

Arborist Report for the Proposed Art Gallery building (café & loading bay) extension within the Benalla Botanical Gardens.

William Boag Architects have approached Council to conduct an Arborist report to assess the impact of the proposed Benalla Art gallery building extension. The existing conditions and proposed building extension is shown below.

Image 1: existing conditions.

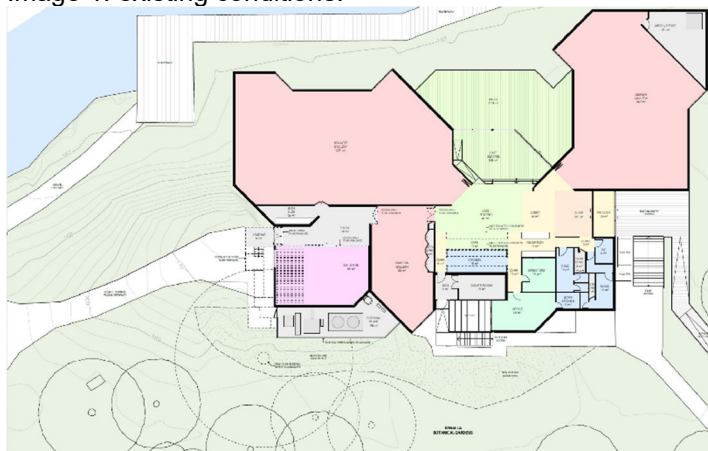
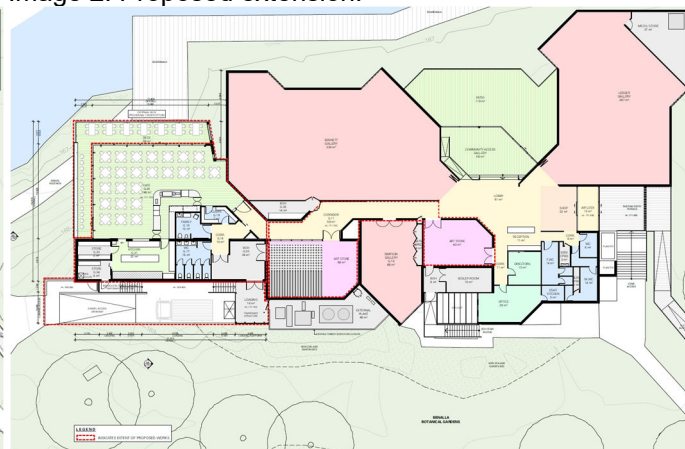


Image 2. Proposed extension.



The report also tables the adjacent trees and gardens beds conditions with proposed recommendations.

Background

The Benalla Art Gallery was constructed in 1975 and designed by Munro and Sargeant with funding from the Victorian Government, Benalla Rural City council and local business Laurie Ledger.

The last major upgrade of the Art Gallery was in 2000, including the construction of a new entrance ramp to provide disabled access to the gallery.

In 2003 the New Zealand Garden bed was planted against the west wall of the Art Gallery to better highlight and connect the Art Gallery to the Botanical Gardens.

A feasibility and business plan was undertaken in 2019 and utilised to attract State funding for the Art Gallery building's extension and to develop a masterplan.

Trees

The tree canopy is arguably the Benalla Botanical Gardens greatest asset, with the site containing an extensive number of large, old and rare trees. Many of the BBGs' trees are in relatively good condition given their age and drought conditions, although tree management problems have been emerging over the last 20 years.

