval 2 submission includes the boundary of the works.**	
WA061				**Parking** What is the parking strategy for the site? During and after construction.	The staging plans provide the location of the site compound which will provide space for construction parking. A small temporary parking area will be provided at the location of the pavilion building to provide parking for mobility impaired drivers. Parking will be available in the car park to the north of Albert street for other users of the park. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **This Supplementary Works Approval 2 submission includes the boundary of the works.**	
WA062				**Plans** There are no contour plans, demolition plans.	Contour and demolition plans provided. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **This Supplementary Works Approval 2 submission includes the design contours on the civil drawings and a demolition plan.**	
WA062				**Site Servicing** NCA would like a briefing from the engineering consultant on services including services that impact on NCA assets including Commonwealth Avenue,	Refer to response to WA003 **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **WSUD provisions are not included as part of the Phase 2 Works Approval submission. Provision for**	

				the lake wall or lake ie. stormwater pipes into the lake/irrigation extraction	**stormwater outlets for future WSUD provisions are detailed. WSUD requirements will be detailed as part of the current Acton Waterfront Review.** **A further Works Approval will be submitted detailing stormwater diversion works in Parkes Way**	
WA064				**Furniture/ Play** Whilst the Materials Palette Report and the Works Approval Report refer to Furniture, Play and adult fitness equipment in Point Park, the drawings submitted do not show any of these elements - furniture, park benches, bins, water bubblers, exercise, play equipment. Consultation has also had a request for BBQ facilities.	Refer to response to WA006 **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA065				**Tree Assessment Report** There does not appear to be any response in the documentation provided to the trees identified as High or exceptional value in the Tree Assessment Report. What consideration was given to their possible retention in the design?	Refer to response to WA007 **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **This Supplementary Works Approval 2 submission includes details of tree removal, including tree identification numbers.**	
WA066				**Pavilions**	Refer to response to WA008	

				General comment is that the design and scale of the Pavilions should be reviewed. The eight metre height seems too high and they appear bulky.	**SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **Previous response is satisfactory and this submission is for Supplementary Works Approval 2.**	

Ref	Area	Page / Dwg No.	Section Ref	NCA Comment	LDA Response	Drawing Ref or Report Section
WA067		28	4.5.1	Please clarify the proposed surface finish for the cycleway and how it will differentiate from the footpath.	The central pathway through point park will be Concrete Pavement with Light grit blast finish. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA068		29	4.5.1	Clarity needed as to how the proposed street furniture will or will not relate to the broader existing surrounds (ie the material palette for Commonwealth Avenue / Constitution Avenue) and why. Are there further objectives beyond using high quality materials ie establishing continuity within the public realm which contributes towards the character of West Basin?	West Basin waterfront will have the character of a national boulevard. The design of the street furniture did develop post Works Approval submission. Along the 8.1m wide promenade we propose to use a custom furniture suite as detailed in drawings CttL-S1AW2-AGN-DRG-5021 and CttL-S1AW2-AGN-DRG-5022. For the remainder of Stage 1A (squares, parks and waterfront boulevard) we propose to use the Constitution Avenue suite. The details shown on drawing CttL-S1AW2-AGN-DRG-5040 require updating to reflect this. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA069		34	4.6.2.2	Corkhill Street – acknowledge the treatment of these significant entry points into West Basin, ie 12m wide to facilitate large service vehicles; keep lake vistas open, maximise landscape areas on verges	The supplementary works approval submission has adopted the Oxigen layout at the entry point and shows the road pavement which is subject to a later works approval as 12 wide. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA070		34	4.6.2.3	Albert Street – acknowledge the treatment of these significant entry points into West Basin, same as above with Corkhill St	The supplementary works approval submission has adopted the Oxigen layout at the entry point and shows the road pavement which is subject to a later works approval as 12 wide. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA071		37	4.7.2	Coordinate with NCA to ensure new sewer manhole is incorporated into Preliminary Sketch Plan for Commonwealth Avenue	This work does not form part of the supplementary works approval submission. It is noted that co-ordination will need to occur in the design development of this connection as part of a future works approval submission. The Commonwealth Ave Works Approval submission being prepared by Oxigen should allow for a worksite capable of a 10m deep excavation at the site of the sewer connection. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA072		37	4.7.2	Sewer – clarify in drawings the location and design of the sewer overflow structure and future attenuation tank.	Provision for a storage tank will not be made within point park. The location and size are not appropriate for this location. A pumped sewerage solution is most likely to be used. Storage provision for the West Basin development, if required using a pumped solution, will be provided elsewhere in the development, most likely this will be in a fill / reclamation area to minimise excavation. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA073		38	4.7.2	Coordinate with NCA TransACT network will be connected to existing TransACT cable within the median of Commonwealth Avenue – to note in PSP for Commonwealth Ave	All service providers will be co-ordinated with during the project. On site location of cables has commenced. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA074		42	4.8.2	Flooding -No hydraulic modelling has been carried out during concept design. Assessment of flood risk to the proposed works should be included	The 1:100 flood line has been shown on the hydraulic services plan. The impact of flooding under the Point Park scope of works is minimal. Detailed hydraulic modelling of the upstream catchment to Stage will to occur during design development for future Works Approval submissions. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA075		47	4.10.1	There is no discussion as to the design treatment and integration of Barrine Drive into RG Menzies Walk once it is closed. This needs to be addressed both in the report and the works approval drawings.	Oxigen has been commissioned by the NCA to provide a design report for the interface between RG Menzies Walk and Point Park, including the area beneath Commonwealth Avenue bridge and stairs. The layout of Point Park at the interface point will be adapted to incorporate the outcomes of the design study. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA076	Materials Palette	General		It is unclear how the Materials Palette is to be used as a number of the items are not shown in the drawings or are not cross referenced.	Revised materials palette forms part of Supplementary Works Approval submission for Point Park. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA077	Materials Palette			How is disabled access accommodated in the design? For example, use of tactile indicators and specified routes.	An accessibility report into for the works forming the supplementary Works Approval submission has been commissioned and included in the supplementary report. The drawings reflect the recommendations from the accessibility consultant. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA078	Materials Palette			General comment – there are suggestions of materials (benches, bubblers, bollards) which are referred to in the works approval drawings (sheet CttL-S1AW2-AGN-DRG-5040) which do not appear in the materials palette document. Please update.	Revised materials palette forms part of Supplementary Works Approval submission for Point Park. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA079	Materials Palette		4	Please explain philosophy behind choice of materials palette.	A materials palette with addresses the items with Point Park and the area forming this supplementary works approval is provided with this submission. This materials palette is cognisant of the Commonwealth Ave. materials palette and also of the overall palette for the West Basin development. The material palette has been chosen to provide a high quality and enduring set of materials that can be applied across the 55m extents to define travel paths, varying speeds, crossing/interchange spaces within a comprehensive set. • Concrete for its Canberra legacy – the quality of concrete achieved in Canberra's array of public buildings has been above that of other Australian cities. • Bluestone and similar for their civic values and tie-back to civic. Limestone and sandstone to link the surrounding geology. • Timber to soften and allow places to sit upon the other materials when Canberra is particularly hot or particularly cold. Each of these materials is arranged in a number of ways, particularly the concrete, with varying saw-cuts to dictate speed, density of use, frontage to structures and in particular warn pedestrians and cyclists of points of cross-over across the street and around the arc – particularly at the waterfront interfaces **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA080	Materials Palette		5	Drinking fountains are shown, however none are shown in the drawings/legend	The supplementary Works Approval drawings and supplementary report include changed tree species to address the comment raised. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA081	Materials Palette		7.1	General comment – Many of the trees which are being proposed are quite small with limited canopies. Given the exposure of the site, it would be preferable to have more trees incorporated with larger shade canopies to provide more site amenity. Some of the species being proposed – such as Eucalyptus pauciflora – do poorly in the Canberra climate and should be substituted with another species.	The supplementary Works Approval drawings and supplementary report include changed tree species to address the comment raised. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA082	Materials Pallete		5	Drinking fountains are shown, however none are shown in the drawings/legend	The revised Works Approval drawings and supplementary report include changed tree species to address the comment raised. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA083	Materials Palette		14.1	XP1 Boardwalk lighting is not the same as XP1 lighting shown in plans CCW-DRG-5050	Revised plans showing streetlight positions. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **Lighting is consistent with the previous constructed Works Approval for Phase 1.**	
WA084	Materials Palette		14.1	Bespoke benches – potentially hard to source and service as the project ages. Off the shelf products encouraged.	Benches and street furniture to be sourced from Street Furniture Australia and will be of the same style as the furniture used for Constitution Avenue **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **Benches are consistent with the previous constructed Works Approval for Phase 1.**	
WA085	Materials Palette		19.3	The perspective is without any labels, unlike the rest of the perspectives in the document. Update.	Revised drawings submitted **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA086	Materials Palette		22 & 23 / 3	Unclear as to where the seating typologies are located within Western Park, as there is no reference made to them in the plans. A number of types of bench/seat are shown but there is no legend as to which are located where. Why are there so many types? Simplify. AGN-DRG-5021 refers to BWB seats/benches but these are not shown in any drawings or legend.	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA087		CCW-DRG-5011	Legend Sheet	Yellow circles (trees) – not shown in legend Bollards shows circle and square – no reference to what these are. No drinking fountains shown. Unclear what seats/benches are proposed	The supplementary Works Approval drawings include a revised legend for the works forming Stage 1 – Point Park. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA088		CCW-DRG-5101-5109	Sheets 1 to 9	Trying to understand all the different material types in the drawing is confusing, as the symbols in the legend don't necessarily correspond with changes in material (esp in regards to walls and paving). Pavement finishes are not correct in legend or on drawings. Too many different pavement materials. The Cycle Path The cycleway is shown as a range of pavement types including P1, P1 (different colour and markings), P3, P11 all within a small section. Cobbles on the bike path may pose a safety issue to cyclists. The consultation as well as the NCA's own review has identified issues with the design of the cycle path. Issues include separation from cars and pedestrians, delineation of the path, design to minimise conflict, Key conflict points do not appear well addressed in the design for example the connection point of the Commonwealth Avenue path to the shared path (corners off alignment, light pole in space, pedestrian conflicts) Boardwalk The general arrangement drawings refer to BA and BB on the boardwalk. There is no reference to what this is. The architectural drawings have no materials referenced on them There are no civil drawings of the boardwalk or lake wall. Stormwater feature treatment – no information is provided on what this is.	The supplementary Works Approval drawings include a revised legend for the works forming Stage 1 – Point Park A revised materials palette is included with this supplementary submission. Several design options of the cycle path design and location were prepared and stakeholder consultation undertaken with parties including the NCA and Pedal Power. These issues were all considered. The three main options investigated were: • Option 1 – Dedicated off road cycleway adjacent to pedestrian footpath with parking to both the northern and southern verges of the waterfront boulevard • Option 2 – Dedicated cycleway adjacent to the waterfront boulevard with parking only to the northern verge of the waterfront boulevard • Option 3 – Combined on road cycle way with vehicles The initial outcome was that Option 1 was recommended by the LDA and taken forward. . Following the NCA Design Review Panel on 27 March 2015 and follow up meetings with NCA and LDA on 9 and 17 April 2015 – the NCA provide clear guidance that Option 2 was to be adopted. The NCA indicated that Option 1 would not be approved by the NCA. On road cyclists will be encouraged to utilse Albert St for access to reduce conflicts on the footpaths within Point Park. This will be achieved using structures at the Belvedere. Tactiles will be in place at key intersections to warn pedestrians. Furniture and light poles will be placed at the rear edge of the front 2.7m of the promenade to discourage cyclists from the slow movement area at the lake edge. Position of light poles has been reviewed. No stormwater treatment in the area covered by this supplementary submission. Furniture associated with this supplementary	

WA089		CCW-DRG-5101	Sheet 1 of 9	Would be helpful to indicate where the entry to the toilets is intended to be given it is adjacent to a wall. In landscape plans the toilet is located in the bioretention area/stormwater treatment area. Clarity needed as to the extent of paving material on the stepped area near the water notes both P1 and P12. Future play area what will be built there now? Connector paths have no lighting. W6A is shown as two different colours. Unclear why.	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA090		CCW-DRG-5101	Sheet 1 of 9	What is the WL Stormwater Feature Treatment?	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA091		CCW-DRG-5103	Sheet 3 or 9	What is the detail of the P18 and P19. What is the detail of the P14.	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA092		CCW-DRG-5103	Sheet 3 or 9	Clarity regarding treatment of where land overlaps with the lake edge western side	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **Interim phase land reclamation will be up to the lake edge.**	
WA093		CCW-DRG-5103	Sheet 3 or 9	Area in front of the pavilion is very busy with several different paving treatments between the road and paths. Unclear why the road needs to have two paving types within the main body of the road – simplify?	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA094		CCW-DRG-5104	Sheet 4 or 9	What is the detail of the P18 and P19. What is the detail of the P14.	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA095		CCW-DRG-5104	Sheet 4 or 9	Clarify paving treatment of paving treatment of pedestrian path along urban edge – labelled P1 and P8	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA096		CCW-DRG-5104	Sheet 4 or 9	Question the change of paving treatment within the main body of the boulevard – makes it unnecessarily busy	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA097		CCW-DRG-5105	Sheet 5 of 9	Odd outcrop of bluestone across from pavilion – function?	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA098		CCW-DRG-5105	Sheet 5 of 9	Clarify what SW1 is in the legend	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA099		CCW-DRG-5105	Sheet 5 of 9	Inconsistent paving around water feature – both bluestone and concrete. Simplify to one material.	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA100		CCW-DRG-5105	Sheet 5 of 9	What is the purpose of the block of different paving in front of the tree pits? Simplify.	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA101		CCW-DRG-5105	Sheet 5 of 9	Corkhill Street intersection unresolved, needs tightening up of the design and a strategy for the public realm.	The supplementary works approval submission has adopted the Oxigen layout at the entry point and shows the road pavement which is subject to a later works approval as 12 wide. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA102		CCW-DRG-5106	Sheet 6 of 9	Unclear how Barrine Drive will tie in to the boulevard?	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA103		CCW-DRG-5106	Sheet 6 of 9	Decomposed granite section some labelled P12, unlabelled section in a grey colour with decomposed granite hatching. What is this?	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA103		CCW-DRG-5107	Sheet 7 of 9	Albert Street entry to be 12m wide – drawings not reflecting this. Also question the presence of parking along this side street and use of asphalt. As a main entry to West Basin, paving material should be consistent with what's used along the boulevard.	The supplementary works approval submission has adopted the Oxigen layout at the entry point and shows the road pavement which is subject to a later works approval as 12m wide. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA104	Levels and Grading	CCW-DRG-5151	Sheet 1 of 9	Would be helpful to identify high points and low points of the site. Contours?	Grading plans form part of the Supplementary Works Approval submission for Point Park **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.** **This Supplementary Works Approval 2 submission includes site contours on the civil drawings**	
WA105	Levels and Grading	CCW-DRG-5157-59	Sheets 7-9	Drawings need updating to account for Commonwealth Ave works	Commonwealth Ave drawings included in supplementary submission **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA106	Landscaping Planting Plan	LLU-DRG		General comment – Many of the trees which are adjacent to the boardwalk, the play area in Western Park and the pavilions are small trees with limited tree canopies. Given the exposed nature of these areas, it would be good to incorporate taller shade trees to provide more pedestrian amenity.	The supplementary Works Approval drawings and supplementary report include changed tree species to address the comment raised. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA107	Architectural Plans	AGN-DRG-5021		Boardwalk pods different lights shown to those proposed	Street lighting revised and details in supplementary Works Approval report. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA108	Architectural Plans	AGN-DRG-5031 & 5033		These pavilions seem tall (8m) – is the scale appropriate and necessary to the nature of the waterfront? Many of the nearby trees will be substantially shorter than these buildings (ie Sapium sebiferum). There do not appear to be any kitchen/servery facilities in the Pavilions Types 1 and 2 but there are large seating areas like a café/restaurant.	The pavilions do not form part of this works approval submission and will be part of a future submission. This works approval submission shows temporary works in the location of the pavilion. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA109	Architectural Plans	AGN-DRG-5031-5039		There is no legend for these drawings; colours and materials, services drawings. There are no detailed drawings. How are the Pavilions including those on the boardwalk serviced? Where do trucks park?	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA110	Architectural plan furniture details	AGN-DRG-5040		The suite of furniture includes elements – ie bollard, bubbler, bike rack, bench – which is not listed in the materials palette document or shown on the drawings. Too many different styles of furniture? What are the details of the Tribune Balustrade? Not shown where this is used, not referenced in plans.	We understand the NCA may not have a copy of the PSP Final/Tender issue of the drawing set. An instruction from the LDA occurred subsequent to the lodgement of the Works Approval set where the Constitution Avenue furniture set was adopted for Stage 1A. The design team support this, we understand it is also supported by the NCA. The WA set can be updated to reflect the later PSP/Tender set, or we are most happy to forward the later updated issue for clarification. The tribune is part of the set – made of brass in likeness to the CAU set. Reference on the plans can be cross checked. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA111	Architectural plan furniture details	AGN-DRG-5040		Section 5 – Pavilion Type 2 Deck Extension – a width of 3.5m feels very narrow to accommodate tables and chairs for dining. Is there a way to extend to 5m?	This work does not form part of the supplementary works approval submission. The comment will be addressed as part of a future works approval submission. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA112	Architectural plan furniture details	AGN-DRG-5040		Unclear where the sections are related to. Does not match legend or plans.	Revised architectural drawings submitted for shade structure **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **Previous response is satisfactory and this submission is for Supplementary Works Approval 2.**	
WA113	Irrigation	LLU-DRG-6107/8/9		Limited irrigation provided to the G2 Grassland area, is this appropriate?	Irrigation will be provided appropriate to all grassing areas and plant types to maintain the high quality finish to the park. Detailed irrigation plans will be developed in detailed design. Provision of ring main indicated in supplementary drawings **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA114	Irrigation	LLU-DRG-6201		Why is the irrigation pump room not being constructed. Noted as future pump room. Where will the pump room be. Staging unclear. Where are the locations for the penetrations through the lake wall and in take holes in lake.	Controller and metering will be installed beneath the new stairs from Commonwealth Avenue **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA115	Civil Hydraulic and Drainage	DRG-5107	Sheet 7 of 9	Need to coordinate this drainage infrastructure with the Commonwealth Ave PSP	Separate package of works and scope **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The details of the stormwater discharges from the existing outlets are detailed in this submission.**	
WA116	Services Masterplans General Arrangement	UGA-DRG-5101-5052	All Sheets	Legend is provided after main drawings. Co-ordination of pit locations required. No detailed design provided for services. When to be provided? Details on geothermal pipes, location and details.	Site serving drawings specific to the scope of works for Point Park and the area forming the supplementary Works Approval submission are in included in the drawing set. No provision for geothermal pipes in this stage of works. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **Previous response is satisfactory and this submission is for Supplementary Works Approval 2.**	
WA117	Services Masterplans General Arrangement	UGA-DRG-5106	Sheet 6 of 10	Inconsistency of land use in triangle of land between future pavilion and boardwalk. Needs clarification. In Section M CCW-DRG-5308 adjacent the Pavilion, there is water between the existing lake wall and the boardwalk structure. In UGA-DRG-5106 there are trees and grass shown in this area.	This area is a temporary work area for this stage of works and will be in filled. It is intended that this will be a grassed area in the final design. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	

WA118	Services Masterplans General Arrangement	UGA-DRG-5106	Sheet 6 of 10	Servicing along Albert will need to be modified to reflect width of 12m rather than 6.6m	The supplementary works approval submission has adopted the Oxigen layout at the entry point and shows the road pavement which is subject to a later works approval as 12m wide. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	
WA119	Services Masterplans General Arrangement	UGA-DRG-5106	Sheet 6 of 10	Check placement of lights on Albert Street in relation to water main.	Servicing positions changed and Albert Street shown as 12m **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.**	

WA120	Services Masterplans General Arrangement	DRG-5109	Sheet 9 of 10	Confirm placement of sewer line in Commonwealth PSP	This work does not form part of the supplementary works approval submission. It is noted that co-ordination will need to occur in the design development of this connection as part of a future works approval submission. The Commonwealth Ave Works Approval submission being prepared by Oxigen should allow for a worksite capable of a 10m deep excavation at the site of the sewer connection. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **The scope of this submission is not applicable to this previous NCA comment.** **Service requirements for the Phase 2 land reclamation works are included on the Works Approval drawings. Service requirements will be detailed as part of the current Acton Waterfront Review.**	
WA121	Tree Management Plan	DRG-7103	Sheet 3 of 4	Consider tree removals along Commonwealth to coordinate with PSP?	Trees to be removed as part of this Stage 1 project are identified on the drawings. **SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:** **Previous response is satisfactory and this submission is for Supplementary Works Approval 2.**	

WA122	Other	WGA-DRG-0102	Water	Check location of water main in relation to Albert Street design. Different location to that shown in UGA-DRG-5106	Water main base updated to be consistent **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **Service requirements for the Phase 2 land reclamation works are included on the Works Approval drawings. Service requirements will be detailed as part of the current Acton Waterfront Review.**	
WA123	Other	LLU-DRG-0102		These drawings show completely different layout to Point Park (called Eastern Park) from the other drawings and the general arrangement plan.	All drawings reference Point Park. **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.**	
WA124	Other	SEGA-DRG-0102	Sewage	Check if there's update to the sewerage storage tank and impact on Commonwealth Ave	See response to WA072 **<u>SUPPLEMENTARY WORKS APPROVAL 2 RESPONSE:</u>** **The scope of this submission is not applicable to this previous NCA comment.** **Service requirements for the Phase 2 land reclamation works are included on the Works Approval drawings. Service requirements will be detailed as part of the current Acton Waterfront Review.**	

APPENDIX 3

2020 Tree Survey

SPACELAB

TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	1041
REGULATED TREE	NO
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	POOR
URBAN AMENITY ASSESSMENT	LOW

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	REMOVE
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Eucalyptus mannifera
Common Name	White brittle gum

LOCATION			
E: 210552.95		N: 603256.51	
Height (M)	6	Canopy (M)	4
Trunk Circum	500	No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	2
POTENTIAL TO IMPROVE AMENITY	2

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	2
Age	2
Tolerance to Disturbance	2
Risk Potential	2
Health / Condition	1

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	1
Potential Contribution to Future Landscape	1
Visual/ Scenic	1
Unique Species	1
Habitat Quality	2
Habitat Value	3
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

SPACELAB

TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	1053
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	MEDIUM
URBAN AMENITY ASSESSMENT	HIGH

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	RETAIN
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Eucalyptus mannifera
Common Name	White brittle gum

LOCATION			
E: 210457.26		N: 603251.06	
Height (M)	15	Canopy (M)	9
Trunk Circum	1300	No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	2
Risk Potential	3
Health / Condition	2

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	3
Potential Contribution to Future Landscape	2
Visual/ Scenic	2
Unique Species	1
Habitat Quality	2
Habitat Value	3
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

SPACELAB

TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	1054
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	MEDIUM
URBAN AMENITY ASSESSMENT	HIGH

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	RETAIN
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Eucalyptus mannifera
Common Name	White brittle gum

LOCATION			
E: 210456.3		N: 603255.43	
Height (M)	16	Canopy (M)	9
Trunk Circum	1300	No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	2
Risk Potential	3
Health / Condition	2

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	3
Potential Contribution to Future Landscape	2
Visual/ Scenic	2
Unique Species	1
Habitat Quality	2
Habitat Value	3
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

SPACELAB

TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	1111
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	POOR
URBAN AMENITY ASSESSMENT	LOW

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	REMOVE
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Pinus ponderosa
Common Name	Bull Pine

LOCATION			
E: 210472.54		N: 603231.11	
Height (M)	18	Canopy (M)	14
Trunk Circum	2100	No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Infected by Lophodermium sp.

