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ARBORIST REPORT

PROPOSED TOWNHOUSE RESIDENTIAL DEVELOPMENT
66 THOMAS STREET
CITY OF MISSISSAUGA

PREPARED FOR:
DEZEN REALTY
4890 TOMKEN ROAD, UNITS 1-4
MISSISSAGUA, ONTARIO
L4W 1J8

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OUR PROJECT NO:
17-5173

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TABLE OF CONTENTS

Enclosed: Full Size Tree Inventory & Preservation Plan
Full Size Restoration Planting Plan

ARBORIST REPORT
Proposed New Townhouse Residential Development
66 Thomas Street, Mississauga

Introduction
Strybos Barron King Ltd. was retained by Dezen Realty to prepare an Arborist Report for the subject property in accordance with City of Mississauga Tree Bylaw requirements.

Site Context
The subject property (66 Thomas Street) is located on the northeast corner of Thomas Street and Joymar Drive, abutting industrial properties to the east and Tannery Street to the north. Mullet Creek passes along the east side of the property. A Stacked Townhouse Residential Development including ecological restoration works along the west side of the Mullet Creek floodplain are proposed for the site.

Plans Utilized
A topographic plan and Regional Flood Plain and Natural Hazards Figure plan provided by Crozier & Associates noting existing trees, staked dripline associated with the Mullet Creek stream bank as well as limits of proposed development were used as reference to determine the location of existing trees in relation to the proposed development works.

Tree Inventory *(Refer to Tree inventory tables found on page 2 and Appendix A-Site Photographs)*
Trees were identified by an ISA Certified Arborist both within and immediately adjacent to the subject property. The trees are described in terms of species and diameter at breast height (DBH – measured at 1.4m from grade). They have been assessed in terms of their general health from poor to good; **GOOD** – trees in good overall health and condition with desirable structure, **FAIR** – trees in moderate health and condition with less desirable structure, and **POOR** – trees displaying prominent health issues such as decay and disease and/or poor form and structure. (Refer to *Tree Preservation & Removal Plan* for locations of specific trees.)

Table 1 - Tree Inventory Descriptions

Key#	This number refers to the inventory number for the tree/grouping.
Species	The common names are provided for each tree.
DBH	This refers to Diameter (in centimetres) at Breast Height and is measured at 1.4m above the ground for each tree.
Crown	Estimated diameter of tree canopy (in metres), measured from dripline to dripline (varies in most cases considering the nature of tree groupings)
Health	An assessment of the general health and vigour of the tree, derived partly through a comparison of deadwood and live growth relative to a 100% healthy tree. The size and colour of foliage are also considered in this category. During the leaf-off season, the amount and distribution of buds is an important determinant of canopy vitality. This indicator is also measured on an ascending scale of poor-fair good.
Structure	A term describing key distinguishing structural character or defect.