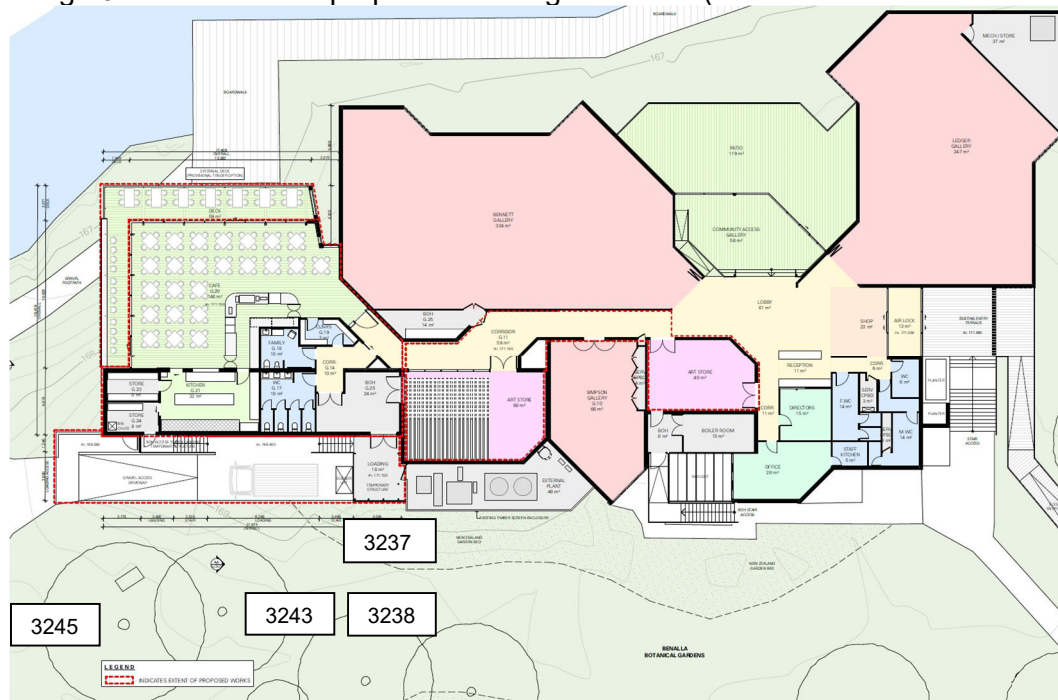
This is due to two reasons; firstly, many of the trees were planted over a short period of time, leading to little variation in the age of the population. Secondly, many of the trees popular during the Victoria era are being proven to have a life expectancy of approximately 80 to 120 years in this climate. Implementation of a tree replacement strategy reduces these problems.

The proposed building works are in the proximity of 4 trees;

- 4 x *Ulmus x hollandica* known as tree numbers: 3245, 3243, 3238 & 3237.
- 3 x of which (tree numbers: 3245, 3243 & 3238 have no incursion into the Tree Protection Zones.
- 1 x of which (tree number: 3237) has an incursion, has been an incursion before the before the proposed development and has been recommend for removal and should be included in future tree replacement.

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Image 3. Trees near the proposed building extension (tree numbers listed below order left to right)



Tree Protection

The trees directly adjacent to the Art Gallery building were assessed by Council Arborist to identify the trees and to establish the tree protection zones and allowable incursion into this space.

Further information on the 4 trees are shown below, this shows the level of impact by the proposed building extension, these have been previously assessed by an independent Arborist in 2020. These tree reports have been tabled as appendices.

Tree 3245 *Ulmus x hollandica* Dutch Elm.

- The proposed building will see an encroachment of 0 into the TPZ
- DBH 0.52 TPZ 6.24m SRZ 2.67
- Distance from building to centre of tree 6.31
- NO Incursion

Tree 3243 *Ulmus x hollandica* Dutch Elm.

- The building will see an encroachment of 3.04% into the TPZ
- DBH 0.52 TPZ 6.24m SRZ 2.67
- Distance from building to centre of tree 5.373
- Minimal Incursion

Tree 3238 *Ulmus x hollandica* Dutch Elm.