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	2
Risk Potential	2
Health / Condition	1

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	1
Potential Contribution to Future Landscape	1
Visual/ Scenic	1
Unique Species	`2
Habitat Quality	1
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

SPACELAB

TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	1112
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	POOR
URBAN AMENITY ASSESSMENT	LOW

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	REMOVE
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Pinus ponderosa
Common Name	Bull Pine

LOCATION			
E: 210464.13		N: 603239.47	
Height (M)	16	Canopy (M)	14
Trunk Circum	2100	No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Infected by Lophodermium sp.

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	2
Risk Potential	2
Health / Condition	1

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	1
Potential Contribution to Future Landscape	1
Visual/ Scenic	1
Unique Species	`1
Habitat Quality	1
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

SPACELAB

TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	1140
REGULATED TREE	NO
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	POOR
URBAN AMENITY ASSESSMENT	LOW

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	REMOVE
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Betula pendula
Common Name	Silver Birch

LOCATION			
E: 210386.22		N: 603273.92	
Height (M)	9	Canopy (M)	6
Trunk Circum	850	No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	2
Age	3
Tolerance to Disturbance	3
Risk Potential	3
Health / Condition	1

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	1
Potential Contribution to Future Landscape	1
Visual/ Scenic	1
Unique Species	1
Habitat Quality	1
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

SPACELAB

TREE ASSESSMENT

SUMMARY

TREE NUMBER/GROUP	1141
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT

ARBORCULTURAL ASSESSMENT	POOR
URBAN AMENITY ASSESSMENT	MEDIUM

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	REMOVE
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA

Assessment Date	17th March 2020
Species	Salix babylonica
Common Name	Weeping Willow

LOCATION

E: 210373.97		N: 603273.19	
Height (M)	16	Canopy (M)	14
Trunk Circum	2800	No of Trunks	1

TREE MANAGEMENT

POTENTIAL TO REDUCE RISK	3
POTENTIAL TO IMPROVE AMENITY	3

NOTES

Rot at 2m and 4m with bees

ARBORICULTURAL CHARACTERISTICS

	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	1
Epicormic Growth	3
Mistletoe	3
Form	4
Age	1
Tolerance to Disturbance	3
Risk Potential	1
Health / Condition	1

URBAN AMENITY CHARACTERISTICS

	RATING
Contribution to Existing Landscape	1
Potential Contribution to Future Landscape	1
Visual/ Scenic	1
Unique Species	1
Habitat Quality	1
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

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TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	1768
REGULATED TREE	NO
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	POOR
URBAN AMENITY ASSESSMENT	LOW

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	REMOVE
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Casuarina cunninghamiana
Common Name	River Sheoak

LOCATION			
E: 210529.43		N: 603305.89	
Height (M)	10	Canopy (M)	9
Trunk Circum	1100	No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	2
POTENTIAL TO IMPROVE AMENITY	2

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	2
Age	2
Tolerance to Disturbance	2
Risk Potential	2
Health / Condition	1

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	1
Potential Contribution to Future Landscape	1
Visual/ Scenic	1
Unique Species	1
Habitat Quality	2
Habitat Value	3
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	

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TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	G06
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	MEDIUM
URBAN AMENITY ASSESSMENT	MEDIUM

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	RETAIN
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Salix sp.
Common Name	Willow

LOCATION			
E: 210303.581		N: 603292.055	
Height (M)		Canopy (M)	
Trunk Circum		No of Trunks	7

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Weed species

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	3
Risk Potential	2
Health / Condition	2

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	3
Potential Contribution to Future Landscape	3
Visual/ Scenic	3
Unique Species	1
Habitat Quality	1
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	1

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TREE ASSESSMENT

SUMMARY

TREE NUMBER/GROUP	G08
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT

ARBORCULTURAL ASSESSMENT	MEDIUM
URBAN AMENITY ASSESSMENT	MEDIUM

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	RETAIN
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA

Assessment Date	17th March 2020
Species	Populus nigra 'Italica'
Common Name	Lombardy poplar

LOCATION

E: 210413.756		N: 603280.577	
Height (M)		Canopy (M)	
Trunk Circum		No of Trunks	1

TREE MANAGEMENT

POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS

	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	3
Risk Potential	2
Health / Condition	2

URBAN AMENITY CHARACTERISTICS

	RATING
Contribution to Existing Landscape	3
Potential Contribution to Future Landscape	3
Visual/ Scenic	3
Unique Species	1
Habitat Quality	2
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	1

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TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	G18
REGULATED TREE	NO
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	MEDIUM
URBAN AMENITY ASSESSMENT	MEDIUM

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	RETAIN
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	Prunus cerasifera
Common Name	Cherry Plum

LOCATION			
E: 210476.143		N: 603215.383	
Height (M)		Canopy (M)	
Trunk Circum		No of Trunks	MULTIPLE

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	3
Risk Potential	3
Health / Condition	2

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	2
Potential Contribution to Future Landscape	2
Visual/ Scenic	2
Unique Species	1
Habitat Quality	1
Habitat Value	1
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	1

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TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	G19
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	MEDIUM
URBAN AMENITY ASSESSMENT	HIGH

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	RETAIN
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	C. cunninghamiana/P. nigra
Common Name	River Sheoak

LOCATION			
E: 210515.752		N: 603163.563	
Height (M)		Canopy (M)	
Trunk Circum		No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Nothing to note

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	2
Risk Potential	3
Health / Condition	2

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	3
Potential Contribution to Future Landscape	3
Visual/ Scenic	3
Unique Species	1
Habitat Quality	2
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	2

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TREE ASSESSMENT

SUMMARY	
TREE NUMBER/GROUP	G20
REGULATED TREE	YES
REGISTERED TREE	NO

TREE ASSESSMENT	
ARBORCULTURAL ASSESSMENT	POOR
URBAN AMENITY ASSESSMENT	MEDIUM

RECOMMENDATION	NAME	RETAIN AND MANAGE / REMOVE
Arborist	ST, JL	REMOVE
Landscape Architect	**SPACE**LAB	

GENERAL TREE DATA	
Assessment Date	17th March 2020
Species	S.babylonica/F.oxycarpa
Common Name	Weeping Willow

LOCATION			
E: 210523.19		N: 603046.929	
Height (M)		Canopy (M)	
Trunk Circum		No of Trunks	1

TREE MANAGEMENT	
POTENTIAL TO REDUCE RISK	1
POTENTIAL TO IMPROVE AMENITY	1

NOTES

Very near water edge

ARBORICULTURAL CHARACTERISTICS	RATING
Canopy Density	2
Canopy Dead Wood	2
Insect Attack	3
Disease	3
Epicormic Growth	3
Mistletoe	3
Form	4
Age	2
Tolerance to Disturbance	3
Risk Potential	2
Health / Condition	1

URBAN AMENITY CHARACTERISTICS	RATING
Contribution to Existing Landscape	1
Potential Contribution to Future Landscape	1
Visual/ Scenic	1
Unique Species	1
Habitat Quality	2
Habitat Value	2
Cultural Value	1
Social Value	1
Scientific Value	1
Remnant Species	1
Landscape Tree Group	2

APPENDIX 4

Geotechnical Advice

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Memorandum 2

To	Indesco Consulting Engineers	John Randall	john.randall@indesco.com.au
cc			
From	Michael Jones	**Date**	3/7/2018
Subject	Comment on Additional Land Reclamation Methods West Basin Development-Stage 2, Acton	**Project No.**	77417.10

1. Introduction

As requested, comment is provided below in regards to two (2) additional potential methods that may be used to reclaim a portion of Lake Burley Griffin as part of the West Basin Development in Acton. It is understood that this memorandum report is to assist the detailed design for the completion of approximately 500 metres boardwalk works extending from the recently completed boardwalk at Point Park and the associated land reclamation works between the lake edge and the boardwalk.

2. Natural Site Constraints

Two main geotechnical related natural site constraints have been identified at the site which include but are not limited to the following:

- The depth of the lake (i.e. water depth) is assumed to be up to 5.5 metres along the future boardwalk alignment;
- Subterranean water flows will likely be present across this site, both from the existing land form and from within the lake.

An additional constraint is likely which is related to consolidation of sediment and any water softened material over the lake floor. The degree of this constraint however can only be assessed following completion of field investigations which are likely to commence in the coming 5 – 6 weeks.

3. Development Imposed Constraints

Through the initial design phases of the project, a number of development imposed constraints have been identified which include but are not limited to the following:

- Placement and interaction of the fill with driven CHS piles at the board walk;
- Angle of repose of the fill material;
- Wave action at the lake edge;
- The ability of the fill material to support construction equipment including crawler cranes and trucks delivering the fill material,
- Wash out and internal erosion of the fill materials;

- The ability to drive sheet piles and/or drill piers through the placed material; and
- Settlement properties of the fill.

4. Reclamation Methods

Two additional fill methodologies for the land reclamation have been reviewed, including:

- Graded small crushed rock fill; and
- Gravel fill.

It is noted that the use of a sand type material has been explored however; the availability of suitable sand with the region has been extremely limited and has not been considered any further.

3.1 Graded Small Crushed Rock Fill.

This method involves the placement of a quarried durable rock which has been crushed to a particle size range of 5 – 75 mm with minimal fines. The fill would be required to be relatively uniformly graded to assist with stability once placed. The fill procedure would be a “wet fill” from the existing lake edge out towards the boardwalk. An armouring layer at the lake edge would be required comprising the same type of rock however in the particle size range of 200 - 700 mm. An intermediate filter layer to minimise wash out may be required between the armouring layer and general reclamation fill however this would be dependent on the grading distribution of both materials.

It is expected that the board walk will be supported on driven piles. It may be possible to utilise land based installation methods for the board walk pending advice from piling contractors and a stability analysis of the cross section profile, loading locations and extent of loads. Figure 1 shows a possible scenario of the geometry of the edge of the general reclamation material and the board walk piles.

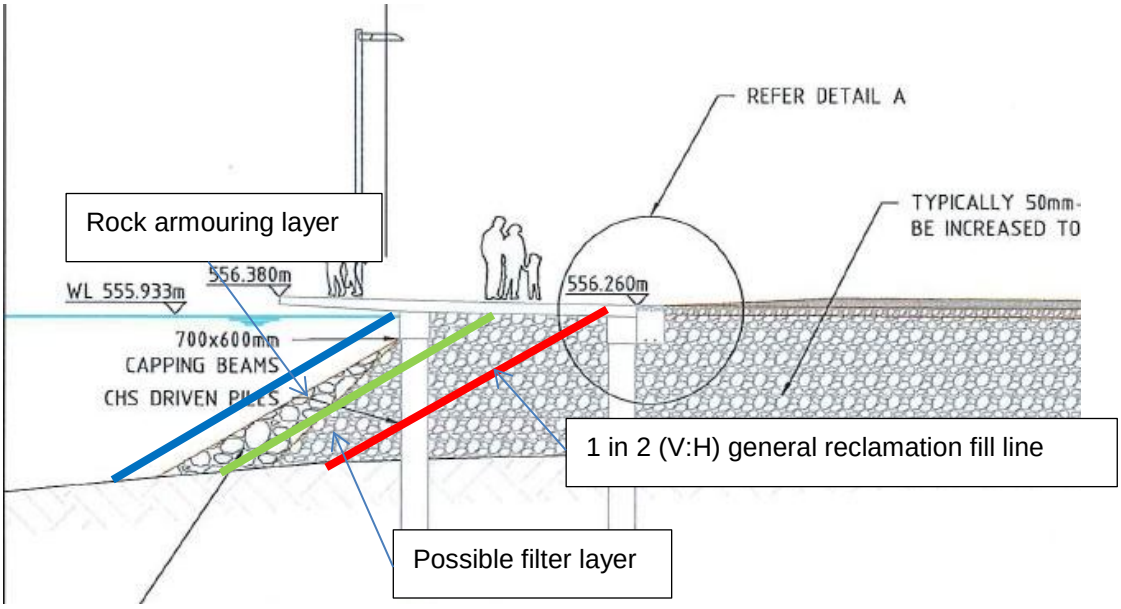

Figure 1: Possible Board Walk/Graded Small Crushed Rock Geometry

Advantages of this method include:

- The material is inert and stable in water;
- Allows for relatively straightforward/low risk construction;
- Semi-predictable angle of repose, say at 1:1.5 to 1:2 (vertical :horizontal);
- Expected to be able to drill selected piers through the placed material and pending advice from piling contractors, likely to be able to drive piles including sheet piles through it although a trial is recommended to confirm this advice as discussed below;
- Able to be placed directly over the soft sediments (pending depths) in the lake bed, which it would semi-penetrate during construction.

Disadvantages of this method include:

- Greater settlement than other methodologies. Settlements in the order of 150 – 250 mm could be possible;
- Difficulty in trenching and subsequent backfilling for services alignments in rock fill as trenches less stable;
- Possible need for flexible pipe connections to cater for the settling filling;
- Potential damage to pipes from rock, requiring gravel backfilling;
- Due to its high permeability, any excavations below lake level will most likely encounter groundwater. Spear point wells to manage groundwater inflow during excavation works are unlikely to be effective and consideration should be given to a cutoff wall (eg driven sheet piles or a secant wall) installed through the filling into the natural ground to manage groundwater inflow.

3.2 Gravel Fill

This method is similar to the small crushed rock however the rock particles are limited to a gravel of 5 – 7 mm. Armouring and possible filter inclusion would also be as per the small crushed rock. Whilst the smaller particle size would be an advantage to enable easier piling through it, a number of potential stability issues were identified resulting from the near-single size particle distribution. These potential issues include the potential for non-tracked plant and equipment to topple as a result of the gravel shifting under load due to no confinement at the surface and the uncertainty of the internal stability of such a large volume of gravel without confinement. Due to these stability concerns, it is suggested that gravel fill not be utilised.

4. Comments

On the basis that the rock fill is to be non-load bearing and required to simply reclaim the former lake behind the boardwalk in the form of a working platform, with the exception of the light weight structures next to the boardwalk, the following comments/specification for the rock fill are provided:

- All filling to at least 500 mm above the maximum lake level is recommended to be done using the small crushed rock which is durable in a submerged environment and free from chemical leachate issues;

- Over filling allows for consolidation/settlement drop of the foundation and filling materials;
- The size of the rock used for the bulk filling is likely to mostly range from 5 – 75 mm;
- A trial at one of the potential quarry using 5 to 75 mm sized rock is suggested to determine if that size is suitable for stability purposes and to enable sheet piling driving tests;
- At the exposed edge of the rock fill which faces the lake, an armouring layer should be provided using a general rock size of 200 – 700 mm for wave action protection;
- Additional analysis will be required to determine if an intermediate filter layer is required between the bulk reclamation material and the armouring layer to prevent wash out from wave action;
- The rock fill will be required to be placed by end dumping then spread by dozer with the final surface advised to subject to compaction by means of impact rolling to expedite settlement of rock fill. It must be noted that impact rolling will not expedite consolidation of the lake sediment/foundation. In this regard, standard density testing cannot be completed in such material and therefore a method specification is suggested to monitor appropriate compaction;
- A geotextile layer or filter layer (minimum 200 mm thick) of well graded fine to coarse gravel is recommended to be installed and/or placed and compacted to act as a filter for any future soil type filling. This would be required to be done immediately prior to placement/compaction of the filling soil filling and may not be required at this stage;
- The particle size distributions of the above rock fill materials are given as a guide and can be subject to review pending availability of materials of certain size ranges at the time of construction;
- The installation of settlement monitoring points (estimate 12 in total) would be required to measure and monitor over time the rate of settlement;
- Following stabilisation of the settlement, the area would need to be regraded or topped up to the required level potentially with a DGS20 type gravel or overburden gravel;
- At locations of known proposed service trenches, provision must be made to allow for excavating a battered trench, with backfilling undertaken most likely with gravel aggregate to take into consideration the likely presence of water and potential damage of rock fill to the pipes.
- Where the reclamation is required to meet existing land, some form of keying will be required with the extent varying depending that locations position relative to the lake. Areas that are above lake level and not prone to water inundation may require an over-excavation depth of about 300 mm extending for 3 – 5 m into existing land (pending if uncontrolled filling is present). Areas that are close to the lake level will most likely require a greater depth of keying, probably in the order of 0.5 – 1.0 m, though this cannot be determined until the time of construction.

Whichever system or combination of systems is chosen, site levels will be critical in reducing the severity of some of the potential issues. The higher the design surface levels are (including the base level of any basement), the less some of the potential issues are likely to be. For example: if the basement level is limited to be say 300 mm above lake level, it would be expected that bulk excavation is unlikely to encounter free ground water.

Similarly, if the finished ground surface is say 1 – 2 m above lake level and clayey or select material is used above for reclamation or above the rock fill, then trench excavations are likely to be relatively conventional.

The above advice is provided with no knowledge of the future structures or services including design levels and recommended to be only used for preliminary planning purposes. All future development must be subject to development/site specific geotechnical advice following receipt of detailed preliminary design plans.

This memorandum must be read in conjunction with the notes "About this Report" which are attached.

We trust the above is in accordance with your present requirements. Should you have any questions please contact the undersigned.

Douglas Partners Pty Ltd

Michael Jones
Principal

Reviewed by:

for **Scott McFarlane**
Principal

Attachments: Limitations
About this Report

Douglas Partners
Geotechnics / Environment / Groundwater

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Limitations

Douglas Partners (DP) has prepared this report for this project at the West Basin Development Stage 2. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Indesco Consulting Engineers Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The comments provided in the report are based on limited knowledge of the surrounding subsurface conditions and must be considered preliminary until the completion of development specific geotechnical investigations.

DP's advice is based upon the conditions encountered during previous investigations. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the previous site(s) between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in the Comments section of this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the geotechnical components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

About this Report

Douglas Partners

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

APPENDIX 5

Accessibility Report

20190402 West Basin Phase 2 Access Review tender

2nd April 2019

Indesco
Level 1 Equinox 4
DEAKIN, ACT, 2600

Attention: Viet Le
Viet.le@indesco.com.au

Dear Viet,

Project: **City to the Lake – West Basin Phase - Boardwalk**
Location: **West Basin ACTON**

Subject: **Report on Access review of Tender Documentation –**

The following report provides an assessment of the provision of access for people with disabilities to the proposed Boardwalk extension and associated works as documented in the West Basin Phase 2 Tender documentation.

Background

The Project is part of the City to the Lake regeneration project. The subject site for this project is the West Basin Precinct between Commonwealth Avenue and the Ferry Terminal. The regeneration of the public areas is proposed to be developed in a design involving roadways, parking and a pedestrian promenade along the lake. Part of the redevelopment will include reclamation of part of the lake and construction of a Boardwalk along the new eastern shore of the lake. SQC Architecture were engaged by Indesco during the design phase for the first stage of the Boardwalk to establish a design approach to provide a safe and equitable visitor experience to the Boardwalk and adjacent Henry Rolland Park development, for people with a mobility or visual disability. Our engagement also includes preparation of this Access review report of the Tender documentation.

The study area for the Works Package 2 is the northern end of the Boardwalk which extends from the north end of Henry Rolland Park to the north end of West Basin, beyond the Ferry Terminal site. The Site Plan is shown on Figure 1 in Appendix A – General Arrangement and Chainage Plan drawing 007. The study site excludes the adjacent Boardwalk and Henry Rolland Park which have now been constructed.

The study also excluded provision of designated accessible parking spaces (DAPS), as there is no works to the adjacent carparking included in the scope. We have assumed that as part of the redevelopment of this part of West basin, the responsible authority will provide DAPS in the existing large public carpark which is adjacent to the study site. These spaces should be located close to the pathway which leads from there to the Boardwalk.

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www.sqca.com.au

Approach - Precedents

At present there is no singular standard covering access for people with disabilities to parks and public urban space. Our approach has been to draw together best practice from the range of standards which do address aspects related to provision of access. Provision of access to the urban environment must consider a broad range of disabilities, not all of which are met by providing access for a person using a wheelchair. These may include, hearing, vision, limitations on ambulant mobility and balance.

The overarching principle in assessing the design for the Boardwalk Works Package 2 is that it must meet the requirements of the Disability Discrimination Act 1992 (DDA) and is an environment which provides dignified and accessible access to a person with a disability. This applies not only to issues such as parking and access paths but also to fixtures and amenities. This can generally be met in the physical design by complying with the relevant parts of the applicable Australian Standards.

The most applicable Australian Standards for the design of the Boardwalk are the AS1428 series Access for People with disabilities. Specifically:

- AS1428.1 – General requirements for Access – New Building Works
- AS1428.2 - Enhanced and Additional requirements – Buildings and facilities
- AS1428.4.1 – Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment

The following issues (which are addressed in the above Standards), need to be considered in assessing the Accessibility of the Boardwalk in the study area, and have been the basis or our advice to and assessment of the project;

- Provision of a Continuous Accessible Path of travel;
- Pathway design;
- Tactile Ground Surface Indicators;
- Toilets;

Other issues which need to be considered, yet are not addressed in the Standards include:

- Signage;
- Landscape Design;

Design Proposal

The design for the Boardwalk in West Basin Phase 2 works is illustrated in the following drawings prepared by Indesco, which were reviewed in preparing the report.

-	General Arrangement & Chainage Plan	007	rev D
-	Construction Details Plan Sheet 1 of 2	010	rev D
-	Construction Details Plan Sheet 2 of 2	011	rev D
-	Typical Cross Section sheet 1 of 2	020	rev C
-	Typical Cross Section sheet 2 of 2	021	rev C
-	Connection Details	025	rev A
-	Boardwalk Cross Section Drawings	042 – 058	rev C
-	Grading Plan	060	rev D
-	Intersection Details Key Plan	070	rev D
-	Path 3 Details Sheet 1 of 2	082	Rev C
-	Path 3 Details Sheet 2 of 2	083	Rev C
-	Boardwalk Panel Detail with Street Furniture	402	rev D

Materials and finishes on the Boardwalk are exactly as per stage 1 of the Boardwalk.

The Boardwalk is designed to flank the east shore of the West Basin. Dryland Grass will extend from the Boardwalk to the adjacent roadways and carpark. Five drainage swales cut across the grassland and under the boardwalk before discharging into the lake. A paved

pathway will lead from the Boardwalk in the northern half and link to the carpark and wider pedestrian network connecting to the City Centre.

The grade of the Boardwalk along its length is designed to be between 1.0% to 1.5%, including crossfalls. This will provide a compliant grade path with less than 1:40 crossfall.

Assessment of the Design

Provision of a Continuous Accessible Path of travel;
The Boardwalk and the branch paths leading to the carpark are deemed to be the Continuous Accessible Path of Travel (CAPT). Both pathways are of a grade compliant with AS1428.1 and provide safe access.

Parking;
Designated Accessible Parking spaces will need to be provided in the adjacent Car Park separately by the relevant authority.

Pathway design;
The proposed finishes to the Boardwalk and pathways will provide the firm, even, non slip pavement surfaces required by AS1428.1

Tactile Ground Surface Indicators;
There are no locations where additional TGSI are required to be installed. The paving in the Boardwalk includes a contrast tactile band which is intended to perform the function of a hazard warning should a person with vision impairment deviate off the main line of the pathway toward the lake.

Pedestrian / vehicle conflict points;
There are no conflict points in this stage of the works.

Toilets;
There are no toilets provided in the scope of works. National Capital Authority must ensure that a compliant accessible toilet is provided near the promenade as the existing toilet building is being demolished as part of these works and will leave the whole of West Basin and the Henry Rolland Park recreation areas without any toilet facilities. Given that recreational facilities are provided in the adjacent Park, which encourage people to spend some time here, the lack of toilets is a concern for people with disabilities as their journey to a facility is often slower and not as easily managed.

Signage;
There is little need for signage in the design and none indicated, however we understand there may be some directional signage guiding to adjacent attractions. The signage will be to NCAs template for the lake foreshore and we recommend that this signage be accessible (including Braille and Tactile).