Tree Inventory List

EXISTING TREE INVENTORY									
KEY	SPECIES	CALIPER	CROWN	HEALTH	STRUCTURE	COMMENTS	PRESERVATION	MIN. TPZ	KEY
		IN (cm)	IN (m)	G/F/P			DIRECTION		
1	NATUALIZED GROUPING	WHIP-65		VARIES	VARIES	MIXED, NATURALIAZED GROPUING OF TREES AND SHRUBS WHICH OCCURS ALONG THE TOP OF EXISTING BANK AND ALONG CREEK SLOPE. THIS GROUPING IS DOMINATED BY DECLINING ASH TREES AND SEVERAL MANITOBA MAPLE. A SMALLER NUMBER OF CRACK WILLOW (MOSTLY ALONG THE EAST CREEK BANK) ARE PRESENT. THE MAJORITY OF THE TREES EXHIBIT MULTIPLE STEMS AND ONE SIDED FORMS DUE TO CROWDING. OVERALL, THE VEGETATION ALONG THE WEST SIDE OF THE CREEK IS COMPOSED EITHER OF EXOTIC, INVASIVE SPECIES OR DEAD OR DECLINING ASH TREES. THIS GROUPING IS IN GENERALLY POOR CONDITION. THE EXISTING TOP OF BANK APPEARS TO BE FILL MATERIAL AND DEBRIS.	PRESERVE (SELECTIVE REMOVALS OF THE IMMATURE, NATURALIZED AND INVASIVE TREES ALONG THE STAKED TOP OF BANK MAY BE REQUIRED DUE TO THE PROPOSED GRADING TO RE-ESTABLISH THE TOP OF BANK)	NA	1
2	CRACK WILLOW	65.0	15.0	FAIR	MULT-STEMMED	MATURE, MULTI-STEMMED TREE LOCATED ALONG THE EXISTING CREEK BANK. SOME DIEBACK THROUGHOUT IS NOTED AS WELL AS SEVERAL POTENTIALLY WEEK BRANCH UNIONS	PRESERVE	4.2	2
3	SIBERIAN ELM	15-30	9.0	POOR-FAIR	MULT-STEMMED	ASYMMETRICAL FORM, CROWDED BY ADJACENT TREE, DIEBACK THROUGHOUT, INCLUDED BARK	REMOVE	2.4	3
4	MANITOBA MAPLE	16.0	6.0	FAIR	HORIZONTAL	LEANING, CROWDED BY ADJACENT TREE	REMOVE	1.8	4
5	SIBERIAN ELM	17.0	6.0	GOOD	MULT-STEMMED	NARROW FORM, CROWDED BY ADJACENT TREE	PRESERVE	1.8	5
6	SIBERIAN ELM	18.0	6.0	GOOD	MULT-STEMMED	FENCE INGROWN, DIEBACK ON LOWER BRANCHES	REMOVE	1.8	6
7	SIBERIAN ELM	25.0	6.0	GOOD	DOUBLE STEM	DAMAGE TO LOWER BRANCHES	REMOVE	1.8	7
8	SIBERIAN ELM	18.0	5.0	POOR	IRREGULAR FORM	FENCE INGROWN, DIEBACK THROUGHOUT	REMOVE	1.8	8
9	ASH		6.0	DEAD			REMOVE	NA	9
10	MANITOBA MAPLE	29.0	8.0	POOR-FAIR	ASYMMETRICAL FORM	CROWDED BY ADJACENT TREE, SOME DIEBACK THROUGHOUT	REMOVE	1.8	10
11	NORWAY MAPLE	32.0	6.0	FAIR	ASYMMETRICAL FORM	CROWDED BY ADJACENT TREE, SOME INTERNAL DIEBACK	REMOVE	2.4	11
12	NORWAY MAPLE	24.0	7.0	GOOD	GOOD FORM	MINOR INTERNAL DIEBACK	REMOVE	1.8	12
13	ASH	40.0	6.0	DEAD			REMOVE	2.4	13
14	MANITOBA MAPLE	60.0	16.0	DEAD			REMOVE	3.6	14

Observations

The subject property currently contains several light industrial commercial properties. All of existing table land area is currently used by each property for parking, material storage and/or amenity space. Consequently, various amounts of fill and other material storage occurs along the existing top of bank. The existing stream bank is composed of naturalized communities dominated by Manitoba Maple and Green Ash. The south west side of the creek is less mature and contains the majority of the dead or dying Ash trees and dense groupings of Manitoba Maple. Further north, the slope becomes more mature with several Crack Willow trees and more mature Manitoba Maple groupings.

Much of the remaining site is void of trees with the exception of a small number of naturalized individuals occurring along fence lines or planted trees within the boulevard at the northwest corner of the site.

Tree Removals *(Refer to Appendix B – Tree Preservation and Removal Plan)*

In determining the tree preservation possibilities for the site several factors were considered as noted below:

- Overall tree health, form, size, species and predicated longevity.
- Anticipated impact from construction of buildings and proposed landscape features, road works, site servicing and grading.

Each tree was assigned a minimum Tree Preservation Zone (TPZ) as per standard requirements used by municipal by-laws. See table1.

Table 2 - Tree Protection Zones

Trunk Diameter (DBH)	*Minimum Protection Zone*
<10 cm	1.2m
10-29 cm	1.8 m
30-40 cm	2.4 m
41-50 cm	3.0 m
51-60 cm	3.6 m
61-70 cm	4.2 m
71-80 cm	4.8 m
81-90 cm	5.4 m
91-100 cm	6.0 m
< 100 cm	6cm per 1cm DBH

Trees are recommended for preservation or removal based on proximity of the TPZ to the limit of construction, in conjunction with the overall tree health, size and anticipated ability to withstand root or crown impacts.