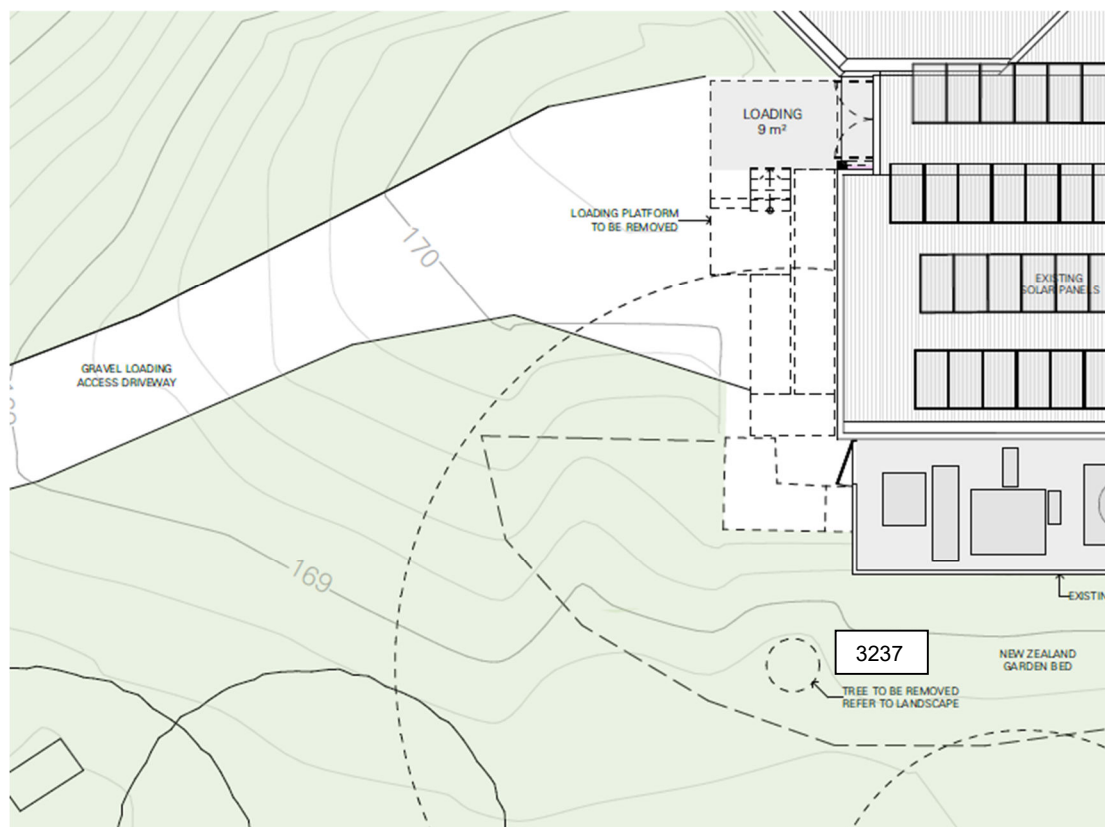
- The building will see an encroachment of 0 into the TPZ
- DBH 0.52 TPZ 6.24m SRZ 2.71m
- Distance from building to centre of tree 7.97m
- NO Incursion

Tree 3237 *Ulmus x hollandica* Dutch Elm.

- The building will see an encroachment of 60 % into the TPZ
- DBH 0.52 TPZ 6.24m SRZ 2.55
- Distance from building to centre of tree – 1.0m
- Major Incursion. Existing incursion due to poor placement of the tree (see below image).
- Recommendation: Tree removal.

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Image 2. Shows existing conditions and how Tree 3237 has encroached on the existing building.



Recommendation

- Remove tree 3237.
- Install garden beds to maximising plant health through mulching.
- Monitor the health of all trees.

New Zealand Garden Bed

The design and planting of New Zealand garden bed located directly against the Art Gallery wall was in 2003 (table 1 below shows the plant listing). The framework of Cordylines in this bed is well established and provides plenty of visual impact, however much of the lower-level planting has struggled and in cases not survived.

A new design needs to be developed focusing on utilizing and retaining the existing plants whilst introducing a diverse NZ range of plants that have been selected for their foliage contrast and their ability to thrive under the prevailing conditions.

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Table 1. Current listing of New Zealand Garden Bed plantings.

Code No.	Plant name	Qty	Common Name
1	Melicytus ramiflorus	1,1	
2	Phormium tenax	5	New Zealand Flax
3	Entelea arborescens	1	Whau
4	Kunzea ericoides	1	Kanuku
5	Pseudopanax arobreus	1	Firefinger,Houhou
6	Coprosma repans	1	Mirror Plant
7	Brachyglottis repanda	1	
8	Cordyline australis	6	Cabbage Tree
9	Metrosideros villosus	1	Tahiti
10	Pittosporum eugenoides 'Variegatum'	1	Variegated Tarata
11	Heptacodium jasminodes	1	
12	Pseudopanax lessonii 'Variegata'	1	
13	Hoheria populnea alba variegata	1	Lacebark
14	Sophora teraptera	4	Kowhai
15	Hoheria populnea alba variegata	1	Lacebark
16	Cordyline australis Purpurea Group	3	Red Star
17	Phormium 'Yellow Wave	2	New Zealand Flax
18	Phormium 'Dazzler'	2	New Zealand Flax
19	Aronia arbutifolia	1	Chokeberry
20	Phormium tenax 'Purpurea'	2	New Zealand Flax
21	Phormium sp 'Surfer Boy'	3	New Zealand Flax
22	Metrosideros excelsa	1	New Zealand Christmas Tree
23	Hebe 'Wiri Splash	2	Hebe
24	Pseudopanax lessonii 'Cyril Watson'	1	
25	Clanthus puniceus 'alba'	1	New Zealand Glory Pea
26	Pseudopanax crassifolium	1	Lancewood
27	Phormium cookianum Dwarf Green	1	
28	Cotoneaster dammeri	1	Bearberry cotoneaster
29	Lophomyrtus 'Black Stallion'	1	
30	Cordyline 'Red Fountain'	2	

Recommendation

- Develop New Zealand Garden Bed design.
- Relocate thriving and significant planting.