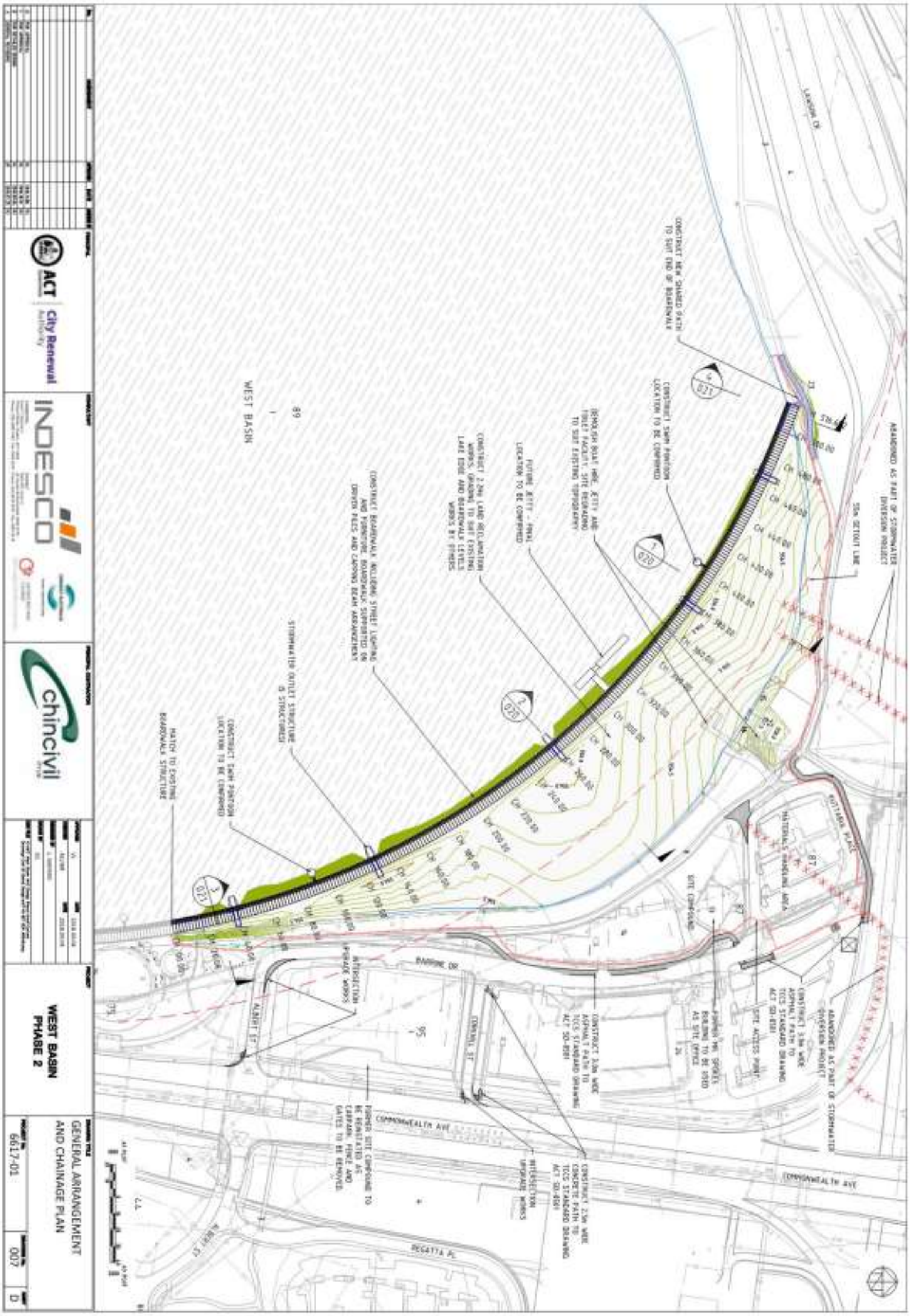
Utility Installations and furniture BBQs
The only installation along the Promenade are bench seats. These are provided along the Boardwalk at regular intervals and will include an arm rest on one end. The seats or of an accessible design

Conclusion
We are of the opinion that the proposed design for the West Basin Phase 2 Boardwalk Works meets the intent of the applicable Australian Standards to the degree necessary for this type of amenity and without constraining the enjoyment and movement through the space of all users. The design as proposed in the reviewed drawings, will provide a high level of access for people with a broad range of disabilities.

Yours faithfully,

Nicholas Goodwin RAIA
Director // Accredited Access Consultant
ACAA Member No341

APPENDIX – SITE PLAN


WEST BASIN
CONSTRUCT NEW SHARED PATH TO SUIT END OF BOARDWALK
CONSTRUCT SWIM PONTOON LOCATION TO BE CONFIRMED
FUTURE JETTY - FINAL LOCATION TO BE CONFIRMED
STORMWATER OUTLET STRUCTURE (S STRUCTURES)
MATCH TO EXISTING BOARDWALK STRUCTURE
ABANDONED AS PART OF STORMWATER DIVERSION PROJECT
SITE COMPOUND
COMMONWEALTH AVE
BARRINE DR
ALBERT ST
REGATTA PL
ACT
City Renewal Authority
INDESCO
chincivil
WEST BASIN PHASE 2
GENERAL ARRANGEMENT AND CHAINAGE PLAN
6617-01
007
D

APPENDIX 6

Design Safety Report

WEST BASIN STAGE 2

BOARDWALK AND LAND RECLAMATION

DESIGN SAFETY REPORT

PROJECT NO: 6617

Version 1

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Prepared By: Viet Le Date: 13 June 2019

Approved: Date:

Quality Manager

Base Template:	Version A May 2014

External Issue

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Version 1			

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Document	**Outline of Amendments**	**Amended By**	**Date Amended**

Internal Circulation

Circulation To:	**Initial**
Viet Le	
Darren Benson	
Andrew Crompton	

These forms comprise the Design Safety Report for the above project pursuant to Chapter 6 Part 6.2 Clause 295 of the WHS Regulations 2011.

This Design Safety Report has been prepared by Indesco Pty Limited for the nominated project. The report is provided for the exclusive use of the client for the nominated project only and for the purpose(s) described in the report. It should not be used for other projects or by a third party without the prior approval of Indesco Pty Limited.

1. INTRODUCTION

The purpose of the report is to record the process of risk management providing reasonably practical guidance on measures which need to be taken to prevent fatal injury or death to public and persons engaged in construction, maintenance, refurbish, and finally demolishment.

The structure of the report is organised in four main sections

- Safety in Design;
- Project Specific Details;
- Hazard Identification; and,
- Risk identification and Risk Assessment.

This document shall be read and used in conjunction with the enclosed appendices.

2. SAFETY IN DESIGN

Safe design is a process of hazard identification and risk assessment to eliminate or minimize risk of death or injury throughout the life of the product being designed. Indesco undertakes designs that aim to eliminate/minimize work health and safety hazards and minimizes the risks to those involved in the construction of the designs and to those who will eventually use, maintain, refurbish or eventually demolish it.

This report provides information related to hazards identified during the design stage to persons involved in the construction or modification of structures resulting from the project design.

The report documents hazards identified during the design (Attachment A) and notes those that have been resolved and those that remain for action by others during the construction phase along with typical control measures for consideration.

Where appropriate the report includes an assessment of the specific risks associated with certain aspects of the design and proposes specific controls to mitigate these safety risks.

In preparing this report we note that safe design is an integrated part of achieving a broader set of design objectives, including practicability, constructability, aesthetics, cost and the functionality of the works.

Safe design is the process of successfully achieving a balance of these sometimes competing objectives, without compromising the health and safety of those potentially affected by the assets resulting from the works.

2.1 KEY STAKEHOLDERS

The safe design function is influenced by a range of stakeholders at varying stages of the design process, as well as during the lifecycle of the structure.

In the context of this Design Safety Report the key stakeholders that influence and inform the safe design process include:

- Indesco and other design professionals acting as sub-consultants;
- Others who make design decisions or decisions that influence design outcomes, such as the developer, regulators and asset owners;
- Contractors and suppliers involved in the construction of the designed works; and
- Government agencies and regulators.

Each of these stakeholders will have varying legal obligations and duties in relation to safety in design depending on their level of influence over the design outcome of the works, the particular phase in the life-cycle of the structures and how they are constructed.

It is important that all stakeholders involved in the project adopt a collaborative risk management approach and we note that whilst this report contributes to this approach it cannot be relied on as the sole source of information in relation to hazards arising from this project.

This is particularly important throughout the construction phase where the effectiveness of the safe design process will rely on a shared understanding of the hazards and risks involved in delivering the project and a systematic and proactive approach to managing these.

The principal contractor has duties to ensure the works is planned and managed in a way that eliminates or minimises health and safety risks so far as is reasonably practicable.

A key assumption during the development of this report is that the principal contractor awarded the project and their various sub-contractors and suppliers are following the design plans, specifications and contractual requirements and are also able to meet their respective obligations under the relevant State/Territory WHS Act.

2.2 CONSTRUCTION PHASE

In addition to those safety requirements arising from the contract documentation to ensure safe construction of the works under the contract, there is also a need for ongoing monitoring and evaluation of the hazards and risk controls communicated within this safety report.

The Superintendent for the construction phase will incorporate the identified hazards/risks documented in this report into the Construction Project Quality Plan (PQP) along with other risk categories for the purpose of ongoing monitoring and reporting during the construction phase.

2.3 DESIGN CHANGES

It is not uncommon following the completion of the design or during the construction phase for people involved with the procurement or construction and supply (where they are not the original designers) to experience or identify new hazards and risks encountered that were not previously known to the designers.

Such new information including any design modifications to control the risks should be documented and communicated back to the designers. Where engaged in a construction phase services role Indesco will update the Hazard Register to capture any design changes.

Proposals for design changes arising during the construction phase that may affect the health and safety of those who work on or use the structure must be referred back to the original or subsequent designer with safety being a key criteria in determining whether an alternative is adopted or not.

A person conducting a business or undertaking who alters or modifies a design without consulting the original or subsequent designer will assume the duties of a designer.

3. PROJECT DETAILS

3.1 PROJECT BACKGROUND

The works defined in this design submission form part of the overall proposed redevelopment of West Basin.

The redevelopment of West Basin is part of the ACT Government's *City to the Lake* initiative. Under this initiative the West Basin project will create an active waterfront public realm supported by mixed uses, a range of open spaces and parks and residential developments.

A masterplan has been prepared for the implementation of West Basin. Due to the scale of the whole development a staged rollout has been proposed. Point Park, the first stage of the West Basin Project has been recently completed. This project, West Basin Phase 2, is the next phase of the work. It comprises of the completion of the boardwalk connecting that constructed in the above Point Park project to the western shoreline of the West Basin Precinct and the land reclamation behind the Boardwalk. These components are initiated to prepare the area for the future subdivisional of the land and infrastructure to support the proposed development.

West Basin Phase 2 includes the following components:

- Completion of West Basin Boardwalk
- Land reclamation behind the Boardwalk
- Demolition work of existing structure
- Services relocations.
- Lighting and installation of furniture

A Works Approval Application has already been lodged with the NCA for this phase and approval is pending awaiting the confirmation of the land custodial matters.

This specific submission relates only to the design and construction of the above works described as West Basin Phase 2 – Boardwalk and Land Reclamation.

3.2 OBJECTIVE OF WORKS

The objective of the works is to construct an 8.1m wide 517m long stretch of the lakeside boardwalk and reclaim the land behind it. The boardwalk is to be constructed from pre-cast concrete elements, which in its ultimate configuration, is proposed to extend and complete around the new perimeter of West Basin as part of the overall West Basin Redevelopment. The land reclamation is to be undertaken using “wet-fill” technique which has been considered as the most cost effective construction method.

3.3 DESCRIPTION OF THE WORKS

West Basin Phase 2 is located on the eastern edge of Lake Burley Griffin. The area is generally bounded by the following:

- Commonwealth Avenue to the east;
- Albert Street to the north; and
- The existing lake edge along West Basin to the south / west.

The works associated with the implementation of West Basin Phase 2 generally include the following:

- Site clearing and tree removal;
- Site establishment including pollution protection measures;
- Construction of a boardwalk, retaining walls and seating walls;
- Stormwater, irrigation and water works;
- Lighting;
- Services relocation; and
- Temporary cyclepath diversion.

4. PARTIES TO PROJECT

4.1 KEY STAKEHOLDERS

The following key parties are involved in the project:

Responsibility	Agent
Client:	LDA
Client Project Manager:	Peter Rea
Main Contractor:	Chincivil
Contractor Project Manager:	Andy Crompton
Lead Consultant:	Indesco
Consultant Project Managers:	John Randall & Viet Le

4.2 DESIGN TEAM

The following consultants have participated in the detailed design of the works:

Responsibility	Scope
Civil Engineering & Infrastructure:	Indesco
Structural Design:	Indesco
Landscape Design:	Indesco
Electrical & lighting design	JRA
Geotechnical:	Douglas Partners
Environmental	Environment and Heritage Partners (EHP)

5. HAZARD IDENTIFICATION

The following hazards have been identified during the design process. Hazard controls, procedures to manage or monitor on-going hazards, and who is responsible for the management of these controls are detailed in Attachment A.

This is a living document and hazard identification and control is to be adapted as needed.

- Existing services;
    - Disruption to services
- Demolition of structures
    - Personnel not appropriately trained or insufficient supervision of apprentices
    - Undefined boundaries between operational machinery and required personnel
- Traffic
    - Pedestrian or motorist injury from inadequate monitoring of TTM;
- Working over water
    - Drowning risk to personnel;
    - Collapse due to poor ground stability at lake edge;

5.1 EXISTING SERVICES

Underground and overhead services were considered during the design phase and have been identified on the drawings. In additional to the typical hazards presented to construction workers by these services, the age of the infrastructure suggests that there is a risk of asbestos piping in conduits and pits. This risk should be reflected in the contractors WHSMPs.

5.2 DEMOLITION OF STRUCTURES

Minor elements of existing roads, paths, services and structures are to be demolished and removed. A demolition plan will be provided by the Contractor and this will be reviewed to assess risk areas have been properly covered. This will include, but not be confined to:

- Ensure the plan defines zones of operation for people and equipment.
- That the personnel involved in each activity have the appropriate training.
- An appropriate procedure for demolishing each of the structures is being implemented.

5.3 TRAFFIC

From a design perspective Indesco have undertaken a specific assessment of risk for the traffic hazards and prepared a site specific TTM in response to the risks identified.

5.3.1 Key Traffic Management Issues

The traffic management addresses the following key issues:

- Separation of construction traffic from road traffic;
- Management of construction traffic movements along dedicated paths;
- Management of public road traffic adjacent to work site;
- Separation of pedestrian and cyclist traffic from construction zone;
- Minimization of traffic conflicts.

5.3.2 Hierarchy of Controls

The traffic management response considers the following hierarchy of controls.

Elimination	Close the road for the duration of the project including cyclepath diversion
Substitution	Require works to be programmed when there is no risk or significantly less risk present
Isolation	Use of approved temporary safety barriers to isolate workers from road activities
Engineering Controls	e.g. Signage/speed limits – typical TTM's
Administrative controls	Safe work practices put in place including training, supervision etc
PPE	Typical control

5.3.3 Elimination/Substitution

Elimination was considered to be achieved by closing the road for the duration of the project. However, after evaluation, substitution was assessed as an appropriate risk response. This will be affected by programming the works to commence outside period of significant event in the adjacent Commonwealth Park such as Florida.

5.3.4 Other Controls

The adopted TTM adopts a range of other controls from Isolation through to PPE.

Isolation of the work zone from pedestrians and cyclists is achieved by providing diversion routes. Fencing has been defined with the typical range of engineering/administrative and PPE controls to further reduce the risk of accidents.

Chincivil (as main contractor) will ensure the TTM is in place and monitored daily to ensure the plan is effective.

- Ensure the plan defines zones of operation for people and equipment.
- That the personnel involved in each activity have the appropriate training.

6. RISK MANAGEMENT PROCESS

The project specific Risk Assessment identifies and addresses risks specifically related to the demolition work, piling, installation of precast element and filling. Also included in Attachment B is a project specific Risk Assessment specifically pertaining to the Traffic Management aspects of the project.

The risk management process is:

- Clear identification of roles and responsibilities (relating to risk management);
- Development of a project specific risk assessment (consequence and likelihood) matrix;
- Preparations of a project specific risk register to identify risks to be addressed /monitored.

6.1 HAZARD REGISTER

Risks identified are evaluated in the Hazard Register attached in Appendix A. Each risk is assessed and given a control and a person or entity allocated responsibility to ensure the control is implemented.

The risk register contains the following details:

- A risk identification number;
- A description of the risk;
- The control measure;
- The hazard group – who will be affected;
- The hazard type – stormwater, electrical , etc.;
- The hazard stage – during design, construction, end user;
- The nominated person or entity responsible for managing that risk; and
- The status of the risk treatment strategy – active or closed.

6.2 RISK ASSESSMENT

After risks have been identified they are assessed for severity. The severity of a risk is expressed as a combination of the likelihood and the consequence. Project specific scales for assessing likelihood and consequence have been developed by the project team and are shown below. The assessed risk severity is then used across all risks to determine where the greatest effort should be focused in treating identified risks. The level of risk severity facilitates structured action planning and resource allocation.

6.2.1 Scales of Likelihood

Likelihood Level	Expected occurrence/ frequency	Meaning
Almost Certain	Occurs 1 in 1 projects	Most likely outcome and could occur at anytime
Likely	Occurs 1 in 2 projects	Likely to occur with a greater than even chance (>50%)
Possible	Occurs 1 in 10 projects	Might occur at anytime
Unlikely	Occurs 1 in 25 projects	Unlikely to occur, but history of the event exists within the industry
Rare	Occurs 1 in 50 projects	No known history of the event but it is conceivably possible

6.2.2 Scales of Consequence

Impact Level	Meaning
Catastrophic	Multiple fatalities or permanent disabilities
Major	Fatality or permanent disability
Moderate	Serious injury (eg. permanent disability or amputation)
Minor	Disabling injury requiring off site medical treatment
Insignificant /Negligible	First-aid treatment.

6.3 RISK CONTROLS

Risk controls are developed by brainstorming sessions in house using a range of people involved in the project to gain a variety of perspectives. These controls are then reviewed by senior peers and monitored and updated.

6.4 RISK SEVERITY MATRIX

Likelihood		Consequence				
		E	D	C	B	A
		Negligible	Minor	Moderate	Major	Catastrophic
A	Almost Certain	Medium	High	High	Very High	Very High
B	Likely	Medium	Medium	High	High	Very High
C	Possible	Low	Medium	High	High	High
D	Unlikely	Low	Low	Medium	Medium	High
E	Rare	Low	Low	Medium	Medium	High

6.5 RISK RESPONSE

Risk Severity level	Risk Response
Low	Unlikely to require allocation of resources, management by routine procedures
Medium	Must be brought to the attention of all parties, resources must be allocated to address risk
High	Senior management action required, risk treatments must be applied, responsibility must be specific and unambiguous, subject to regular and ongoing monitoring
Very High	Immediate senior executive action required, action plans and specific allocation of responsibilities, all possible treatments must be put in place to reduce risk.

APPENDIX A - RISK REGISTER

Hazard Register

Item	Hazard Types	Hazard Group	Description	Proposed Controls	Status
1	Pedestrian movement	Public	8.1m concrete promenade has exposed edge to water potentially allowing user to fall into the lake resulting in drowning - note a barrier along the lake edge is visually intrusive and not consistent with the edge treatment of the remainder of the lake.	Width of promenade is 8.1m to minimise overcrowding	Closed
				Edge 2.7m of promenade a different, darker colour to differentiate lake edge	Closed
				Tactile delineator also provides contrasting visual indication of edge of boardwalk	Closed
				Use of concrete seating units in alignment of tactile strip provides a perceived barrier for the visually impaired	Closed
				Grab rail provided along length of concrete promenade	Closed
				Access ladders provided at along length of promenade	Closed
				Illuminate promenade	Closed
				Provide lifebuoys at locations	Closed

2	Pedestrian movement	Public	Conflict between pedestrians and cyclists on 8.1m promenade resulting in serious injury	Width of promenade is 8.1m to minimise overcrowding	Closed
				Edge 2.7m of promenade a different, darker colour to differentiate lake edge and provide a slow zone for pedestrians	Closed
				Use of street furniture to discourage use of 2.7m edge strip by cyclists	Closed
				Provision of alternative fast cycle routes for cycle commuters	Ongoing
3	Pedestrian movement	Public	2.7m concrete promenade has 2 exposed edges to water potentially allowing user to fall into the lake resulting in drowning - note a barrier along both of the walkway edges is visually intrusive and not consistent with the edge treatment of the remainder of the lake.	Provide balustrade with height greater than 1m to be provided along the edge of the walkway nearest to the shore	Closed
				Tactile delineator also provides contrasting visual indication of edge of boardwalk	Closed
				Grab rail provided along length of concrete promenade	Closed
				Access ladders provided at along length of promenade	Closed

				Illuminate promenade	Closed
				Provide lifebuoys at locations	Closed
				Design to be reviewed by accessibility consultant	Closed
4	Pedestrian movement	Public	Conflict between pedestrians and cyclists on 2.7m promenade resulting in serious injury	2.7m walkway same colour as 2.7m edge zone of lakeside promenade to indicate slow zone	Closed
				Width of walkway, open edge and short length discourages high speeds	Closed
				Walkway is not a commuter route	Closed
5	Pedestrian movement	Public	Slip / trip by pedestrian on concrete promenade or walkway results in injury	Concrete surface not a polished surface. Surface finishes to be tested for slip resistance	Open
				Pre-cast concrete panels to be placed so that no trip hazards are formed between panels	Open
				Plank effect gaps to be 8mm to minimise risk of trips due to high heels	Closed
				Surface finishes to be intrinsic to concrete slab so as not to deteriorate with time	Closed
6	Pedestrian movement	Public	Slip / trip by pedestrian on wooden deck or walkway results in injury	Use of manufactured timber product that has textures surface	Open

				and slip resistance	
				Use of manufactured timber product minimises chances of warping and splitting of deck	Open
				Gap between planks to be kept to a maximum of 8mm	Open
7	Construction activity	Construction workers	Design Requires High Risk Works to be Executed - Working Near Water - Resulting in drowning of worker	Use of pre-cast and pre-fabricated structural elements to reduce amount of work near or on water	Closed
				Land reclamation is a semi-dry technique behind sheet pile wall reducing exposure to water	Open
				Detailed WHS Plan, Risk Assessment and SWMS to be prepared prior site works take place	Open
8	Construction activity	Construction workers	Design Requires High Risk Construction Works to be Executed - Working Near Buried Cables - Risk of Injury to Service strike resulting in fatality. Note only buried electrical cables have been identified in the vicinity of the works	Potholing undertaken during design stage to confirm location of buried electrical cables	Closed
				Dial before you dig drawings obtained and underground services shown on construction drawings	Closed

				Works do not required disturbance of existing buried electrical cables	Open
				Detailed WHS Plan, Risk Assessment and SWMS to be prepared prior site works take place	Open
9	Construction activity	Construction workers	Design Requires High Risk Construction Works to be Executed - Working in Trenches - Risk a fatality to worker working in trench	Designed trenches do not exceed 1.5m in depth	Open
				Detailed WHS Plan, Risk Assessment and SWMS to be prepared prior site works take place	Open
10	Construction activity	Construction workers	Design Requires High Risk Construction Works to be Executed - Working Near Mobile Plant - Works result in worker fatality	Store area and compound area in separate locations	Closed
				Limit of works sufficient to minimise reversing movements of plant	Closed
				Location of silt curtain positioned so as to permit movement and passing of barges	Closed
				Provision of GPS data to minimise use of grade checkers on the ground	Open
				Detailed WHS Plan, Risk Assessment and SWMS to be prepared prior site works take place	Open
11	Construction activity	Construction workers	Design Works Requires High Risk Construction Works to be Executed - Excavation works may uncover contaminated materials or buried asbestos	Contamination samples have be undertaken at earlier stage of the project indicating no significant presence of harmful contaminants	Open
				Unexpected finds protocol included in CEMP plans	Closed
				Detailed WHS Plan, Risk Assessment and SWMS to be prepared prior site works take place	Open