Private Tree By-Law
The City of Mississauga's Private Tree By-law governs all trees found on private property of 15cm DBH (Diameter at Breast Height) or greater.

The By-law states that:

- A permit is required to remove **three (3) or more trees** with a diameter greater than 15 cm (6 in) within one calendar year
- A permit is not required to remove up to **two (2) trees** of any diameter per calendar year
- A permit is required to remove three (3) or more dead, dying or hazardous trees with a diameter greater than 15 cm (6 in) within one calendar year

Summary of Removals
8 Privately owned trees are subject to the private tree bylaw and will require a permit to remove.
2 City owned trees will require City approval to remove.

(Refer to The Tree Inventory List and Tree Preservation & Removal Plan for specific details)

Discussion

City Owned Trees
Two (2) City owned trees, (key# 10 Manitoba Maple – 29cm DBH & key# 11 Norway Maple – 32cm DBH) will require removal to the proposed development works.

Removals Subject to Private Tree Bylaw
8 Privately owner trees (key# 3, 4, 6, 7, 8, 10, 11 & 12) will require removal due to the proposed development grading and/or construction works.

Valley land Tree Removals/Preservation
The valley land trees are to be preserved and protected and retained where possible. The proposed site works include the removal of all hard surfaces, debris, fill and structures within the floodplain area. Since these works will include re-grading to the

current top of bank, some selective tree removals may be required along that limit. The majority of the trees along the staked top of bank are relatively immature invasive species. The proposed restoration planting plan includes the planting of native trees, shrubs and ground cover from the limit of grading (staked top of bank in most areas) to the new property limit which has been established 5m from the reginal flood line.

Tree Preservation Recommendations
(Refer to Appendix D – Tree Protection Hoarding Detail)

The following tree protection measures are recommended to be undertaken by the builder in order to successfully preserve the trees noted on the Tree Preservation Plans.

Pre-Construction

- Prior to the commencement of any site works, all trees to be preserved will be protected with City approved framed tree protection hoarding. This hoarding shall be maintained for the duration of site construction. It shall not be removed until authorized by the Consulting Arborist or the City.
- Once installed, the limits of protection hoarding shall be approved in the field by the Consulting Arborist and the City of Mississauga, Urban Forestry Department.

During Construction

- Areas within the protection hoarding shall remain undisturbed for the duration of site construction and shall not be used for the storage of excavated fill, building materials, structures or equipment.
- Minor grading works will be permitted at the edge of the preservation zone as required to correct localized depressions or blend grade to limit of site works. This work to be undertaken under the review of the Consulting Arborist.
- Where root systems of trees to be preserved are exposed or damaged by construction work, they shall be trimmed neatly by a qualified Arborist in accordance with acceptable arboricultural practice. The exposed area shall be backfilled with appropriate material to prevent desiccation.
- No cables of any type shall be wrapped around or installed in trees to be preserved. No contaminants will be dumped or flushed where feeder roots of trees exist.

Post-Construction

- Following construction, the limits of the “Tree Protection Zone” shall be inspected by the Consulting Arborist. Any pruning, watering, fertilization or replacement requirements will be determined at that time.
- Tree protection hoarding may be removed to facilitate final landscape fine grading and tree planting. This must be completed under the review of the Consulting Arborist.

To ensure that the above measures are properly implemented, the Consulting Arborist shall be involved at the following stages of construction in the vicinity of the tree preservation zones:

1. Upon layout and installation of protective hoarding.
2. Periodically during construction to ensure that hoarding remains in place and no damage occurs to trees to be preserved.
3. Upon fine grading of site or other landscape works
4. Upon completion of construction activities

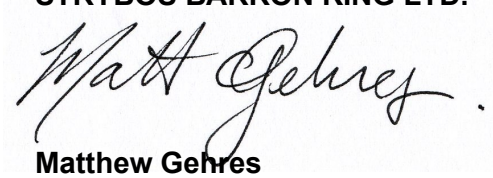
Conclusion

Strybos Barron King Ltd. was retained by Dezen Realty to prepare an Arborist Report for the subject property in accordance with City of Mississauga Tree Bylaw requirements. The report summarizes the trees inventoried and provides recommendations for retention or removal in context with the proposed site plan. The attached Tree Preservation Plan & Restoration Planting Plan is to be used as reference with this report. A Stacked Townhouse Residential Development including ecological restoration works along the west side of the Mullet Creek floodplain are proposed for the site.