The report purpose;

- is for the submission of planning permit application to Heritage Victoria.
- to ensure a balance between conservation of the significant heritage resources of the Benalla botanical Gardens and adjacent land use
- to design safe and secure features and public spaces that create enjoyment for residents and visitors to Benalla

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Appendices.

Tree Number : 3245



StreetTree : Park Tree

Genus : Ulmus

Species : x hollandica

Origin : Exotic

Height__m_ : 10

Spread__m_ : 9

DBH__cm_ : 52

Age : Mature

Health : Good

Structure : Good

ULE : 20+ years

Works_requ : Deadwood Removal

Works_re_1 :

Works_re_2 :

Priority : Moderate

Defects :

QTRA_Proba : (1) 1/1 - >1/10

QTRA_Failu : (4) 100mm - 25mm dia

QTRA_Targe : Human Pedestrian and cyclist

QTRA_Tar_1 : 4

Risk_Score : 1/500k

Nature_Str : Park tree

Powerline : None

AuditedBy : Pinnacle Arborpro

Inspector : Neil Macintosh

Audited : March 2020 - Phase 1

Easting_GD : 408621.8639

Northing_G : 5954322.962

Arborist Report for the Proposed Art Gallery building (café & loading bay) extension within the Benalla Botanical Gardens.

Tree Number : 3243



StreetTree : Park Tree

Genus : Ulmus

Species : x hollandica

Origin : Exotic

Height__m_ : 10

Spread__m_ : 9

DBH__cm_ : 52

Age : Mature

Health : Good

Structure : Good

ULE : 20+ years

Works_requ : Deadwood Removal

Works_re_1 :

Works_re_2 :

Priority : Moderate

Comment :

Defects :

QTRA_Proba : (1) 1/1 - >1/10

QTRA_Failu : (4) 100mm - 25mm dia

QTRA_Targe : Human Pedestrian and cyclist

QTRA_Tar_1 : 4

Risk_Score : 1/500k

Nature_Str : Park tree

Powerline : None

AuditedBy : Pinnacle Arborpro

Inspector : Neil Macintosh

Audited : March 2020 - Phase 1

Easting_GD : 408625.3766

Northing_G : 5954317.624

Tree Number : 3237

Arborist Report for the Proposed Art Gallery building (café & loading bay) extension within the Benalla Botanical Gardens.



StreetTree : Park Tree

Genus : Ulmus

Species : x hollandica

Origin : Exotic

Height__m_ : 10

Spread__m_ : 9

DBH__cm_ : 52

Age : Mature

Health : Good

Structure : Good

ULE : 20+ years

Works_requ : Deadwood Removal

Works_re_1 :

Works_re_2 :

Priority : Moderate

Comment :

Defects :

QTRA_Proba : (1) 1/1 - >1/10

QTRA_Failu : (4) 100mm - 25mm dia

QTRA_Targe : Human Pedestrian and cyclist

QTRA_Tar_1 : 4

Risk_Score : 1/500k

Nature_Str : Park tree

Powerline : None

AuditedBy : Pinnacle Arborpro

Inspector : Neil Macintosh

Audited : March 2020 - Phase 1

Easting_GD : 408639.0309

Northing_G : 5954313.786

Tree Number : 3238

Arborist Report for the Proposed Art Gallery building (café & loading bay) extension within the Benalla Botanical Gardens.



StreetTree : Park Tree

Genus : Ulmus

Species : x hollandica

Origin : Exotic

Height__m_ : 10

Spread__m_ : 9

DBH__cm_ : 52

Age : Mature

Health : Good

Structure : Good

ULE : 20+ years

Works_requ : Deadwood Removal

Works_re_1 :

Works_re_2 :

Priority : Moderate

Comment :

Defects :

QTRA_Proba : (1) 1/1 - >1/10

QTRA_Failu : (4) 100mm - 25mm dia

QTRA_Targe : Human Pedestrian and cyclist

QTRA_Tar_1 : 4

Risk_Score : 1/500k

Nature_Str : Park tree

Powerline : None

AuditedBy : Pinnacle Arborpro

Inspector : Neil Macintosh

Audited : March 2020 - Phase 1

Easting_GD : 408630.6372

Northing_G : 5954307.325