Risk Category	ID #	Risk Description	Consequences	Likelihood	Initial Risk Assessment	Proposed Treatment	Consequences	Likelihood	Residual Risk Assessment	Owner	Timeframe Within Which Event May Occur; Trigger Points; Milestones for Major Reviews	Status
1 – Safety	1.1	Members public or construction workers killed or injured due to traffic incident	Catastrophic	Almost certain	Very High	Provide a concept TTM that would provide a safe work environment for the public and contractor and should include lowering speed environment of traffic. This is to follow AS1742.3-2009. The preparation of the TTM is to account for all hazards influenced by or arising from the scope of works. It is to be designed by an accredited person.	Catastrophic	Unlikely	High	Designer	Ongoing during design phase/ Final at DR	Closed
1 – Safety		TTM not implemented by contractor/or not accredited person	Catastrophic	Almost certain	Very High	Appropriate procurement planning/ implementation to appoint contractor with good safety record in urban context. Appropriate contract form/provisions selected to allow enforcement Sufficient oversight/surveillance allowed in procurement phase Accreditation provided with Hold Point	Catastrophic	Unlikely	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Implemented TTM not eliminating risks	Catastrophic	Likely	High	Ongoing monitoring review effectiveness and change as required by authorised person.	Catastrophic	Unlikely	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Pedestrians enter work site	Catastrophic	Almost certain	Very High	Contractor to ensure site is secure and gates are to be locked after work.	Catastrophic	Unlikely	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active

Risk Category	ID #	Risk Description	Consequences	Likelihood	Initial Risk Assessment	Proposed Treatment	Consequences	Likelihood	Residual Risk Assessment	Owner	Timeframe Within Which Event May Occur; Trigger Points; Milestones for Major Reviews	Status
1 – Safety		Accident with pedestrians within the work zone – consider residents access	Catastrophic	Possible	High	Provide clear instructions/signage for the public. Fence off the work area to restrict pedestrians from accessing the work site. Workers/Spotters are to provide assistance to pedestrians that are disadvantaged/ restricted by the TTM Provide clear written instructions for affected residents and operators about movement around plant. Regular review.	Catastrophic	Rare	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Accident with pedestrians outside the work zone - heavy machinery	Catastrophic	Almost certain	Very High	If heavy machinery/plant (or part of) is to operate outside the work area or cross over the boundary work area, the TTM is to be revised. Spotters will be required to on each approach to the location where the machinery will impacting on pedestrian movements	Catastrophic	Unlikely	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Insufficient warning to motorists approaching site resulting in accident	Major	Possible	High	TTM signs to be located/maintained at the appropriate distances from the work site, unrestricted for approaching road users to AS.	Major	Unlikely	Medium	Principal Cont.	Construction commencement/ Ongoing till completion	Active

Risk Category	ID #	Risk Description	Consequences	Likelihood	Initial Risk Assessment	Proposed Treatment	Consequences	Likelihood	Residual Risk Assessment	Owner	Timeframe Within Which Event May Occur; Trigger Points; Milestones for Major Reviews	Status
1 – Safety		Signs not visible for approaching motorists resulting in accident	Major	Possible	High	TTM layout is to be checked prior to the commencement of work and on completion of work each day. Signs to standards are to be checked for visibility. Any damaged signs (including dirty signs) are to be rectified and/or replaced prior to work commencing.	Major	Unlikely	Medium	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Motorists approaching site disobeys signs	Major	Possible	High	Registration details of the motorists are to be collected and provided to the police. If it is a common occurrence the police will need to be asked to attend the worksite during key times.	Major	Possible	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Motorists within clear zones resulting in accident	Major	Possible	High	Adequate clear zones are to be provided for in the TTM. This may require a lane shift, partial closure, full closure of the road to provide a safe environment for the public and construction workers.	Major	Unlikely	Medium	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Road users outside the work zone - heavy machinery resulting in accident	Major	Possible	High	If a heavy machinery (or part of) is to be operated outside the work area or cross over the boundary work area, the TTM is to be revised. Spotters will be required to on each approach to the location where the machinery will impacting on road movements	Major	Unlikely	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active

Risk Category	ID #	Risk Description	Consequences	Likelihood	Initial Risk Assessment	Proposed Treatment	Consequences	Likelihood	Residual Risk Assessment	Owner	Timeframe Within Which Event May Occur; Trigger Points; Milestones for Major Reviews	Status
1 – Safety		Construction traffic turning on and off the site can cause accident with general public.	Catastrophic	Likely	Very High	Safe access points identified on TTM. Ensure contractor has approved TTM's prior to any construction works Accredited controller may be required subject to location and level of use	Catastrophic	Unlikely	High	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Inexperienced traffic controllers.	Catastrophic	Possible	High	Accreditation provided with Hold Point	Major	Unlikely	Medium	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Restricted construction site - leads to death or injury of worker	Major	Possible	High	Site construction management plan prepared/implemented in response to Principal Contractor risk assessment. Part road closure to provide sufficient space for exclusion zones to mobile plant.	Major	Unlikely	Medium	Principal Cont.	Construction commencement/ Ongoing till completion	Active
1 – Safety		Constructed shared zone and open spaces results in vehicular or pedestrian accidents or trip and fall	Major	Possible	High	Design to current standards to recognised standards / Accessibility review.	Major	Unlikely	Medium	Principal Cont	Ongoing after completion	Active

1 – Safety		Assaults on public due to poor lighting.	Major	Possible	High	Lighting design in accordance to Australian standards	Major	Unlikely	Medium	Principal Cont	Ongoing after completion	Active

APPENDIX 7

2020 Tree Assessment Survey

Appendix A Tree Assessment Data

Appendix B – Tree Assessment Drawings

Appendix C – Tree Assessment Sheets

WEST BASIN – CANBERRA
March 2020

TREE ASSESSMENT AND REPORT

Prepared for ACT Government | CITY RENEWAL AUTHORITY

Prepared by SPACELAB URBAN PLANNING AND DESIGN

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1. OVERVIEW

INTRODUCTION

This report is an updated version of the 2014 City to the Lake Tree Assessment and Report, for the City Renewal Authority. This subject site is currently referred to as: West Basin Precinct, Canberra. Previous information contained within this report and its appendices has been updated based on field reviews undertaken on the 17th of March 2020.

The initial assessment and report were produced under the *City Plan 2014*, West Basin (City to the Lake), for the Land Development Agency (now the Suburban Land Agency).

The report maintains the objectives of the brief being:

- To quantify and assess the trees and stands of remnant vegetation located within the site area; and
- To identify and assist:
  - The health and amenity of existing trees and remnant vegetation;
  - Trees for retention in accordance with the *Tree Protection Act 2005*; and
  - Trees and significant stands of less mature trees deemed to possess potential contributions to urban amenity.

The Tree Assessment Methodology developed by the Land Development Agency (LDA) was used to assess the trees and stands of vegetation and all data was entered into the Tree Assessment Proforma supplied by the LDA.

Recommendations in this report will assist in the development of the site.

Figure 1 | Project site (*ACTmapi 2019*)

SITE DESCRIPTION

The site is located between the foreshore of Lake Burley Griffin West Basin, and the major distributor road of Parkes Way in the suburb of Acton, ACT. The site is commonly known as Acton Park.

The site is *envisaged to comprise:*

- *A new Canberra Aquatic Centre,*
- *A new National Cultural Institution,*
- *Revitalised waterfront public realm, including interpretive boardwalk and water gardens,*
- *Vehicular penetration and permeability, including direct extension of Marcus Clarke, and*
- *The West Basin Estate.*

The extents of the assessment are defined in the assessment plans associated with this report. Refer to **APPENDIX B** for the tree assessment drawings. The site extent is also identified in **Figure 2**.

Figure 2 | Project Site – Extent designed by dashed line (*Nearmap.com*)

Trees in this report are located along the shorelines and throughout the parkland that contains open space, a shared bicycle path, a series of open car parking lots, a futsal court, a building that houses a bike rental, and a ferry boat and paddle boat jetty and rental structure. The area is subject to special conditions outlined in the *Lake Burley Griffin Management Plan* by the National Capital Authority.

2. TREE ASSESSMENT METHODOLOGY

The following information for each assessed tree is presented in this report.

Tree Number/Group:
A unique reference number is assigned to each tree or group of trees and described in terms of GIS co-ordinates. Each tree/group of trees is numbered and referenced to the Plan and Report as applicable.

Regulated Tree:
Is the Tree considered to be a Regulated tree in accordance with the ACT *Tree Protection Act 2005*
Y – Yes
N – No

Registered Tree:
Is the Tree listed on the Provisional Tree Register or the Tree Register? Reference check to be undertaken by visiting

http://www.tams.act.gov.au/live/environment/urbantreeprotectionintheact/acttreeregister

If registered notate the unique reference number allocated by the Act Territory Government.

General Tree Data

Assessment Date
Date field assessment is undertaken

Assessor
Name of field assessor

Tree Location
GIS location, ACT grid coordinates, Stromlo Projection, Eastings and Northings of tree position.

Species
Botanical and Common Name

Height
Height in metres

Canopy Spread
Canopy diameter in metres shown as the maximum crown width of the tree or group of trees

Trunk Circumference
For Single Trunks circumference in millimetres, measured 1 metre above ground level
For multiple trunks the cumulative total of each trunk in millimetres at 1 metre above ground level

Number of Trunks

For single trees: number of trunks at 1 metre above ground level;
For groups of trees: general average number of trunks.

Recommendation

Recommendation is based on the professional judgement by the **Arborist and/or Landscape Architect and/or Landscape Consultant** following evaluation of the overall components of the full assessment.

RETAIN/MANAGE	Retain and manage the tree
Or	
REMOVE	Remove the tree

ARBORICULTURAL CRITERIA DEFINITIONS

Each tree has been assessed with the following arboricultural criteria. The definitions of values presented on the assessment sheets is provided below:

Canopy Density:
Relative density of canopy foliage
3 - Full canopy (80% to 100%)
2 - Part canopy (20% to 80%)
1 - Sparse canopy (<20%)

Canopy Dead Wood:
Amount of dead wood in the canopy as a % of the canopy:
3 - 0% to 20% dead wood
2 - 20% to 60% dead wood
1 - 60% to 100% dead wood

Insect Attack:
Evidence of insect attack:
3 - None
2 - Moderate
1 - Significant

Disease:
Evidence of disease present:
3 - None
2 - Moderate
1 - Significant

Epicormic Growth:
Presence of epicormic growth:
3 - None
2 - Moderate
1 - Significant

Mistletoe:
Presence of mistletoe in canopy:
3 - None
2 - Up to 5 clumps (moderate)
1 - More than 5 clumps

Form:
Canopy balance and distribution - relative to the normal habit of the tree species:
4 - Typical of species
3 - Stunted
2 - Unbalanced/lopsided canopy
1 - Trunk lean approximately 30$_{o}$ or more off vertical

Age:
Age category:
4 - Juvenile
3 - Semi- Mature - Adolescent
2 - Mature
1 - Over-Mature - Senescent – limited life expectancy

Tolerance to Disturbance:
Tolerance to disturbance within the tree protection zone based on species characteristics and site conditions:
3 - High, tree species generally tolerant of some site disturbance,
2 - Medium, tree species that may tolerate limited site disturbance,
1 - Low, tree species generally highly sensitive to site disturbance.

Risk Potential:
Risk potential/structural integrity associated with trunk and major branches. Comment on the risk in the context of future land use if known and/or recommend incompatible land uses.

3 - **Low risk potential**
- good structural integrity with low risk potential
- may require minimal or no short term horticultural maintenance

2 - **Medium risk potential**
- poor branch unions, narrow angle branch forks or multiple leaders etc
- risk can be mitigated and managed by tree surgery and horticulture maintenance techniques

1 - **Significant risk potential**
- decay within trunk or major branches and/or
- prevalence of hollows or decay and/or
- depressed sections of the trunk indicative of underlying health issue and/or
- storm damage or physical and/or
- risk cannot be mitigated by extensive tree surgery or horticultural techniques

Health/Condition:
Overall health and condition of the tree based on arboricultural assessment of crown and trunk of the tree:
4: Excellent **2:** Fair
3: Good **1:** Poor

URBAN AMENITY CRITERIA DEFINITIONS

Each tree has been assessed with the following Urban Amenity criteria. The definitions of values presented on the assessment sheets is provided below:

Contribution to Existing Landscape Character:
What level of contribution does the tree make to the existing landscape setting?
3 - Significant
2 - Moderate
1 - None

Potential Contribution to Future Landscape Character:
If retained, what level of contribution does the tree(s) potentially have for future landscape settings?
3 - Significant – could provide significant landscape character
2 - Moderate
1 - None

Visual / Scenic:
Visual prominence and scenic quality of the tree when viewed from within and beyond the site based on its position in the landscape and its form, condition, spatial arrangement, health and size:
3 - High – visually prominent landform and exposed to significant public viewing (either now and/or in the future)
2 - Medium - visually prominent location or existing exposure to public view
1 - Low – not exposed to the existing public, scenic value important to future local urban development

Unique species:
Based on the rarity or commonness of the species in the region or growing at the extent or outside of its normal range and the abundance of the species within its geographic range:
2 - Rare
1 - Common

Habitat Quality:
Based on the potential to retain or attract native fauna:
3 - Provides significant habitat to native birds or arboreal animals either due to its abundance or ecological diversity or as a result of limited availability
2 - Ability to retain or attract native wildlife including invertebrates
1 - No habitat opportunity for native fauna or known to harbour exotic pests

Habitat Value:
Habitat value provided by tree e.g. considering nesting hollows, shelter, seed pods, nectar, roosts etc
High Value
4 - Food source or nesting hollows for endangered species - specialised
3 - Locally occurring habitat– non-specialised
Limited Value – Low
2 - No identifiable habitat – shelter only
1 - Potential for harbouring pest species

Cultural Value:
Does the tree have cultural/heritage value? If so is it documented or how is it known?
2 - High - Yes – describe (anecdotal/referenced)
1 - Low - None known

Social Value:
Does the tree possess social context e.g. is there community connection to its planting or location? And if so is it documented / how is it known
2 - High - Yes – describe (anecdotal/referenced)
1 - Low - None known

Scientific Value:
Does the tree possess scientific interest? e.g. genetic, stunted growth, curious habit, habitat, climatic range. If so how is it documented, or how is it known.
2 - High - Yes – describe (reference)
1 - Low - None known

Remnant Species:
Is the tree a remnant species?
2 - Yes therefore contributes to natural biodiversity (Highly Valued in terms of local ecology and genetics)
1 - No - i.e. planted native species, self sown exotic, planted exotic

LANDSCAPE TREE GROUPS DEFINITIONS

The assessment of landscape trees that are clearly identifiable as dense uniform landscape groups to be assessed as groups for their potential contribution to future urban amenity. The groups are to be considered and assessed on the same bases as individual trees.

3 - An identifiable group of trees that when considered as a whole meet at least one of the values for Tree Quality Classification of Exceptional Quality.

2 - A clearly identifiable group of landscape trees that includes trees that meet the requirements for assessment under the Tree Protection Act, 2005 and has the potential to contribute to the future urban amenity.

1 - A clearly identifiable group of landscape trees that may include trees that do not meet the requirements for assessment under the Tree Protection Act, 2005 and has the potential to contribute to the future urban amenity.

TREE ASSESSMENT – ARBORICULTURAL RATING DEFINITIONS

Each assessed tree has been provided with an aboricultural quality rating.
The Arborcultural Assessment is the culmination of the assessment of Arborcultural Criteria best fitting the following statements (see also Arborcultural Criteria).

E **Exceptional meets most or all of the following**

- Mature specimen
- Well balanced grand and/or outstanding appearance and stature
- Little or no evidence of:
    - insect or parasitic attack and/or disease
    - epicormic growth and/or
    - dead wood and/or
    - physical damage

H **High meets one of the following**

- Mature Tree specimen
    - Tree structure, appearance form and balance is considered typical
    - Little no evidence of insect/parasite attack, epicormic growth and/or dead wood
- Juvenile or adolescent specimen (or group of trees or regeneration) that does not meet the prescribed requirements of the Tree Protection Act which exhibits excellent form and health with potential to:
    - become a Regulated Tree; and
    - contribute positively to the landscape character / urban amenity of the place in the future

M **Medium Mature Tree specimen exhibiting some or all of the following characteristics:**

- Sparse or pale coloured foliage
- Epicormic growth and/or dead wood throughout the crown
- Evidence of some branch fall
- Less than desirable form

Or (meets this criteria)

- Juvenile or adolescent specimen (or group of trees or regeneration) that does not meet the prescribed requirements of the Tree Protection Act. This assessment may include tree(s) which exhibit some negative characteristics which, with cost effective maintenance and/or management these trees have the potential to become:
    - a regulated tree; and
    - contribute positively to landscape character and / or urban amenity of the place in the future

P **Poor Quality or Deteriorating Tree meets the following statement**.
Tree assessed as:

- limited life expectancy (less than 5-10 years) and/or
- limited habitat value; and/or
- significant risk potential with regard to:
    - poor form, health and condition, significant die back or sparse canopy; and/or

- physical damage, disease, decay, susceptible to large limb drop, included bark forks etc

TREE ASSESSMENT **– URBAN AMENITY RATING DEFINITIONS**

Each assessed tree has been provided with an Urban Amenity rating.
The assessment of Urban Amenity[1] Assessment is the culmination of the Urban Amenity Criteria best fitting the following statements (refer also Urban Amenity Criteria).

E **Exceptional Urban Amenity**
A tree or well defined group of trees that meets at least two of the following:

- Significant Visual Prominence or Scenic Quality
- Unique Species – i.e. not common place to the Region
- Significant habitat
- Known Cultural /Heritage Value - referenced
- Known Social Value – referenced
- Scientific Value - referenced

(Note: as an example, a tree, may be considered "Exceptional" on the basis of scientific and known social value but be of poor form/condition and represent a significant hazard).

H **High**
A tree or well defined group of trees which may or may not attain the status of being a Regulated Tree that exhibit the following:

- good form, health and condition without significant defects; and
- where retained and managed is unlikely to present an unreasonable financial impost or public risk

M **Medium**
A tree or well defined group of trees that are considered to require expenditure with regard to its long term management to attain a High value and is assessed to be of little (if any) habitat value.

L **Low**
A tree of poor form, structure or health with little, if any, habitat value i.e. the tree is considered in fundamental decline or likely to represent a significant hazard in an urban context.

1 Urban amenity is considered the form, texture, arrangement and appearance of landscape elements (in this case trees and stands of vegetation) that contribute positively to the character of a place.

TREE PROTECTION / MANAGEMENT FOR TREES TO BE RETAINED

Under the ACT *Tree Protection Act 2005* a Protected Tree includes all Regulated Trees and those trees deemed Registered (i.e. a tree that has been included on the *ACT Tree Register*).

Tree Management Plans are required to accompany the Estate Development Plan for all Protected Trees. Schedule 1 of *Notifiable Instrument N12010-586* outlines the guidelines for Tree Management Plans applicable to trees attaining the status of Protected Tree under the *Tree Protection Act 2005*.

TREE MANAGEMENT ASSESSMENT DEFINITIONS

Each tree has been assessed with the following Tree Management criteria. The definitions of values presented on the assessment sheets is provided below:

Potential to Reduce Risk:
Are there arboricultural/horticultural works that can be carried out to reduce potential risks?

3 - Significant works – involving financial investment requiring commitment to long term remedial specialised techniques
2 - Moderate works –requiring commitment to regular horticultural/arboricultural treatment
1 - None – regular on-going management required long term but no obvious immediate management required

Potential to improve amenity value:
Are there arboricultural/horticultural works that can be carried out to improve the potential amenity value of the tree?

3 - Significant works commitment to regular ongoing horticultural/arboricultural maintenance required (pruning, shaping, spraying) etc to retain urban amenity
2 - Moderate works commitment to immediate (but not onerous) maintenance to enhance amenity
1 - None – occasional, regular and expected horticultural works may be required – not immediate

ASSESSMENT DATA

Refer to **APPENDIX A.**

3. RECOMMENDATIONS

19th March, 2020

The site was pinspected during the week starting 16th March 2020.

Without exception the trees have declined by at least one category ie. from High to Medium or Medium to Poor.

This is undoubtedly due to the long drought rather more than the hailstorm in the recent past. There is very little likelihood that they will recover but at best remain in poor condition if not die in the short term. It needs to be noted that despite the recent rain which has 'greened up' the landscape, soil moisture levels for tree roots remain low.

High-quality trees such as the large well-spaced *Casuarina cunninghamiana* have declined dramatically. This may be due to the fact that the lake water level fell by a significant amount. This would cause the water table to fall under the roots denying the trees the moisture they relied upon.

The carpark trees have found soil moisture conditions to be very detrimental and have declined over the last five years. Due to the sealed surface they gain little from short rainfall events.

It needs to be noted that some of the species on the site are now not acceptable eg the *Populus alba*, *Acer negundo* and *P. nigra*.

The *Ulmus carpinifolia* along Commonwealth Avenue are failing due to defoliation caused by the *Xanthogaleruca luteola* (Elm Leaf Beetle) and the drought. Those on the site side of the Avenue are a little better than the many dead ones on the other side but are unlikely to fully recover.

The two groups of *P. alba* have done relatively better than all others. This may be due to the original material being from stock imported by Pryor from Spain being more drought hardy.

The two large *Pinus ponderosas* are going to die from a needle fungus *Lophodermium sp* and will not recover.

Overall most of the trees on the site have reached the end of their Safe Useful Life.

Conclusion

Given the above comment we recommend that all weed species such as *Populus alba*, *Acer negundo*, the *Salix* species and known problematic species such as *Eucalyptus nicholii* be removed. Also trees in the *globulous* group are proving to be difficult to manage and this needs to be taken into account if the *Eucalyptus maidenii* are retained.

The trees given an (E) exceptional (H) high arboriculture value may be retained and the remaining trees only retained where they fit within the proposed developments.

It needs to be noted, that trees of this age and situation, given a high amenity value but low arboriculture value, will pose very real problems into the future.

A program to combat the Elm Leaf Beetle should be implemented to assist the longevity of the *Ulmus* species on the site and the maintenance work, clearly in evidence, be maintained.

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4. NOTES / DISCLAIMER

This report is to be utilised in its entirety only. Any written or verbal submission, report or presentation that includes statements taken from the findings, discussions, conclusions or recommendations made in this report, may only be used where the whole of the original report (or copy) is referenced in, and directly attached to that submission, report or presentation.

Information contained in this report covers only those trees, which were examined, and reflects the condition of those trees at the time of inspection on 17th March, 2020.

The inspection was limited to visual examination, without dissection, excavation, probing or coring. There is no warranty or guarantee or expressed or implied, that problems or deficiencies of the subject trees may not arise in the near future.

The findings of this report may not necessarily agree with reports prepared by others, including the Government Conservator of Trees.

APPENDIX A – TREE ASSESSMENT DATA

APPENDIX A - TREE ASSESSMENT DATA
City to the Lake - West Basin Tree Assessment
March 2020

TREE ASSESSMENT DATA

Tree Number	Regulated Tree	Registered Tree	Arborcultural Assessment	Urban Amenity Assessment	Arborist	Retain or Remove	Landscape Architect	Assessment Date	Species	Common Name	Easting	Northing	Elevation	Height	Tree Canopy	Trunk Circumference	Trunk Diameter	Number of Trunks	Potential Reduce Risk	Potential Improve Amenity	Canopy Density	Canopy Dead Wood	Insect Attack	Disease	Epicormic Growth	Mistletoe	Form	Age	Tolerance to Disturbance	Risk Potential	Health Condition	Contribution to Existing Landscape	Potential Contribution to Future Landscape	Visual Scenic	Unique Species	Habitat Quality	Habitat Value	Cultural Value	Social Value	Science Value	Remnant Species	Comments	Tree Group
983	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210559.79	602732		12	12	2000	0.02	1																									
992	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210577.5	602735.12		12	16	1900	0.02	1																									
993	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210581.77	602731.49		15	19	2600	0.02	1																									
994	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210583.15	602797.98		14	12	1500	0.02	1																									
995	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210571.49	602787.63		14	12	1500	0.02	1																									
996	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210576.12	602782.84		13	12	1400	0.02	1																									
997	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210576.71	602774.41		15	16	2300	0.02	1																									
998	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210574.31	602764.17		15	17	2000	0.02	1																									
1004	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210538.44	602892.24		9	10	2500	0.02	1																									
1005	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210537.92	602883.77		9	10	2400	0.02	1																									
1006	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210538.76	602875.53		9	10	2600	0.02	1																									
1011	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210538.22	602931.23		13	11	1400	0.02	1																									
1012	Y	No			ST, JL		SPACELAB	17th March 2020	GONE		210533.45	602939.29		16	18	2900	0.02	1																									
1034	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210606.818	603007.173		11	9	1500		2	2	2	2	2	3	2	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Weed species	
1035	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210607.456	603015.22		12	9	900		1	2	2	2	2	3	2	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Weed species	
1036	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210510.24	603263.87		14	10	1000	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1037	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210515.24	603262.11		8	6	800	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1038	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210508.09	603263.22		8	6	800	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1039	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210510.41	603265.46		7	5	600	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1040	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210530.2	603262.63		10	5	900	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1041	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210552.95	603256.51		6	4	500	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1042	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210563.87	603252.31		18	20	2100	0.02	1	2	2	2	2	3	3	3	3	4	2	2	2	2	3	2	3	1	2	3	1	1	1	1	Scar and rot at 5m	
1043	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210532.63	603217.94		16	15	2100	0.25	1	2	1	2	2	3	3	3	3	4	2	2	1	2	3	2	2	1	2	3	1	1	1	1	Large dead branches	
1044	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210542.12	603223.06		16	15	2400	0.02	1	2	1	2	2	3	3	3	3	4	2	2	1	2	3	2	2	1	2	3	1	1	1	1	Fungal fruiting body at 2m	
1045	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210540.19	603233.03		16	15	2700	0.02	1	2	1	2	2	3	3	3	3	4	2	2	1	1	1	1	1	1	2	3	1	1	1	1	Rot in cavity at 2m	
1046	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210556	603245.73		9	7	1100	0.02	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1047	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidneii	Maiden's gum	210567.78	603245.5		17	19	1900	0.02	1	2	2	2	2	3	3	3	3	4	2	2	2	2	3	2	3	1	2	3	1	1	1	1	Nothing to note	
1048	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermir	210582.06	603248.27		9	7	1200	0.02	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1049	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210588.81	603244.4		17	18	1700	0.02	1	2	2	2	2	3	3	3	3	4	2	2	2	2	3	2	3	1	2	3	1	1	1	1	Nothing to note	
1050	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210600.49	603244.82		10	8	1000	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1051	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210514.09	603247.31		17	16	1600	0.02	1	2	2	2	2	3	3	3	3	4	2	2	2	2	3	3	3	1	2	3	1	1	1	1	Broken branches	
1052	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210464.58	603262.33		18	10	1800	0.02	1	1	1	2	2	3	3	3	3	4	2	2	2	3	3	3	3	1	2	3	1	1	1	1	Problematic union at 2m	
1053	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210457.26	603251.06		15	9	1300	0.02	1	1	1	2	2	3	3	3	3	4	2	2	3	2	3	2	2	1	2	3	1	1	1	1	Nothing to note	
1054	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210456.3	603255.43		16	9	1300	0.02	1	1	1	2	2	3	3	3	3	4	2	2	3	2	3	2	2	1	2	3	1	1	1	1	Nothing to note	
1065	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Quercus suber	Cork Oak	210480.68	603274.15		8	8	2600	0.02	2	1	1	2	2	2	3	3	3	4	2	2	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1066	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210488.25	603258.27		7	7	900	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1067	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus elata	River Peppermint	210485.03	603273.34		13	8	1100	0.02	1	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1111	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Pinus ponderosa	Bull Pine	210472.54	603231.11		18	14	2100	0.02	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	`2	1	2	1	1	1	1	Infected by Lophodermium sp.	
1112	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Pinus ponderosa	Bull Pine	210464.13	603239.47		16	14	2100	0.02	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	`1	1	2	1	1	1	1	Infected by Lophodermium sp.	
1113	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus sideroxylon	Red Ironbark	210518.88	603214.43		7	3	800	0.02	1	1	1	2	2	3	3	3	3	4	3	2	3	2	3	3	1	1	2	2	1	1	1	1	Dead branches removed	
1114	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Quercus palustris	Pin Oak	210512.53	603222.7		5	3	300	0.02	1	1	1	2	2	3	3	3	3	4	3	2	3	2	3	3	1	1	2	2	1	1	1	1	Nothing to note	
1115	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus excelsior	Common Ash	210509.39	603243.73		5	7	1000	0.02	3	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	1	1	1	1	1	Nothing to note	
1116	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus excelsior	Common Ash	210503.58	603233.59		6	6	1100	0.02	3	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	1	1	1	1	1	Nothing to note	
1117					ST, JL	REM	SPACELAB	17th March 2020	DEAD	DEAD	210504.66	603236.21		7	8	900	0.02	1																									
1120	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210448.58	603265.74		10	9	1200	0.02	1	1	1	2	2	3	3	3	3	4	2	2	3	2	3	2	2	1	2	3	1	1	1	1	Nothing to note	
1121					ST, JL	REM	SPACELAB	17th March 2020	GONE		210450.27	603260.3		8	9	950	0.02	1																									
1122	N	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210452.6	603256.93		8	9	900	0.02	1	1	1	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1123	N	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210453.54	603260.67		10	9	900	0.02	1	1	1	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1124	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Quercus suber	Cork Oak	210463.23	603273.79		10	10	2000	0.02	1	1	1	2	2	2	3	3	3	4	2	2	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1140	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Betula pendula	Silver Birch	210386.22	603273.92		9	6	850	0.02	1	1	1	2	2	3	3	3	3	2	3	3	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1141	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Salix babylonica	Weeping Willow	210373.97	603273.19		16	14	2800	0.02	1	3	3	2	2	3	1	3	3	4	1	3	1	1	1	1	1	1	1	2	1	1	1	1	Rot at 2m and 4m with bees	
1168	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus deltoides	Cottonwood	210596.48	602994.27		15	11	1300	0.4	1	3	3	2	2	2	2	3	3	4	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Rot	
1172	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus deltoides	Cottonwood	210598.67	602984.81		16	10	1750	0.55	1	3	3	2	2	2	2	3	3	4	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Rot	
1175	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210567.14	603200.44		6	6	650	0.2	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Suckering below graft	
1177	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210568.25	603190.01		5	6	650	0.2	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Suckering below graft	
1179	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210568.77	603182.09		5	6	650	0.2	1	1	1	2	2	2	2	3	3	4	2	3	3	1	1	1	1	1	2	1	1	1	1	1	Suckering below graft	
1180	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210569.61	603174.71		5	6	650	0.2	1	1	1	2	2	2	2	3	3	4	2	3	3	1	1	1	1	1	2	1	1	1	1	1	Suckering below graft	
1181	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210613.14	602973.49		5	3	350	0.1	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1182	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210570.53	603168.08		4	4	500	0.15	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Suckering below graft	
1184	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210570.54	603161.63		5	5	800	0.25	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Suckering below graft	
1186	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210570.6	603157.38		7	6	800	0.25	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Suckering below graft	
1188	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210569.68	603152.88		6	5	800	0.25	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1192	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210569.34	603147.55		6	6	800	0.25	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1193	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Ulmus parvifolia	Chinese Elm	210588.38	602960.61		10	12	1800	0.55	2	1	1	2	2	3	3	3	3	4	2	3	2	2	3	2	3	1	2	2	1	1	1	1	Some broken branches	
1195	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210581.04	602964.99		11.5	10	1300	0.4	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Weed species	
1196	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus parvifolia	Chinese Elm	210578.55	602961.26		11.5	10	800	0.25	2	1	1	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1198	Y	No	M	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210576.54	602965.22		12	10	1500	0.45	1	1	1	2	2	3	3	3	3	4	2	3	3	2	2	2	2	1	1	2	1	1	1	1	Weed species	
1200	Y	No	M	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210573.44	602962.22		13.5	11	1800	0.55	1	1	1	2	2	3	3	3	3	4	2	3	3	2	2	2	2	1	1	2	1	1	1	1	Weed species	
1206	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210550.6	602992.88		6	6	650	0.2	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Broken stem at 2m, regrowth	
1207	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210550.57	603006.75		6	7	800	0.25	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1208	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Fraxinus oxycarpa 'Raywood'	Claret Ash	210550.97	603017.89		6	7	800	0.25	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1209	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210551.86	603026.83		7	9	1000	0.3	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1210	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Liquidambar styraciflua	Sweet Gum	210556.46	603028.85		7	5	500	0.15	1	1	1	2	2	3	3	3	3	4	2	3	3	2	3	2	3	1	2	3	1	1	1	1	Nothing to note	
1211	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210616.25	602963.82		11	13	1900	0.6	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1216	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210618.8	602982.11		11	16	1600	0.5	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1217	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210620.07	602991.17		15	16	1900	0.6	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1218	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210621.23	603000.18		11	10	1300	0.4	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1219	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210615.43	602991.88		5	6	650	0.2	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1220	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210609.68	603003.738		10	9	800		1	2	2	2	2	3	2	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Weed species	
1223	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210607.618	603019.155		12	10	1900		2	2	2	2	2	3	2	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Weed species	
1225	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210618.15	603009.64		8	6	1000	0.3	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1226	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210626.98	603008.71		12	11	1600	0.5	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1227	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210623.58	603017.91		13	14	1900	0.6	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1228	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210629.1	603025.72		6	6	500	0.15	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1229	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210620.47	603027.92		6	6	500	0.15	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1230	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210626.23	603036.35		15	14	1900	0.6	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1231	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210622.8	603045.9		6	6	650	0.2	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1232	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210631.91	603044.78		14	10	1600	0.5	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1233	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210628.93	603054.85		6	7	800	0.25	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1234	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210625.25	603064.07		5	4	1000	0.3	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1235	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210634.26	603063.1		12	10	1600	0.5	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1236	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210630.83	603072.35		11	12	1600	0.5	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1237	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210627.58	603082.24		6	7	650	0.2	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1238	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210633.39	603090.71		10	10	1500	0.45	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1239	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210638.58	603098.63		5	4	400	0.12	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1240	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210630.14	603100.45		6	8	1000	0.3	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1241	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210635.61	603108.66		9	10	1600	0.5	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1242	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210641.67	603117.31		11	8	1300	0.4	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1243	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210632.51	603118.55		4	4	650	0.2	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1244	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210638.1	603126.96		11	11	1300	0.4	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1245	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210643.88	603135.47		10	10	1400	0.45	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1246	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210640.55	603145.02		8	10	1100	0.35	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1247	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210637.29	603154.84		3	4	350	0.1	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1248	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210642.99	603163.09		8	9	1100	0.35	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1249	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210639.92	603173.04		4	3	350	0.1	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1250	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210642.22	603191.21		4	3	350	0.1	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1251	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210651.16	603189.89		9	10	1300	0.4	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1252	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210647.9	603199.38		10	10	1300	0.4	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1253	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210644.35	603209.07		6	7	800	0.25	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1254	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210650.31	603216.84		8	8	950	0.3	1	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1255	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210647.08	603227.3		8	10	1300	0.4	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1256	N	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210642.55	603235.16		11	8	1000	0.3	3	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1257	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210641.6	603240.87		10	6	800	0.25	3	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1258	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210636.36	603240.84		13	7	1300	0.4	3	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	2	1	1	1	1	Nothing to note	
1259	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210630.98	603234.91		13	8	1300	0.4	1	2	2	2	2	2	3	3	3	4	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Large dead branches	
1260	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus leucoxylon	Yellow Gum	210625.62	603227.01		6	4	400	0.12	1	1	1	2	2	2	3	3	3	4	3	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1261					ST, JL	REM	SPACELAB	17th March 2020	DEAD		210638.21	603235.75		0	0	0	0	1																									
1262	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210617.8	603227.62		7	6	800	0.25	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1263	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210568.32	602803.13		9	12	1300	0.4	1	2	2	2	2	3	2	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Weed species	
1264	N	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210616.34	603224.91		11	6	800	0.25	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	

APPENDIX A - TREE ASSESSMENT DATA

City to the Lake - West Basin Tree Assessment

March 2020

1265	N	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Populus deltoides	Cottonwood	210580.06	602806.44		11	10	1200	0.3	1	2	2	2	2	2	2	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Dieback	
1266	N	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210612.78	603226.22		11	2	700	0.2	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1268	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210610.08	603229.78		13	8	1450	0.45	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1270	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210588.56	603218.87		8	3	650	0.2	1	2	2	2	2	2	3	3	3	2	2	2	1	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1272	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus sp.	Gum	210580.66	603219.29		5	3	350	0.1	1	1	1	1	1	1	1	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	Nothing to note	
1273					ST, JL		SPACELAB	17th March 2020	GONE		210575.4	603226.15		9	7	1300	0.4	1																									
1274					ST, JL		SPACELAB	17th March 2020	GONE		210588.59	602840.46		14	12	1700	0.55	1																									
1275	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210572.8	603233.5		15	14	1900	0.6	1	2	1	2	2	3	3	3	3	4	2	2	1	2	3	2	2	1	2	3	1	1	1	1	Poor union at 5m	
1276					ST, JL		SPACELAB	17th March 2020	GONE		210593.53	602850.22		12	10	1550	0.45	1																									
1277	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210575.11	603216.06		11	10	1450	0.45	1	2	2	2	2	3	2	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1278					ST, JL		SPACELAB	17th March 2020	GONE		210595.36	602861.24		8	6	1450	0.45	1																									
1279					ST, JL		SPACELAB	17th March 2020	GONE		210598.2	602883.71		14	12	1800	0.6	1																									
1280					ST, JL		SPACELAB	17th March 2020	GONE		210593.23	602890.86		13	10	1600	0.45	1																									
1281					ST, JL		SPACELAB	17th March 2020	GONE		210599.61	602893.39		15	13	2200	0.65	1																									
1285	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Populus alba	White poplar	210516.3	603181.51		12	10	1800	0.55	1	2	2	2	2	3	2	3	3	4	2	3	2	2	2	2	2	1	2	2	1	1	1	1	Weed species	
1286					ST, JL		SPACELAB	17th March 2020	GONE		210510.94	603192.49		10.5	16	2100	0.65	1																									
1291	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210558.53	603076.91		7	6	650	0.2	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1292	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210557.49	603071.83		7	6	650	0.2	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1293	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210555.67	603057.65		7.5	7	650	0.2	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1294	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210554.73	603053.18		7.5	6	800	0.25	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1295	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210553.34	603043.52		7.5	10	1000	0.3	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	2	3	1	1	1	1	Weed species	
1296	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Liquidambar styraciflua	Sweet Gum	210557.35	603038.84		6	4	600	0.17	1	1	1	2	2	3	3	3	3	4	2	3	3	2	3	2	3	1	2	3	1	1	1	1	Nothing to note	
1520	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210437.88	603342.33		18.6	8	1900	0.6	1	1	1	1	1	3	1	3	3	4	2	3	1	1	1	1	1	1	1	2	1	1	1	1	Almost dead	
1523	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden’s gum	210429.555	603344.967		14	6	1200		1	3	3	1	1	3	1	3	3	4	2	2	1	1	1	1	1	1	2	2	1	1	1	1	Dying back	
1525	N	No	P	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210425.46	603346.26		10.5	4	600	0.17	1	1	1	2	2	3	3	3	3	2	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Unbalanced	
1526	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210422.48	603348.46		5	7	600	0.18	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1527	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Blue gum	210419.546	603346.657		15	6	1000		3	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Leaning	
1528	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210417.55	603348.34		6.5	6	700	0.2	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1529	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210410.75	603347.71		24.5	23	4500	1.45	1	3	3	2	2	3	2	3	3	4	2	2	1	1	1	1	1	1	2	3	1	1	1	1	Rot at 2m and 5m, broken branch	
1530	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210402.36	603347.74		11	3	500	0.15	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1531	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210401.98	603351.91		18	12	1100	0.35	1	2	2	2	2	3	3	3	3	2	2	2	1	1	1	1	1	1	2	3	1	1	1	1	Leaning over road	
1532	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210399.08	603351.23		21	16	2100	0.65	1	2	2	2	2	3	3	3	3	4	2	2	1	1	1	1	1	1	2	3	1	1	1	1	Fungal fruiting bodies	
1533	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210397.69	603346.48		15	8	1000	0.3	1	1	1	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1698	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210444.84	603313.83		10	11	800	0.23	1	1	1	1	2	2	2	3	3	3	2	2	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1699	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210431.68	603293.91		15	10	1000	0.3	1	1	1	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Unbalanced	
1700	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210434.04	603297.45		15	15	1500	0.48	1	1	1	2	2	3	3	3	3	4	2	2	3	2	3	2	2	1	2	3	1	1	1	1	Nothing to note	
1701	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210441.26	603308.88		15	12	1400	0.44	1	1	1	2	2	2	2	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1702	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210454.18	603284.23		17	10	2300	0.72	2	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Suspect union at 4m	
1703	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210452.31	603289.05		12	10	1300	0.4	3	1	1	2	2	2	2	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1704	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210493.94	603301.14		10	9	1300	0.4	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1705	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210491.35	603306.25		8	10	1000	0.32	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1706	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210486.38	603310.79		6	6	500	0.15	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1707	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210484.15	603309.1		10.5	8	1000	0.32	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1708	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210480.34	603280.77		11	9	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1709	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210483.18	603284.92		13	11	1300	0.42	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1710	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Quercus suber	Cork Oak	210471.87	603282.74		7.5	8	1800	0.55	1	1	1	2	2	2	3	3	3	4	2	2	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1711	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210476.72	603289.18		7	8	700	0.22	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1712	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210472.98	603299.99		10	10	1200	0.37	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1713	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210471.11	603304.63		13.5	11	1300	0.4	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1714	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210474.55	603305.75		10.5	10	1000	0.3	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1748	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210507.88	603271.04		11.5	4	700	0.2	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1749	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210505.4	603276.44		10	7	800	0.25	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1750	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210502.66	603282.56		10	6	800	0.25	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1751	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210499.37	603288.83		12.5	10	1700	0.52	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1752	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210496.74	603294.64		13	11	1500	0.46	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1753	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210535.44	603264.11		10.5	6	850	0.26	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1754	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210537.38	603265.13		10	6	1150	0.36	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1755	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210530.67	603267.81		9	7	800	0.24	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1756	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210528.75	603271.75		9	3	600	0.18	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1757	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210529.73	603271.21		12	7	1000	0.32	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1758	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210526.51	603277.47		8	5	800	0.25	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1759	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210524.2	603282.7		10	5	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1760	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210522.58	603285.16		11	4	800	0.25	1	2	2	1	2	2	2	3	3	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	Nothing to note	
1761	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210517.83	603295.14		12.5	4	900	0.28	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1762	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210515.37	603304.87		13	12	1500	0.46	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1763	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Willow-leaved peppermint	210549.83	603276.05		10	6	1200	0.36	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1764	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210547.32	603281.1		9.5	6	850	0.26	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1765	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210544.54	603286.36		9.5	8	700	0.22	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1766	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210542.05	603291.71		9.5	8	800	0.25	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1767	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210539.39	603296.84		6.5	6	850	0.26	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Scar at base	
1768	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210529.43	603305.89		10	9	1100	0.34	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1773	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210553.01	603303.29		19	8	1000	0.32	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1774	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210558.78	603302.19		8	6	600	0.18	2	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1775	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210562.24	603301.16		10.3	6	850	0.26	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1776	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210561.01	603298.01		8.5	7	850	0.26	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1777	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210568.23	603282.96		9	5	850	0.26	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1778	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210570.12	603277.95		8.5	6	800	0.24	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1779	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210574.61	603267.75		9.5	8	850	0.26	2	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1780	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210576.66	603263.21		9	9	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1781	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210622.36	603246.53		9	6	1000	0.3	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1782	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210620.64	603251.65		11.5	6	1300	0.4	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1783	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210619.52	603256.52		11.5	6	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1784	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210617.69	603261.11		9	7	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1785	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210615.6	603266.91		7.5	6	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1786	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210613.52	603272.87		10.5	6	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1787	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210609.08	603284.17		10.5	4	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1788	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210611.01	603287.87		7.3	4	700	0.2	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1789	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210607.16	603289.45		8.5	4	700	0.2	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1790	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210601.99	603290.9		6.8	5	700	0.2	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1791	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210606.13	603245.32		6.8	8	1000	0.3	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1792	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210602.1	603247.83		11	8	1000	0.3	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1793	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210600.29	603253.72		13	10	1300	0.4	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1794	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210598.38	603258.69		11	8	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1795	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210595.01	603268.82		11	6	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1796					ST, JL	REM	SPACELAB	17th March 2020	DEAD		210592.67	603273.75		0	0	0	0	1																									
1797	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus nicholii	Narrow leaved Peppermint	210588.33	603284.46		9.5	6	1000	0.3	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1798	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210585.92	603289.94		10	8.5	1000	0.3	1	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1799	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210577.43	603297.83		9.3	8	1300	0.4	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1800	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210621.23	603293.22		7	4	400	0.12	3	1	1	2	2	3	3	3	3	3	4	3	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1801	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210631.48	603287.55		5	4.5	700	0.2	3	1	1	2	2	3	3	3	3	3	4	3	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1802	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210635.59	603293.4		4	5.5	1000	0.3	3	1	1	2	2	1	2	3	3	4	2	3	3	2	2	2	2	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1803	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210635.91	603299.98		5.5	6	700	0.2	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1804	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210636.11	603273		19	21	2400	0.75	1	2	2	2	2	3	3	3	3	4	2	2	2	2	3	3	3	1	2	3	1	1	1	1	Scar at 4m	
1805	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210625.95	603284.49		19	17	1900	0.6	1	2	2	2	2	3	3	3	3	4	2	2	2	2	3	3	3	1	2	3	1	1	1	1	Large dead branches	
1807	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210648.68	603244.46		8.5	12	1300	0.4	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1808	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210647.08	603260.31		7.8	12	1000	0.3	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1809	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210650.25	603269.29		7	8	1400	0.42	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1810	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210642.5	603279.36		6	8	1000	0.3	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1811	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210643.46	603286.21		5.5	6	1000	0.3	3	1	1	2	2	1	2	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Defoliated by elm leaf beetle	
1812	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210637.03	603264.13		8.5	4	1000	0.3	3	1	1	2	2	2	2	3	3	3	3	3	3	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1817	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210420.19	603340.24		18.5	12	1800	0.55	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1818	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Gleditzia triacanthos	Honey Locust	210427.62	603336.61		17.5	14.4	1800	0.55	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	1	1	1	1	1	Asymmetric canopy	
1819	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Gleditzia triacanthos	Honey Locust	210430.71	603332.62		17.5	22	1900	0.6	1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	1	1	1	1	1	Nothing to note	
1820	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210423.24	603322.82		17.5	12	1600	0.5	1	2	2	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1821	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210415.95	603313.12		19	20	2600	0.8	1	2	2	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1822	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210426.58	603307.92		19	16	1750	0.55	1	1	1	2	2	1	2	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1823	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210431.98	603314.02		14	14	1600	0.5	1	2	2	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1824	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Ulmus procera	English Elm	210405.32	603312.29		14	13	1800	0.55	1	1	1	2	2	3	3	3	3	4	2	3	3	2	3	3	3	1	2	2	1	1	1	1	Poor union at 1m	
1825	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210391.73	603300.27		15	13	1600	0.5	1	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1826	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210395.48	603298.52		16	14	1750	0.55	1	1	1	2	2	3	3	3	3	2	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Leaning	
1827	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210388.57	603301.32		15	10	900	0.28	1	1	1	2	2	2	3	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1828	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210383.83	603303.6		19.5	11	1450	0.45	1	1	1	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1829	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210413.09	603299.04		15	8	850	0.26	1	1	1	2	2	3	3	3	3	4	2	2	3	2	2	3	2	1	2	3	1	1	1	1	Nothing to note	
1830	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210403.05	603337.04		15.5	8	1600	0.5	1	1	1	1	1	3	1	3	3	4	2	3	1	1	1	1	1	1	1	2	1	1	1	1	Almost dead	
1831	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210395.59	603340.85		18	14	1600	0.5	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Some dead wood	

APPENDIX A - TREE ASSESSMENT DATA
City to the Lake - West Basin Tree Assessment
March 2020

1835	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210369.68	603330.72		20.5	20	2900	0.9	1	1	1	2	2	3	3	3	3	4	2	2	2	2	3	3	3	1	2	3	1	1	1	1	Nothing to note	
1836					ST, JL	REM	SPACELAB	17th March 2020	DEAD		210368.62	603342.73		0	0	0	0	1																									
1837					ST, JL	REM	SPACELAB	17th March 2020	DEAD	DEAD	210366.04	603346.38		19	14	2200	0.7	1																									
1838	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210373.87	603348.46		21	11	2100	0.65	1	1	1	2	2	3	3	3	3	4	2	3	2	2	3	3	3	1	2	3	1	1	1	1	Nothing to note	
1839	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210380.93	603349.76		20	11	1900	0.6	1	1	1	2	2	3	3	3	3	4	2	3	2	2	3	3	3	1	2	3	1	1	1	1	Nothing to note	
1840	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210384.13	603348.3		17	8	1000	0.3	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1841	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210389.54	603347.99		15	2	900	0.43	1	1	1	2	2	3	3	3	3	4	2	3	2	2	3	3	3	1	2	3	1	1	1	1	Nothing to note	
1842	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210392.24	603349.67		22	8	1300	0.4	1	1	1	2	2	3	3	3	3	4	2	3	2	2	3	3	3	1	2	3	1	1	1	1	Nothing to note	
1843	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210390.5	603350.99		16	6	1000	0.3	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1844	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210395.84	603348.54		20	5	750	0.23	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1845	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210385.53	603351.85		12	4	800	0.25	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1846	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210377.97	603348.64		12.5	6	550	0.17	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1847	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210375.12	603352.29		8	4	700	2	1	1	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	2	3	1	1	1	1	Poor form, stunted	
1848					ST, JL	REM	SPACELAB	17th March 2020	DEAD	DEAD	210368.56	603352.12		15	8	1150	0.36	1																									
1849	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210404.53	603298.63		19	16	2200	0.7	1	2	2	2	2	2	3	3	3	2	2	2	1	1	1	1	1	1	2	3	1	1	1	1	Leaning	
1858	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210351.98	603349.69		14	8	1100	0.35	1	1	1	2	2	3	2	3	3	3	2	2	3	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1860	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210356.16	603352.33		12.5	4	1100	0.35	1	1	1	2	2	3	2	3	3	3	2	2	3	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
1861					ST, JL	REM	SPACELAB	17th March 2020	DEAD	DEAD	210345.04	603341.51		10.5	8	950	0.3	1																									
1862	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210352.38	603326.66		22	14	2650	0.85	1	2	2	2	2	3	3	3	3	4	2	2	2	3	3	3	3	1	3	3	1	1	1	1		
1863	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Ulmus carpinifolia	Smooth Leaf Elm	210380.88	603311.35		13	13	1500	0.45	1	1	1	2	2	3	3	3	3	4	2	3	3	2	3	3	3	1	2	2	1	1	1	1	Defoliated by elm leaf beetle	
1864	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Populus nigra 'Italica'	Lombardy poplar	210368.803	603318.06		20	4	1600		1	1	1	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1		
1878	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210317.46	603342.36		13	6	950	0.3	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1885	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210300.78	603343.13		12.5	14	2050	0.65	2	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1886	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210296.06	603340.95		12.5	10	1650	0.52	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1887	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210295.6	603346.56		17.5	17	1900	0.6	1	2	2	2	2	3	3	3	3	4	2	2	1	1	1	1	1	1	2	3	1	1	1	1	Poor unions	
1888	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210292.02	603343.48		17.5	8	1100	0.35	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Poor unions at 1m	
1889	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210287.15	603346.36		10	12	1250	0.4	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1890	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210281.09	603348.31		9.5	14	1550	0.5	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1891	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210276.75	603344.11		9	10	950	0.3	2	1	1	1	2	3	2	3	3	3	2	2	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1892	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210270.77	603343.67		11.5	10	1250	0.4	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1893	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210270.91	603348.96		19	11	1400	0.45	1	2	2	2	2	3	3	3	3	4	2	2	2	3	3	3	3	1	2	3	1	1	1	1	Nothing to note	
1894	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210264.65	603342.08		11	10	2200	0.7	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1895	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210260.42	603338.21		11	9	1900	0.6	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1896	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210259.66	603346.3		6.5	10	1250	0.4	1	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1912	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	209949.01	603250.11		7	12	1200	0.38	1	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Asymmetric canopy	
1913	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	209937.8	603252.11		15.5	15	2350	0.75	2	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1914	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus nicholii	Willow-leaved peppermint	209934.88	603246.43		15	10	1400	0.45	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1915	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	209936.6	603236.18		12	12	1100	0.35	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Numerous small dead branches	
1931					ST, JL		SPACELAB	17th March 2020	GONE		210003.44	603211.19		6.5	7	1100	0.34	9																									
1932	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210026.22	603278.08		10	14	2050	0.65	2	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1933	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210020.97	603277.64		10	14	2700	0.85	4	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1934	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210040.7	603275.42		15	6	900	0.28	1	2	2	1	2	2	2	3	3	2	2	2	2	1	1	1	1	1	2	2	1	1	1	1	Dead branches	
1935	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210043.1	603280.99		14	14	1750	0.56	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	2	1	1	1	1	Open, asymmetric crown	
1936					ST, JL	REM	SPACELAB	17th March 2020	DEAD	DEAD	210047.27	603283.79		10	5	1000	0.32	2																									
1937	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210048.45	603277.9		10	10	1750	0.55	2	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1938	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210052.49	603281.22		10	12	1250	0.4	2	1	1	2	2	3	3	3	3	4	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1939	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210052	603288.27		13	12	1550	0.5	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	2	1	1	1	1	Nothing to note	
1940	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210089.26	603287.67		12	16	2700	0.85	2	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1965	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Salix sp.	Willow	210104.79	603242.67		9	20	3900	1.25	2	1	1	1	1	2	2	3	3	1	2	3	3	1	1	1	1	1	1	1	1	1	1	1	Collapsed	
1976	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210139.6	603296.85		14	22	1650	0.52	3	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1980	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210097.33	603293.07		11.5	10	1500	0.48	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1981	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyputs cinerea	Argyle apple	210102.052	603295.619		12	10	1300		1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1		
1982	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210106.21	603292.98		13	10	1400	0.45	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1983	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210110.77	603293.64		13.5	12	1400	0.45	2	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1984	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210107.22	603297.48		11.5	15	1400	0.45	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Asymmetric crown	
1985	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210115.36	603297.37		8.5	6	700	0.23	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1986	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210113.58	603305.04		12	4.5	550	0.17	1	1	1	1	2	3	2	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	Nothing to note	
1987	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210116.21	603309.28		17	15	1650	0.52	1	2	2	2	2	3	3	3	3	4	2	2	2	3	3	3	3	1	2	3	1	1	1	1	Nothing to note	
1988	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210120.79	603305.27		5.5	5	1100	0.35	2	1	1	2	2	3	2	3	3	3	2	2	3	1	1	1	1	1	1	2	1	1	1	1	Nothing to note	
1989	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210124.53	603307.99		9	8	1450	0.46	3	1	1	2	2	3	3	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
1990	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210128.52	603312.03		10	6	900	0.3	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1991	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210133	603315.96		10	7	1100	0.34	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1994	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210141.85	603315.69		12	12	1550	0.5	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1995	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210145.23	603320.81		13	15	2700	0.86	2	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1996	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210151.92	603317.52		15.5	7	1250	0.4	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1997	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210150.82	603321.14		14.5	6.5	950	0.3	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1998	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210155.6	603322.59		13.5	10	1550	0.5	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
1999	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210164.68	603323.15		13	7	950	0.3	1	1	1	2	2	3	3	3	3	4	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2000	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210170.34	603327.44		10.5	8	1400	0.45	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2001	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210176.04	603328.26		13	6	1700	0.55	2	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2002	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210174.6	603332.31		10	5	950	0.3	1	1	1	2	2	3	2	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2003	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210173.01	603336.86		6	6	1550	0.5	4	1	1	2	2	3	2	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2036	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210253.16	603335.29		5.5	4	1250	0.4	3	1	1	2	2	3	3	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2046	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210242.66	603331.51		10	8	1100	0.35	1	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2050	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210236.52	603331.81		10.5	14	2100	0.66	4	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2051	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210236.07	603339.83		7.5	4.5	1100	0.36	4	1	1	2	2	3	3	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2052	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210229.92	603336.43		13.5	10	1400	0.44	2	1	1	2	2	3	3	3	3	4	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2053	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210230.33	603332.49		11	8	1300	0.42	3	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2059	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210225.47	603333.25		10	8	900	0.25	1	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2060	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210223.09	603337.71		11	13	1800	0.56	2	1	1	2	2	3	3	3	3	4	2	2	3	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2061	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210216.44	603339.94		7.5	6	850	0.27	1	1	1	2	2	3	2	3	3	4	2	2	3	1	1	1	1	1	2	2	1	1	1	1	Rot at base	
2062	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210207.48	603339.04		12	9	1100	0.36	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2063	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210200.94	603340.53		11.5	7	950	0.3	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2064	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210195.15	603343.46		15.5	7	850	0.27	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2065	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210190.67	603340.94		17.5	10	1500	0.48	1	1	1	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2066	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210184.75	603345.83		5.5	10	800	0.26	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2067	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210189.14	603346.32		10.5	10	900	0.3	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2068	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210204.58	603350.06		9	7	1700	0.53	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2069	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210167.43	603336.7		11	11	950	0.3	1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2276	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalytpus cinerea	Argyle apple	210640.57	603317.468		9	8	2300		3	2	2	2	2	2	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1		
2277	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalytpus cinerea	Argyle apple	210644.418	603313.872		9	9	1600		1	2	2	2	2	2	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1		
2278	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus maidenii	Maiden's Gum	210639.6	603293.91		16	22	2200	0.7	1	2	2	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2279	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus cinerea	Argyle apple	210623.97	603307.2		10.5	13	1800	0.55	1	1	1	2	2	3	3	3	3	4	2	2	2	2	3	3	2	1	2	3	1	1	1	1	Nothing to note	
2323	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210527.72	603330.8		11	7	1100	0.35	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2324	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210522.35	603331.3		12.8	11	1300	0.4	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2325	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210514.44	603328.72		14.4	12	1500	0.47	1	2	2	2	2	3	3	3	3	4	2	2	2	2	2	2	2	1	2	3	1	1	1	1	Nothing to note	
2326	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210509.9	603331.82		7.5	6	800	0.25	1	1	1	2	2	3	2	3	3	3	2	2	3	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
2327	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210504	603333.48		9	8	800	0.25	1	1	1	2	2	3	2	3	3	3	2	2	3	1	1	1	1	1	2	2	1	1	1	1	Nothing to note	
2328	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210487.92	603330.47		15.5	18	1800	0.55	1	1	1	2	2	2	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
2329	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210489.26	603335.98		17	22	2100	0.65	1	3	3	2	2	3	2	3	2	4	2	2	1	1	1	1	1	1	2	3	1	1	1	1	Defect at 2m	
2334	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus melliodora	Yellow box	210470.36	603321.73		12.5	8	1000	0.3	1	1	1	2	2	3	3	3	3	3	2	2	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	
G01	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Salix sp.	Willow	209968.453	603209.387						3	1	1	2	2	3	2	3	3	3	2	3	3	1	1	1	1	1	1	1	1	1	1	1	Weed species	1
G02	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Populus alba	White poplar	209956.794	603228.95						1	1	1	2	2	3	3	3	3	4	2	3	3	2	2	2	2	1	1	2	1	1	1	1	Weed species	1
G03	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Salix sp.	Willow	210122.705	603249.161						6	2	2	2	2	3	2	3	3	4	2	3	2	1	1	1	1	1	1	1	1	1	1	1	Weed species	1
G04	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Populus alba	White poplar	210152.095	603301.772						1	1	1	2	2	3	3	3	3	4	2	3	3	2	2	2	2	1	1	2	1	1	1	1	Weed species	1
G05	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210253.707	603320.003						1	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	2	2	1	1	1	Weed species	1
G06	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Salix sp.	Willow	210303.581	603292.055						7	1	1	2	2	3	3	3	3	4	2	3	2	2	3	3	3	1	1	2	1	1	1	1	Weed species	1
G07	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Eucalyptus mannifera	White brittle gum	210327.401	603350.223						1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	Well spaced trees, some mower damage at ba	1
G08	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Populus nigra 'Italica'	Lombardy poplar	210413.756	603280.577						1	1	1	2	2	3	3	3	3	4	2	3	2	2	3	3	3	1	2	2	1	1	1	1	Nothing to note	1
G09	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210386.332	603334.374						1	1	1	2	2	3	3	3	3	4	2	2	2	1	1	1	1	1	2	3	1	1	1	1	3 large trees leaning out from each other	2
G10	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Casuarina cunninghamiana	River Sheoak	210443.554	603345.435						1	1	1	2	2	3	3	3	3	4	3	3	3	1	1	1	1	1	2	3	1	1	1	1	Nothing to note	2
G11	Y	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Eucalyptus bicostata	Southern Blue Gum	210462.503	603332.523						1	2	2	2	2	3	3	3	3	4	2	2	1	2	3	3	3	1	2	3	1	1	1	1	Nothing to note	2
G12	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Prunus cerasifera	Cherry Plum	210571.849	603318.588						Multi	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	1	1	1	1	1	Nothing to note	1
G13	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210600.36	602968.914						1 to 4	1	1	2	2	3	3	3	3	4	2	3	3	1	1	1	1	1	1	2	1	1	1	1	Weed species	2
G14	N	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Acer negundo	Box Elder	210565.139	602964.951						1	1	1	2	2	2	2	3	3	4	2	3	3	1	1	1	1	1	2	1	1	1	1	1	Weed species	1
G15	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Pyrus ussuriensis	Manchurian Pear	210576.447	603140.122						1	1	1	2	2	3	3	3	3	4	2	3	3	2	3	2	3	1	2	3	1	1	1	1	Nothing to note	1
G16	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Pyrus ussuriensis	Manchurian Pear	210567.711	603208.622						1	1	1	2	2	3	3	3	3	4	2	3	3	2	3	2	3	1	2	3	1	1	1	1	Nothing to note	1
G17	Y	No	P	L	ST, JL	REM	SPACELAB	17th March 2020	Populus alba	White poplar	210496.17	603220.27						1 to 3	1	1	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	1	1	1	1	1	1	Weed species	2
G18	N	No	M	M	ST, JL	RET	SPACELAB	17th March 2020	Prunus cerasifera	Cherry Plum	210476.143	603215.383						Multi	1	1	2	2	3	3	3	3	4	2	3	3	2	2	2	2	1	1	1	1	1	1	1	Nothing to note	1
G19	Y	No	M	H	ST, JL	RET	SPACELAB	17th March 2020	C. cunninghamiana/P. nigra	River Sheoak	210515.752	603163.563						1	1	1	2	2	3	3	3	3	4	2	2	3	2	3	3	3	1	2	2	1	1	1	1	Nothing to note	2
G20	Y	No	P	M	ST, JL	REM	SPACELAB	17th March 2020	S.babylonica/F.oxycarpa	Weeping Willow	210523.19	603046.929						1	1	1	2	2	3	3	3	3	4	2	3	2	1	1	1	1	1	2	2	1	1	1	1	Very near water edge	2
G21					ST, JL		SPACELAB	17th March 2020	GONE		210544.503	602822.245						1																									2
G22					ST, JL		SPACELAB	17th March 2020	GONE		210547.369	602800.59						1																									2
G23					ST, JL		SPACELAB	17th March 2020	GONE		210547.141	602768.037						1																									2
G24					ST, JL		SPACELAB	17th March 2020	GONE		210591.37	602822.185						1																									1

APPENDIX B – TREE ASSESSMENT DRAWINGS

WEST BASIN
CITY TO LAKE
TREE ASSESSMENT

PROJECT No. J20-00694
ISSUE DATE: 30.03.2020
ISSUE: C

DRAWING SCHEDULE

TREE ASSESSMENT DRAWINGS:

Drawing NO.	Drawing Title	Scale @A3	Revision
TA1	TREE ASSESSMENT - ARBORICULTURAL ASSESSMENT SHEET 1	1:1000	C
TA2	TREE ASSESSMENT - ARBORICULTURAL ASSESSMENT SHEET 2	1:1000	C
TA3	TREE ASSESSMENT - ARBORICULTURAL ASSESSMENT SHEET 3	1:1000	C
TA4	TREE ASSESSMENT - ARBORICULTURAL ASSESSMENT SHEET 4	1:1000	C
TA5	TREE ASSESSMENT - ARBORICULTURAL ASSESSMENT SHEET 5	1:1000	C
TA6	TREE ASSESSMENT - URBAN AMENITY ASSESSMENT SHEET 1	1:1000	C
TA7	TREE ASSESSMENT - URBAN AMENITY ASSESSMENT SHEET 2	1:1000	C
TA8	TREE ASSESSMENT - URBAN AMENITY ASSESSMENT SHEET 3	1:1000	C
TA9	TREE ASSESSMENT - URBAN AMENITY ASSESSMENT SHEET 4	1:1000	C
TA10	TREE ASSESSMENT - URBAN AMENITY ASSESSMENT SHEET 5	1:1000	C

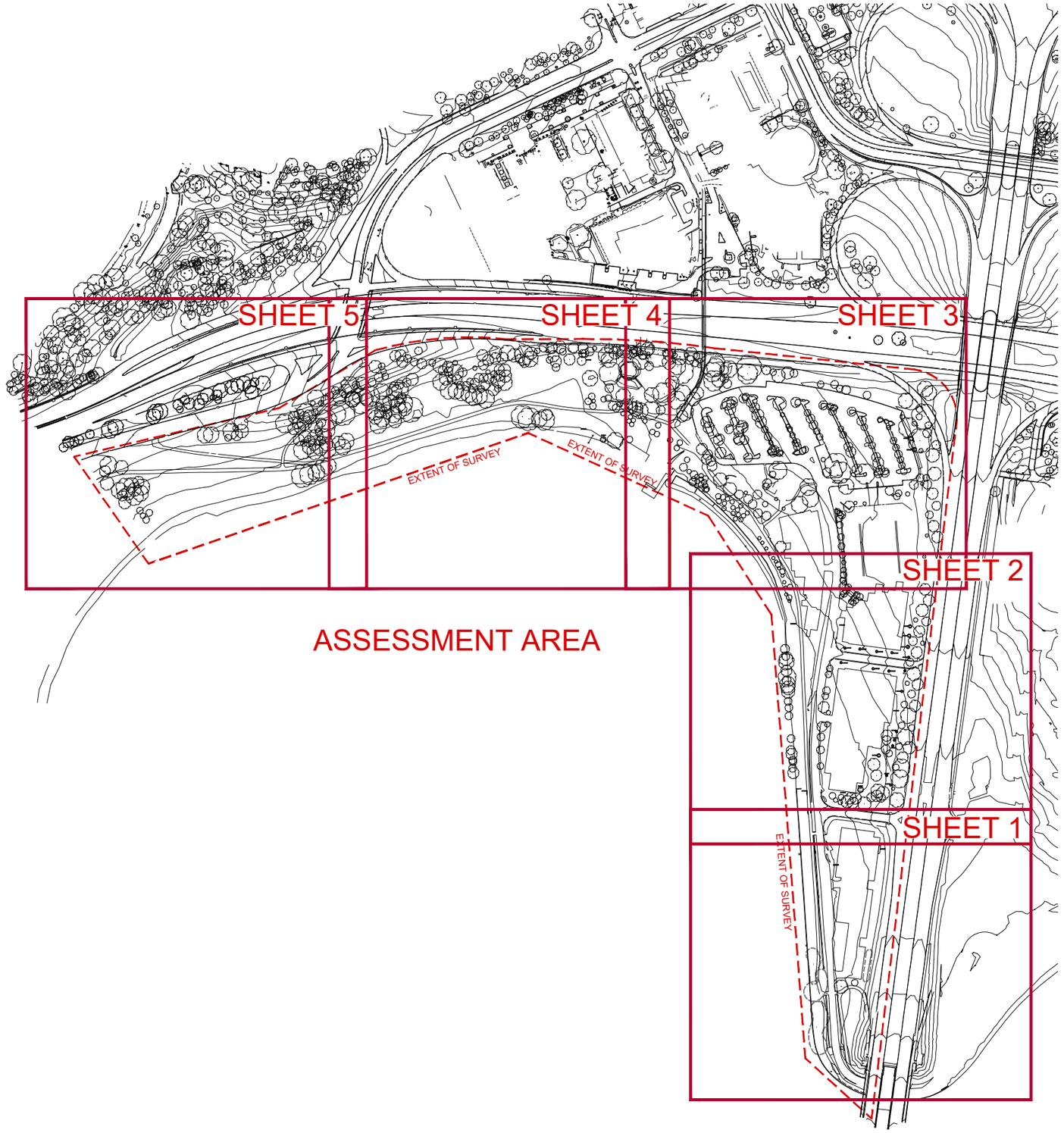
THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

CONSULTANT

SPACELAB
CREATING TIMELESS PLACES

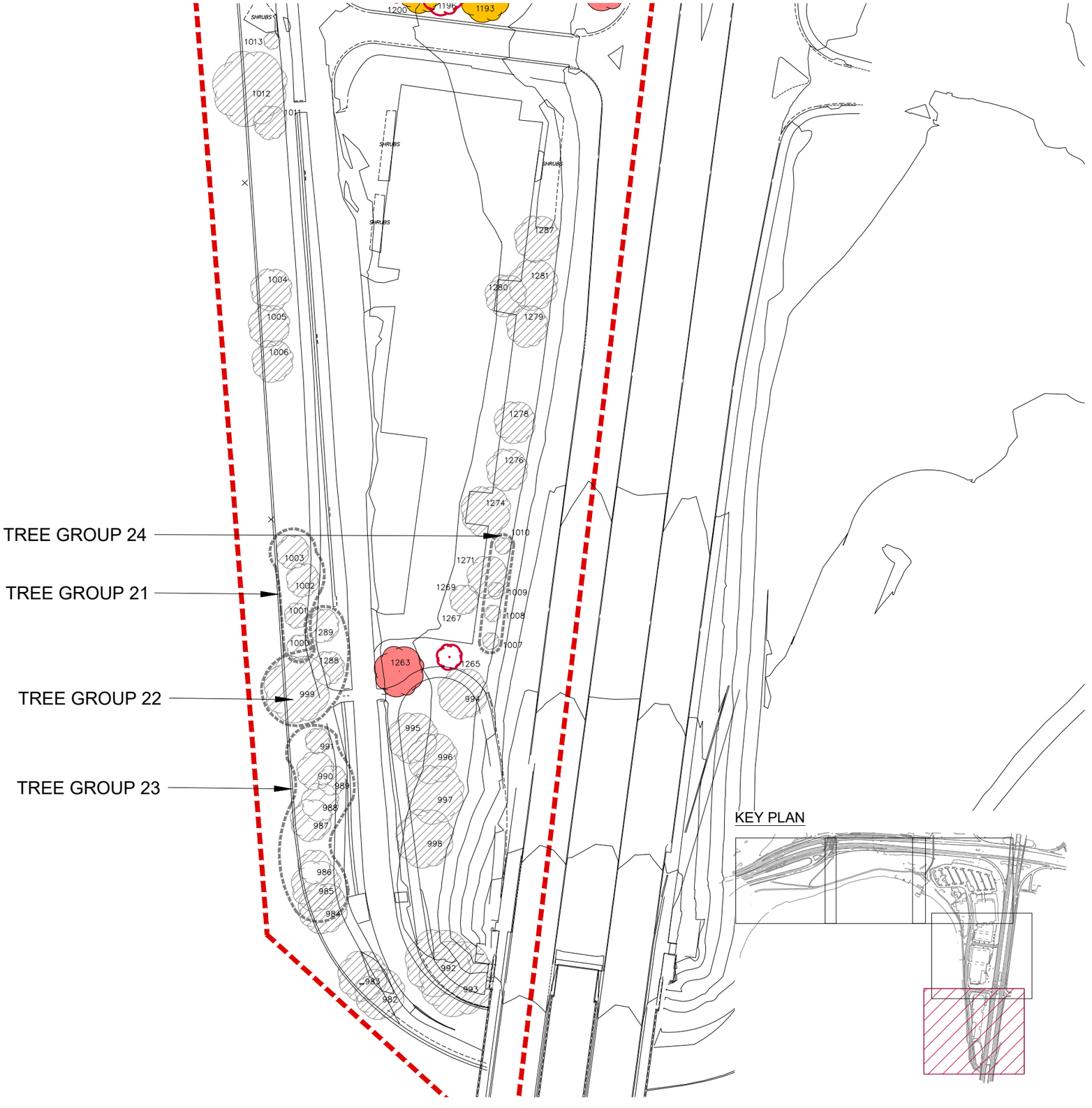
CLIENT

ACT Government | CITY RENEWAL AUTHORITY



WEST BASIN - CITY TO LAKE - KEY MAP
Scale: 1:2000@A1

N



KEY PLAN

LEGEND

SURVEY DATA

EXTENT OF SURVEY

14 — SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1 — HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ARBORICULTURAL ASSESSMENT RATINGS

TREE CLASSIFICATION STATUS

H — HIGH QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- TREE STRUCTURE, APPEARANCE FORM AND BALANCE IS CONSIDERED TYPICAL
- LITTLE NO EVIDENCE OF INSECT/PARASITE ATTACK, EPICORMIC GROWTH AND/OR DEAD WOOD

M — MEDIUM QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- SPARSE OR PALE COLOURED FOLIAGE
- EPICORMIC GROWTH AND/OR DEAD WOOD THROUGHOUT THE CROWN
- EVIDENCE OF SOME BRANCH FALL
- LESS THAN DESIRABLE FORM

P — POOR QUALITY REGULATED TREE

LIMITED LIFE EXPECTANCY (LESS THAN 5-10 YEARS) AND/OR
- LIMITED HABITAT VALUE; AND/OR
- SIGNIFICANT RISK POTENTIAL WITH REGARD TO:
- POOR FORM, HEALTH AND CONDITION, SIGNIFICANT DIE BACK OR SPARSE CANOPY; AND/OR
- PHYSICAL DAMAGE, DISEASE, DECAY, SUSCEPTIBLE TO LARGE LIMB DROP, INCLUDED BARK FORKS ETC

HIGH QUALITY NON-REGULATED TREE
- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT WHICH EXHIBITS EXCELLENT FORM AND HEALTH WITH POTENTIAL TO:
  – BECOME A HIGH QUALITY REGULATED TREE; AND
  – CONTRIBUTE POSITIVELY TO THE LANDSCAPE CHARACTER / URBAN AMENITY OF THE PLACE IN THE FUTURE

MEDIUM QUALITY NON-REGULATED TREE
- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT. THIS ASSESSMENT MAY INCLUDE TREE(S) WHICH EXHIBIT SOME NEGATIVE CHARACTERISTICS WHICH, WITH COST EFFECTIVE MAINTENANCE AND/OR MANAGEMENT THESE TREES HAVE THE POTENTIAL TO BECOME:
  – A HIGH QUALITY REGULATED TREE; AND
  – CONTRIBUTE POSITIVELY TO LANDSCAPE CHARACTER AND / OR URBAN AMENITY OF THE PLACE IN THE FUTURE

POOR QUALITY NON-REGULATED TREE

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
A	FIRST ISSUE FOR APPROVAL	21/05/2014	JL/ST	GM	JE	JE
B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

DRAWING STATUS
Warning unless there is an authorised **SPACE**LAB in the approved for issue column, this drawing is not approved for issue.

CLIENT: ACT Government — CITY RENEWAL AUTHORITY

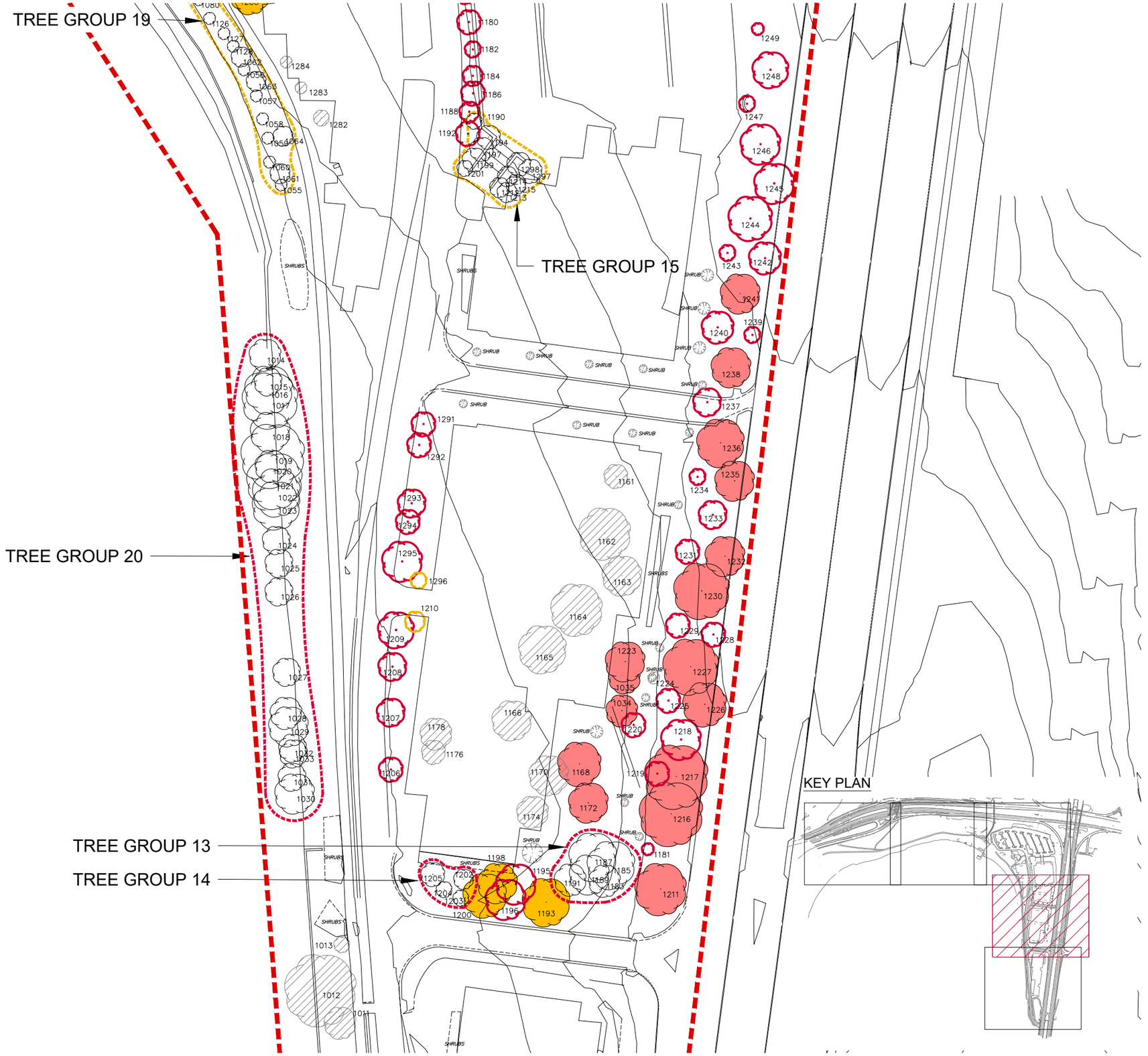
CONSULTANT: SPACELAB — CREATING TIMELESS PLACES

PROJECT: WEST BASIN CITY TO LAKE

DRAWING: TREE ASSESSMENT PLAN ARBORICULTURAL ASSESSMENT SHEET 1

SCALE @ A1: 1:500 — SCALE @ A3: 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA1	DA	C



LEGEND

SURVEY DATA

- EXTENT OF SURVEY
- SURVEYED EXISTING TREE WITH TREE NUMBER
- OFFSITE TREE NOT ASSESSED IN THESE WORKS
- TREE GROUP 1 — HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER
- TREE GROUP 1 — MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER
- TREE GROUP 1 — POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER
- TREE GROUP 1 — PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ARBORICULTURAL ASSESSMENT RATINGS

TREE CLASSIFICATION STATUS

H — HIGH QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- TREE STRUCTURE, APPEARANCE FORM AND BALANCE IS CONSIDERED TYPICAL
- LITTLE NO EVIDENCE OF INSECT/PARASITE ATTACK, EPICORMIC GROWTH AND/OR DEAD WOOD

M — MEDIUM QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- SPARSE OR PALE COLOURED FOLIAGE
- EPICORMIC GROWTH AND/OR DEAD WOOD THROUGHOUT THE CROWN
- EVIDENCE OF SOME BRANCH FALL
- LESS THAN DESIRABLE FORM

P — POOR QUALLITY REGULATED TREE

LIMITED LIFE EXPECTANCY (LESS THAN 5-10 YEARS) AND/OR
- LIMITED HABITAT VALUE; AND/OR
- SIGNIFICANT RISK POTENTIAL WITH REGARD TO:
- POOR FORM, HEALTH AND CONDITION, SIGNIFICANT DIE BACK OR SPARSE CANOPY; AND/OR
- PHYSICAL DAMAGE, DISEASE, DECAY, SUSCEPTIBLE TO LARGE LIMB DROP, INCLUDED BARK FORKS ETC

HIGH QUALITY NON-REGULATED TREE
- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT WHICH EXHIBITS EXCELLENT FORM AND HEALTH WITH POTENTIAL TO:
  - BECOME A HIGH QUALITY REGULATED TREE; AND
  - CONTRIBUTE POSITIVELY TO THE LANDSCAPE CHARACTER / URBAN AMENITY OF THE PLACE IN THE FUTURE

MEDIUM QUALITY NON-REGULATED TREE
- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT. THIS ASSESSMENT MAY INCLUDE TREE(S) WHICH EXHIBIT SOME NEGATIVE CHARACTERISTICS WHICH, WITH COST EFFECTIVE MAINTENANCE AND/OR MANAGEMENT THESE TREES HAVE THE POTENTIAL TO BECOME:
  - A HIGH QUALITY REGULATED TREE; AND
  - CONTRIBUTE POSITIVELY TO LANDSCAPE CHARACTER AND / OR URBAN AMENITY OF THE PLACE IN THE FUTURE

POOR QUALITY NON-REGULATED TREE

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

DRAWING 0 5 10 20m

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
A	FIRST ISSUE FOR APPROVAL	21/05/2014	JL/ST	GM	JE	JE
B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

DRAWING STATUS
Warning unless there is an authorised **SPACE**LAB in the approved for issue column, this drawing is not approved for issue.

CLIENT: ACT Government — CITY RENEWAL AUTHORITY

CONSULTANT: SPACELAB CREATING TIMELESS PLACES

PROJECT: WEST BASIN CITY TO LAKE

TREE ASSESSMENT PLAN
ARBORICULTURAL ASSESSMENT
SHEET 2

SCALE @ A1 1:500 SCALE @ A3 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA2	DA	C

TREE GROUP 9

TREE GROUP 10

TREE GROUP 11

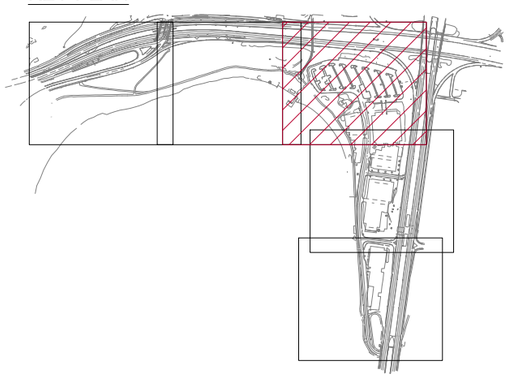
TREE GROUP 12

TREE GROUP 17

TREE GROUP 16

TREE GROUP 19

KEY PLAN



LEGEND

SURVEY DATA

EXTENT OF SURVEY

14 — SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1 — 14 — HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — 14 — MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — 14 — POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — 14 — PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ARBORICULTURAL ASSESSMENT RATINGS

TREE CLASSIFICATION STATUS

H — HIGH QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- TREE STRUCTURE, APPEARANCE FORM AND BALANCE IS CONSIDERED TYPICAL
- LITTLE NO EVIDENCE OF INSECT/PARASITE ATTACK, EPICORMIC GROWTH AND/OR DEAD WOOD

M — MEDIUM QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- SPARSE OR PALE COLOURED FOLIAGE
- EPICORMIC GROWTH AND/OR DEAD WOOD THROUGHOUT THE CROWN
- EVIDENCE OF SOME BRANCH FALL
- LESS THAN DESIRABLE FORM

P — POOR QUALITY REGULATED TREE

LIMITED LIFE EXPECTANCY (LESS THAN 5-10 YEARS) AND/OR
- LIMITED HABITAT VALUE; AND/OR SIGNIFICANT RISK POTENTIAL WITH REGARD TO:
- POOR FORM, HEALTH AND CONDITION, SIGNIFICANT DIE BACK OR SPARSE CANOPY; AND/OR
- PHYSICAL DAMAGE, DISEASE, DECAY, SUSCEPTIBLE TO LARGE LIMB DROP, INCLUDED BARK FORKS ETC

HIGH QUALITY NON-REGULATED TREE

- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT WHICH EXHIBITS EXCELLENT FORM AND HEALTH WITH POTENTIAL TO:
  - BECOME A HIGH QUALITY REGULATED TREE; AND
  - CONTRIBUTE POSITIVELY TO THE LANDSCAPE CHARACTER / URBAN AMENITY OF THE PLACE IN THE FUTURE

MEDIUM QUALITY NON-REGULATED TREE

- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT. THIS ASSESSMENT MAY INCLUDE TREE(S) WHICH EXHIBIT SOME NEGATIVE CHARACTERISTICS WHICH, WITH COST EFFECTIVE MAINTENANCE AND/OR MANAGEMENT THESE TREES HAVE THE POTENTIAL TO BECOME:
  - A HIGH QUALITY REGULATED TREE; AND
  - CONTRIBUTE POSITIVELY TO LANDSCAPE CHARACTER AND / OR URBAN AMENITY OF THE PLACE IN THE FUTURE

POOR QUALITY NON-REGULATED TREE

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
A	FIRST ISSUE FOR APPROVAL	21/05/2014	JL/ST	GM	JE	JE
B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

DRAWING STATUS
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CLIENT: ACT Government — CITY RENEWAL AUTHORITY

CONSULTANT: SPACELAB — CREATING TIMELESS PLACES

PROJECT: WEST BASIN CITY TO LAKE

DRAWING: TREE ASSESSMENT PLAN ARBORICULTURAL ASSESSMENT SHEET 3

SCALE @ A1: 1:500 — SCALE @ A3: 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA3	DA	C

TREE GROUP 7

TREE GROUP 9

TREE GROUP 5

TREE GROUP 4

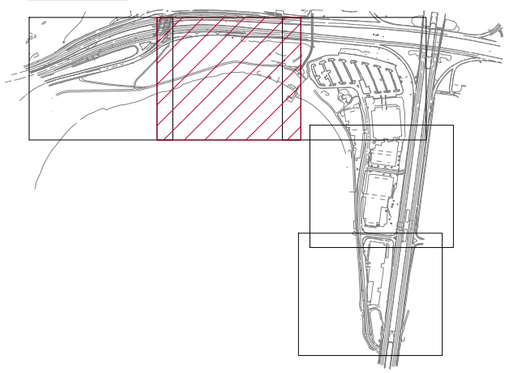
TREE GROUP 6

TREE GROUP 8

SHRUBS

SHRUB

KEY PLAN



LEGEND

SURVEY DATA

EXTENT OF SURVEY

14 — SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1 — HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ARBORICULTURAL ASSESSMENT RATINGS

TREE CLASSIFICATION STATUS

H — HIGH QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- TREE STRUCTURE, APPEARANCE FORM AND BALANCE IS CONSIDERED TYPICAL
- LITTLE NO EVIDENCE OF INSECT/PARASITE ATTACK, EPICORMIC GROWTH AND/OR DEAD WOOD

M — MEDIUM QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- SPARSE OR PALE COLOURED FOLIAGE
- EPICORMIC GROWTH AND/OR DEAD WOOD THROUGHOUT THE CROWN
- EVIDENCE OF SOME BRANCH FALL
- LESS THAN DESIRABLE FORM

P — POOR QUALLITY REGULATED TREE

LIMITED LIFE EXPECTANCY (LESS THAN 5-10 YEARS) AND/OR
- LIMITED HABITAT VALUE; AND/OR SIGNIFICANT RISK POTENTIAL WITH REGARD TO:
- POOR FORM, HEALTH AND CONDITION, SIGNIFICANT DIE BACK OR SPARSE CANOPY; AND/OR
- PHYSICAL DAMAGE, DISEASE, DECAY, SUSCEPTIBLE TO LARGE LIMB DROP, INCLUDED BARK FORKS ETC

HIGH QUALITY NON-REGULATED TREE

- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT WHICH EXHIBITS EXCELLENT FORM AND HEALTH WITH POTENTIAL TO:
- BECOME A HIGH QUALITY REGULATED TREE; AND
- CONTRIBUTE POSITIVELY TO THE LANDSCAPE CHARACTER / URBAN AMENITY OF THE PLACE IN THE FUTURE

MEDIUM QUALITY NON-REGULATED TREE

- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT. THIS ASSESSMENT MAY INCLUDE TREE(S) WHICH EXHIBIT SOME NEGATIVE CHARACTERISTICS WHICH, WITH COST EFFECTIVE MAINTENANCE AND/OR MANAGEMENT THESE TREES HAVE THE POTENTIAL TO BECOME:
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- CONTRIBUTE POSITIVELY TO LANDSCAPE CHARACTER AND / OR URBAN AMENITY OF THE PLACE IN THE FUTURE

POOR QUALITY NON-REGULATED TREE

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

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B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

CLIENT: ACT Government — CITY RENEWAL AUTHORITY

CONSULTANT: SPACELAB — CREATING TIMELESS PLACES

PROJECT: WEST BASIN CITY TO LAKE

DRAWING: TREE ASSESSMENT PLAN ARBORICULTURAL ASSESSMENT SHEET 4

SCALE @ A1: 1:500 — SCALE @ A3: 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA4	DA	C

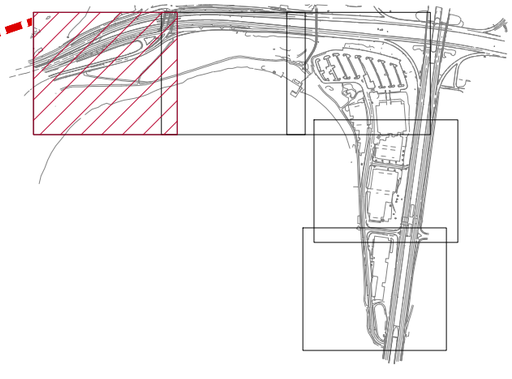
TREE GROUP 4

TREE GROUP 2

TREE GROUP 3

TREE GROUP 1

KEY PLAN



LEGEND

SURVEY DATA

EXTENT OF SURVEY

14 — SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1 — HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1 — PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ARBORICULTURAL ASSESSMENT RATINGS

TREE CLASSIFICATION STATUS

H — HIGH QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- TREE STRUCTURE, APPEARANCE FORM AND BALANCE IS CONSIDERED TYPICAL
- LITTLE NO EVIDENCE OF INSECT/PARASITE ATTACK, EPICORMIC GROWTH AND/OR DEAD WOOD

M — MEDIUM QUALITY REGULATED TREE

MATURE TREE SPECIMEN
- SPARSE OR PALE COLOURED FOLIAGE
- EPICORMIC GROWTH AND/OR DEAD WOOD THROUGHOUT THE CROWN
- EVIDENCE OF SOME BRANCH FALL
- LESS THAN DESIRABLE FORM

P — POOR QUALITY REGULATED TREE

LIMITED LIFE EXPECTANCY (LESS THAN 5-10 YEARS) AND/OR
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- SIGNIFICANT RISK POTENTIAL WITH REGARD TO:
- POOR FORM, HEALTH AND CONDITION, SIGNIFICANT DIE BACK OR SPARSE CANOPY; AND/OR
- PHYSICAL DAMAGE, DISEASE, DECAY, SUSCEPTIBLE TO LARGE LIMB DROP, INCLUDED BARK FORKS ETC

HIGH QUALITY NON-REGULATED TREE
- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT WHICH EXHIBITS EXCELLENT FORM AND HEALTH WITH POTENTIAL TO:
  – BECOME A HIGH QUALITY REGULATED TREE; AND
  – CONTRIBUTE POSITIVELY TO THE LANDSCAPE CHARACTER / URBAN AMENITY OF THE PLACE IN THE FUTURE

MEDIUM QUALITY NON-REGULATED TREE
- JUVENILE OR ADOLESCENT SPECIMEN (OR GROUP OF TREES OR REGENERATION) THAT DOES NOT MEET THE PRESCRIBED REQUIREMENTS OF THE TREE PROTECTION ACT. THIS ASSESSMENT MAY INCLUDE TREE(S) WHICH EXHIBIT SOME NEGATIVE CHARACTERISTICS WHICH, WITH COST EFFECTIVE MAINTENANCE AND/OR MANAGEMENT THESE TREES HAVE THE POTENTIAL TO BECOME:
  – A HIGH QUALITY REGULATED TREE; AND
  – CONTRIBUTE POSITIVELY TO LANDSCAPE CHARACTER AND / OR URBAN AMENITY OF THE PLACE IN THE FUTURE

POOR QUALITY NON-REGULATED TREE

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

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B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

DRAWING STATUS
Warning unless there is an authorised **SPACE**LAB in the approved for issue column, this drawing is not approved for issue.

CLIENT: ACT Government — CITY RENEWAL AUTHORITY

CONSULTANT: SPACELAB CREATING TIMELESS PLACES

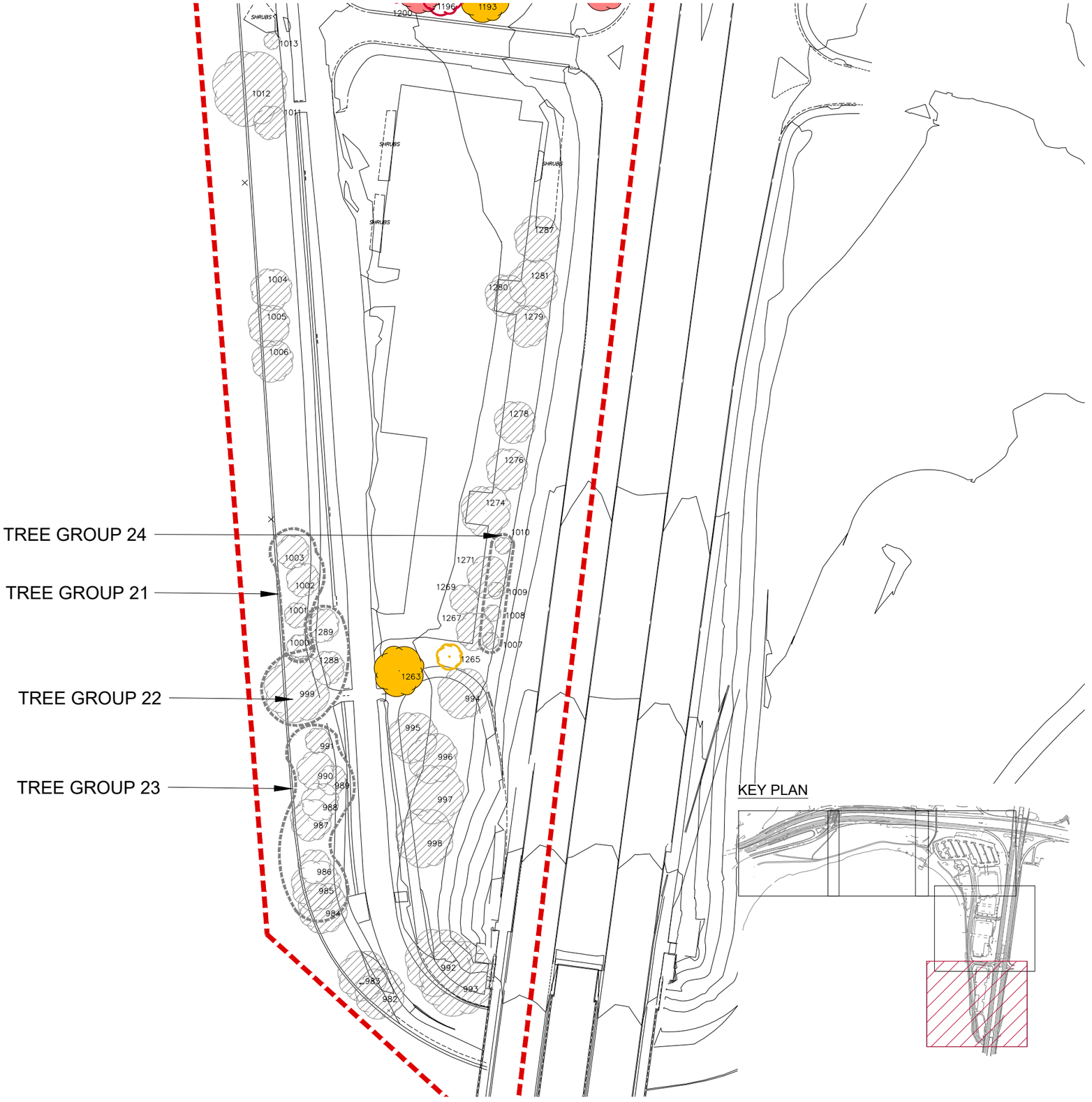
PROJECT: WEST BASIN CITY TO LAKE

DRAWING: TREE ASSESSMENT PLAN ARBORICULTURAL ASSESSMENT SHEET 5

0 5 10 20m

SCALE @ A1 1:500 SCALE @ A3 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA5	DA	C



KEY PLAN

LEGEND

SURVEY DATA

EXTENT OF SURVEY

SURVEYED EXISTING TREE
WITH TREE NUMBER

OFFSITE TREE
NOT ASSESSED IN THESE
WORKS

TREE GROUP 1
EXCEPTIONAL VALUE SURVEYED EXISTING GROUP OF TREES
WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
HIGH VALUE SURVEYED EXISTING GROUP OF TREES
WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES
WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
POOR VALUE SURVEYED EXISTING GROUP OF TREES
WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
PREVIOUSLY REMOVED GROUP OF TREES
WITH GROUP IDENTIFIER & TREE NUMBER

ASSESSMENT DATA

URBAN AMENITY ASSESSMENT RATINGS

H
HIGH QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES WHICH MAY OR MAY NOT ATTAIN THE STATUS OF BEING A REGULATED TREE THAT EXHIBIT THE FOLLOWING:
- GOOD FORM, HEALTH AND CONDITION WITHOUT SIGNIFICANT DEFECTS
- WHERE RETAINED AND MANAGED IS UNLIKELY TO PRESENT AN UNREASONABLE FINANCIAL IMPOST OR PUBLIC RISK
-

M
MEDIUM QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES THAT IS CONSIDERED TO REQUIRE EXPENDITRE WITH REGARD TO ITS LONG TERM MANAGEMENT TO ATTAIN A HIGH VALUE AND IS ASSESSED TO BE OF LITTLE (IF ANY) HABITAT VALUE

L
LOW QUALITY URBAN AMENITY TREE - REGULATED
A TREE OF POOR FORM, STRUCTURE OR HEALTH WITH LITTLE , IF ANY, HABITAT VALUE

HIGH QUALITY URBAN AMENITY TREE
NON REGULATED

MEDIUM QUALITY URBAN AMENITY TREE
NON REGULATED

LOW QUALITY URBAN AMENITY TREE
NON REGULATED

DEAD TREE

TREE NOT PRESENT ON SITE
PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO THE LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
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B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

CLIENT
ACT Government
CITY RENEWAL AUTHORITY

CONSULTANT
SPACELAB
CREATING TIMELESS PLACES

PROJECT
WEST BASIN
CITY TO THE LAKE

DRAWING
TREE ASSESSMENT PLAN
URBAN AMENITY ASSESSMENT
SHEET 1

0 5 10 20m
SCALE @ A1 1:500
SCALE @ A3 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA6	DA	C

TREE GROUP 19

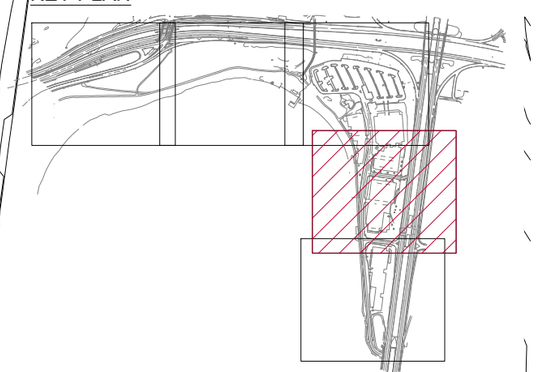
TREE GROUP 15

TREE GROUP 20

TREE GROUP 13

TREE GROUP 14

KEY PLAN



LEGEND

SURVEY DATA

EXTENT OF SURVEY

SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1

EXCEPTIONAL VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ASSESSMENT DATA

URBAN AMENITY ASSESSMENT RATINGS

H

HIGH QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES WHICH MAY OR MAY NOT ATTAIN THE STATUS OF BEING A REGULATED TREE THAT EXHIBIT THE FOLLOWING:
- GOOD FORM, HEALTH AND CONDITION WITHOUT SIGNIFICANT DEFECTS
- WHERE RETAINED AND MANAGED IS UNLIKELY TO PRESENT AN UNREASONABLE FINANCIAL IMPOST OR PUBLIC RISK
-

M

MEDIUM QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES THAT IS CONSIDERED TO REQUIRE EXPENDITRE WITH REGARD TO ITS LONG TERM MANAGEMENT TO ATTAIN A HIGH VALUE AND IS ASSESSED TO BE OF LITTLE (IF ANY) HABITAT VALUE

L

LOW QUALITY URBAN AMENITY TREE - REGULATED
A TREE OF POOR FORM, STRUCTURE OR HEALTH WITH LITTLE , IF ANY, HABITAT VALUE

HIGH QUALITY URBAN AMENITY TREE NON REGULATED

MEDIUM QUALITY URBAN AMENITY TREE NON REGULATED

LOW QUALITY URBAN AMENITY TREE NON REGULATED

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO THE LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
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B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

CLIENT: ACT Government — CITY RENEWAL AUTHORITY

CONSULTANT: SPACELAB — CREATING TIMELESS PLACES

PROJECT: WEST BASIN CITY TO THE LAKE

DRAWING: TREE ASSESSMENT PLAN URBAN AMENITY ASSESSMENT SHEET 2

SCALE @ A1: 1:500 — SCALE @ A3: 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA7	DA	C

TREE GROUP 9

TREE GROUP 10

TREE GROUP 11

TREE GROUP 12

TREE GROUP 8

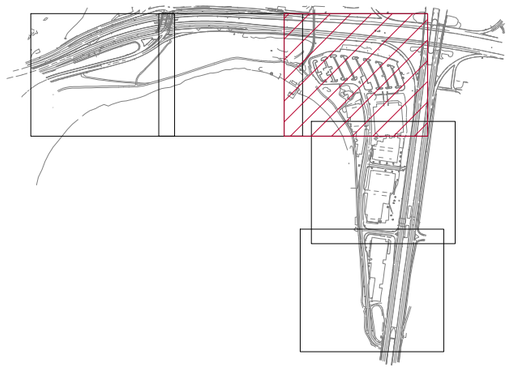
TREE GROUP 18

TREE GROUP 17

TREE GROUP 16

TREE GROUP 19

KEY PLAN



LEGEND

SURVEY DATA

EXTENT OF SURVEY

SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1

EXCEPTIONAL VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1

PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ASSESSMENT DATA

URBAN AMENITY ASSESSMENT RATINGS

H

HIGH QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES WHICH MAY OR MAY NOT ATTAIN THE STATUS OF BEING A REGULATED TREE THAT EXHIBIT THE FOLLOWING:
- GOOD FORM, HEALTH AND CONDITION WITHOUT SIGNIFICANT DEFECTS
- WHERE RETAINED AND MANAGED IS UNLIKELY TO PRESENT AN UNREASONABLE FINANCIAL IMPOST OR PUBLIC RISK
-

M

MEDIUM QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES THAT IS CONSIDERED TO REQUIRE EXPENDITRE WITH REGARD TO ITS LONG TERM MANAGEMENT TO ATTAIN A HIGH VALUE AND IS ASSESSED TO BE OF LITTLE (IF ANY) HABITAT VALUE

L

LOW QUALITY URBAN AMENITY TREE - REGULATED
A TREE OF POOR FORM, STRUCTURE OR HEALTH WITH LITTLE , IF ANY, HABITAT VALUE

HIGH QUALITY URBAN AMENITY TREE NON REGULATED

MEDIUM QUALITY URBAN AMENITY TREE NON REGULATED

LOW QUALITY URBAN AMENITY TREE NON REGULATED

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO THE LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
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B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

DRAWING STATUS
Warning unless there is an authorised **SPACE**LAB in the approved for issue column, this drawing is not approved for issue.

CLIENT: ACT Government | CITY RENEWAL AUTHORITY

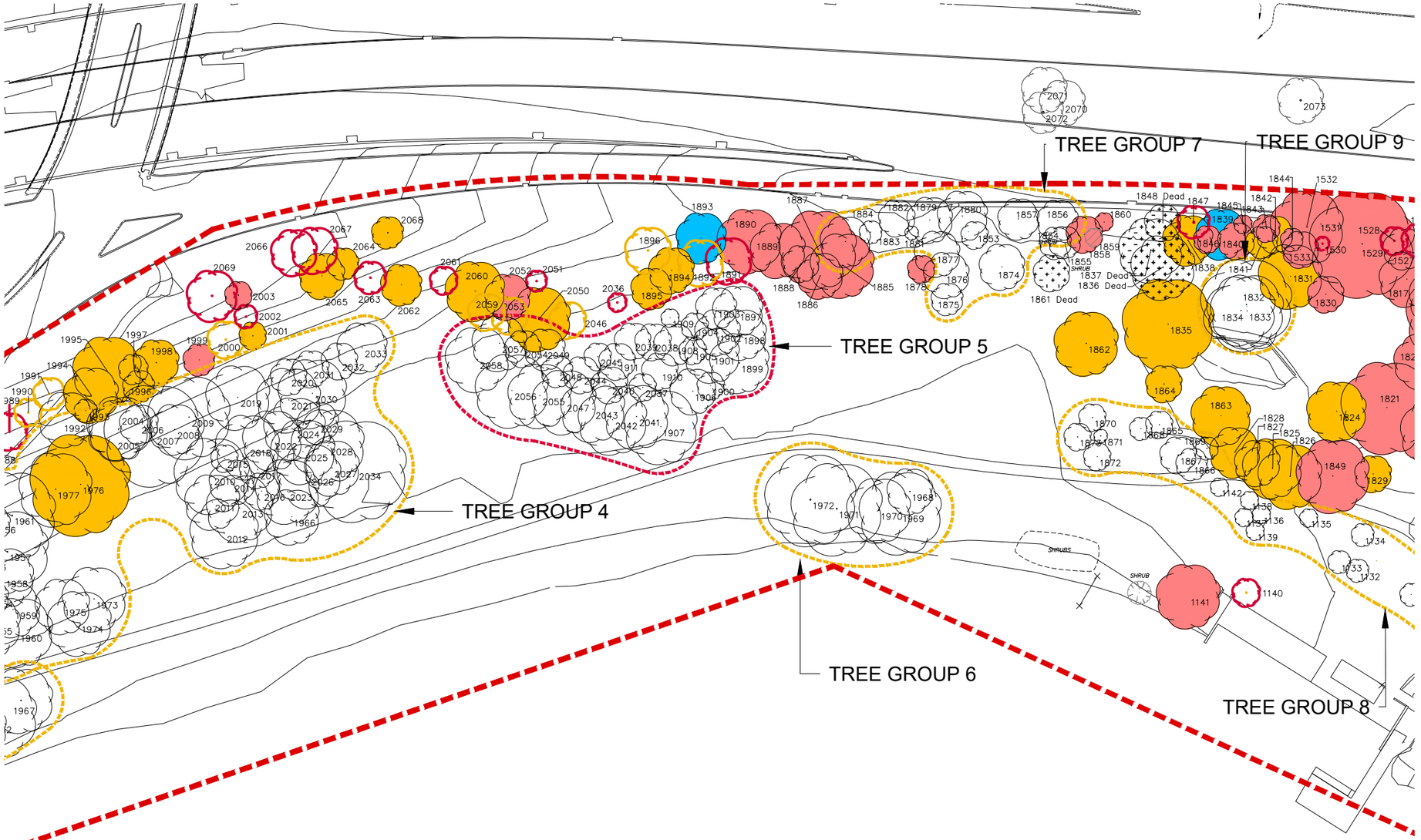
CONSULTANT: SPACELAB CREATING TIMELESS PLACES

PROJECT: WEST BASIN CITY TO THE LAKE

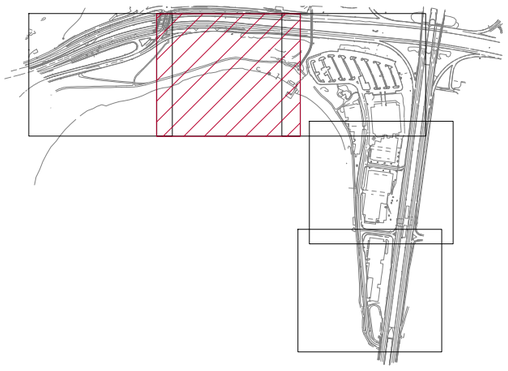
DRAWING: TREE ASSESSMENT PLAN URBAN AMENITY ASSESSMENT SHEET 3

SCALE @ A1: 1:500 | SCALE @ A3: 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA8	DA	C



KEY PLAN



LEGEND

SURVEY DATA

EXTENT OF SURVEY

SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1
EXCEPTIONAL VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ASSESSMENT DATA

URBAN AMENITY ASSESSMENT RATINGS

H
HIGH QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES WHICH MAY OR MAY NOT ATTAIN THE STATUS OF BEING A REGULATED TREE THAT EXHIBIT THE FOLLOWING:
- GOOD FORM, HEALTH AND CONDITION WITHOUT SIGNIFICANT DEFECTS
- WHERE RETAINED AND MANAGED IS UNLIKELY TO PRESENT AN UNREASONABLE FINANCIAL IMPOST OR PUBLIC RISK
-

M
MEDIUM QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES THAT IS CONSIDERED TO REQUIRE EXPENDITRE WITH REGARD TO ITS LONG TERM MANAGEMENT TO ATTAIN A HIGH VALUE AND IS ASSESSED TO BE OF LITTLE (IF ANY) HABITAT VALUE

L
LOW QUALITY URBAN AMENITY TREE - REGULATED
A TREE OF POOR FORM, STRUCTURE OR HEALTH WITH LITTLE , IF ANY, HABITAT VALUE

HIGH QUALITY URBAN AMENITY TREE NON REGULATED

MEDIUM QUALITY URBAN AMENITY TREE NON REGULATED

LOW QUALITY URBAN AMENITY TREE NON REGULATED

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO THE LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
A	FIRST ISSUE FOR APPROVAL	21/05/2014	JL/ST	GM	JE	JE
B	ADDITIONAL TREES SHOWN, COLOURS AMENDED	10/07/2014	JL/ST	IM	JE	JE
C	FOR APPROVAL	30/03/2020	JL/ST	SC	AJ	AJ

CLIENT: ACT Government | CITY RENEWAL AUTHORITY

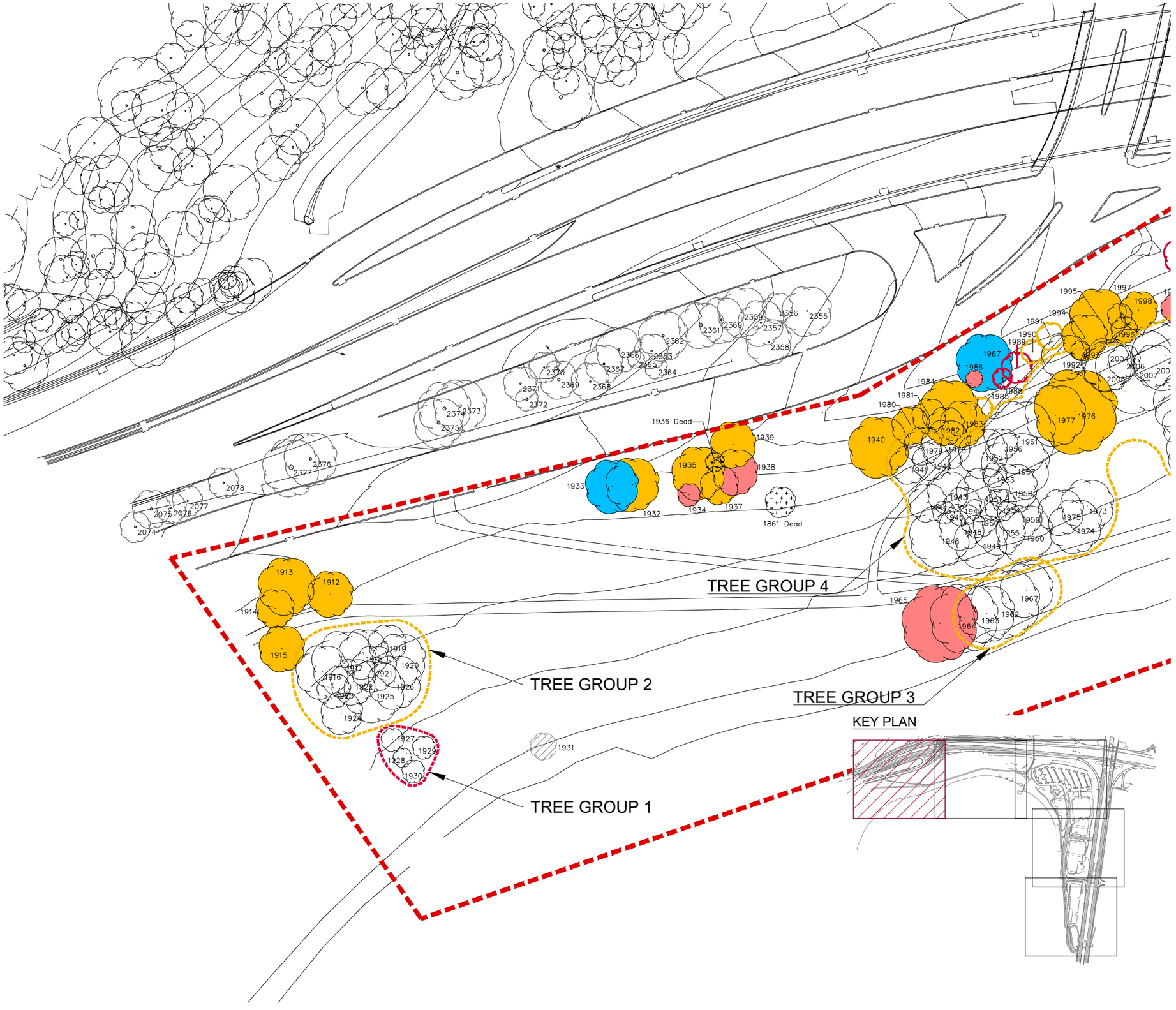
CONSULTANT: SPACELAB CREATING TIMELESS PLACES

PROJECT: WEST BASIN CITY TO THE LAKE

DRAWING: TREE ASSESSMENT PLAN URBAN AMENITY ASSESSMENT SHEET4

SCALE @ A1: 1:500 | SCALE @ A3: 1:1000

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA9	DA	C



KEY PLAN

LEGEND

SURVEY DATA

EXTENT OF SURVEY

SURVEYED EXISTING TREE WITH TREE NUMBER

OFFSITE TREE NOT ASSESSED IN THESE WORKS

TREE GROUP 1
EXCEPTIONAL VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
HIGH VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
MEDIUM VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
POOR VALUE SURVEYED EXISTING GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

TREE GROUP 1
PREVIOUSLY REMOVED GROUP OF TREES WITH GROUP IDENTIFIER & TREE NUMBER

ASSESSMENT DATA

URBAN AMENITY ASSESSMENT RATINGS

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HIGH QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES WHICH MAY OR MAY NOT ATTAIN THE STATUS OF BEING A REGULATED TREE THAT EXHIBIT THE FOLLOWING:
- GOOD FORM, HEALTH AND CONDITION WITHOUT SIGNIFICANT DEFECTS
- WHERE RETAINED AND MANAGED IS UNLIKELY TO PRESENT AN UNREASONABLE FINANCIAL IMPOST OR PUBLIC RISK
-

M
MEDIUM QUALITY URBAN AMENITY TREE - REGULATED
A TREE OR WELL DEFINED GROUP OF TREES THAT IS CONSIDERED TO REQUIRE EXPENDITRE WITH REGARD TO ITS LONG TERM MANAGEMENT TO ATTAIN A HIGH VALUE AND IS ASSESSED TO BE OF LITTLE (IF ANY) HABITAT VALUE

L
LOW QUALITY URBAN AMENITY TREE - REGULATED
A TREE OF POOR FORM, STRUCTURE OR HEALTH WITH LITTLE , IF ANY, HABITAT VALUE

HIGH QUALITY URBAN AMENITY TREE NON REGULATED

MEDIUM QUALITY URBAN AMENITY TREE NON REGULATED

LOW QUALITY URBAN AMENITY TREE NON REGULATED

DEAD TREE

TREE NOT PRESENT ON SITE PREVIOUSLY REMOVED

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH *WEST BASIN CITY TO THE LAKE - TREE ASSESSMENT REPORT* AND *APPENDIX A - TREE ASSESSMENT DATA SHEETS*

ISSUE	REASON FOR ISSUE	DATE	ASSESS.	DRAWN	CHECKED	APPROVED FOR ISSUE
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CLIENT
ACT Government
CITY RENEWAL AUTHORITY

CONSULTANT
SPACELAB
CREATING TIMELESS PLACES

PROJECT
WEST BASIN
CITY TO THE LAKE

DRAWING
TREE ASSESSMENT PLAN
URBAN AMENITY ASSESSMENT
SHEET 5

SCALE @ A1 1:500
SCALE @ A3 1:1000
0 5 10 20m

PROJECT No	DRAWING No	ISSUE	REVISION
J20-00694	TA10	DA	C

APPENDIX C – TREE ASSESSMENT SHEETS