Tree removals will be required in order to facilitate construction of the new development and floodplain restoration and re-naturalization works. Some potential but minor tree removals may be required in order to re-establish and restore the area immediately adjacent to the top of bank. Eight (8) trees subject to the City's private tree by-law and two (2) City owned trees will require removal. A tree removal permit and City permission is required for this work. The planning for site includes a robust restoration and re-naturalization plan which will provide compensation for the minor loss of trees associated with the development works.

Prepared By:

STRYBOS BARRON KING LTD.



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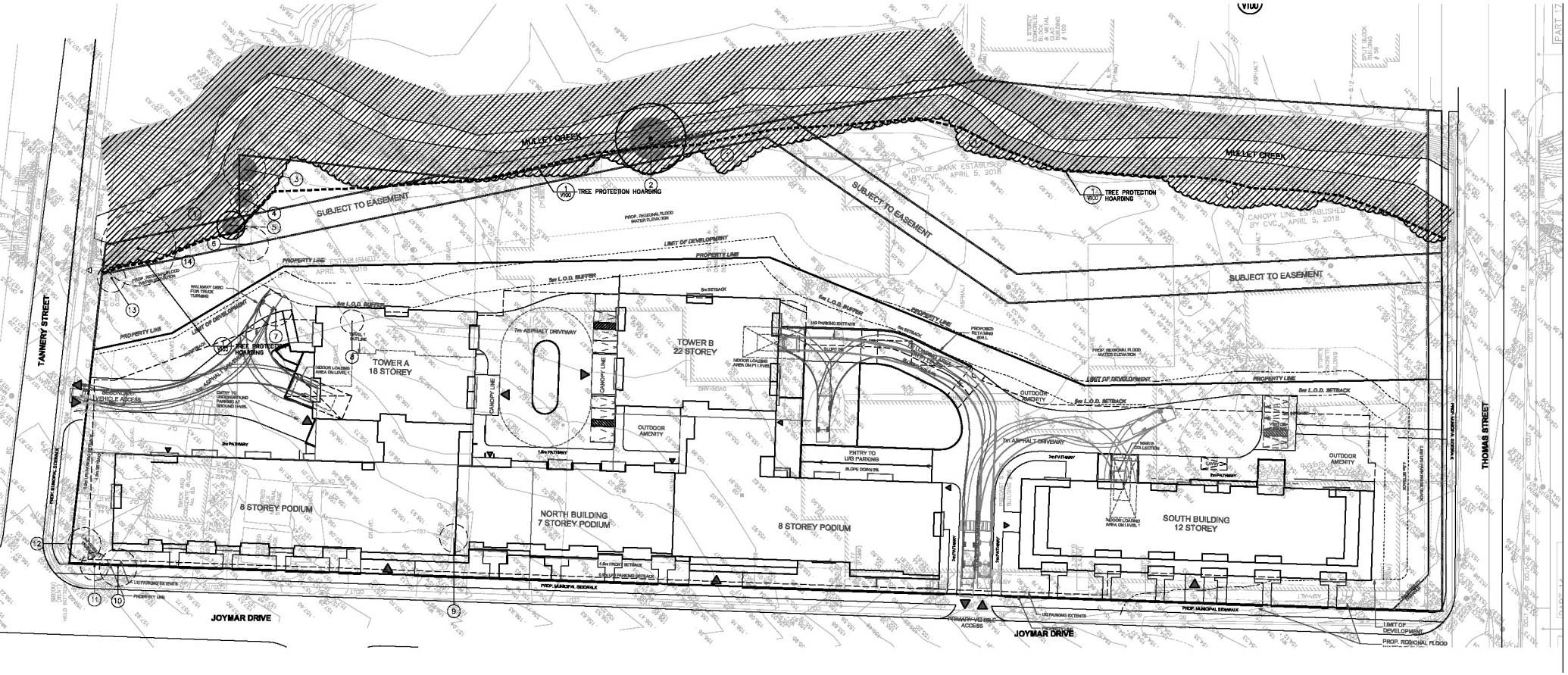
Appendix A -*SITE PHOTOGRAPHS (April 18th 2018)*

	
Southeast corner of site along top of bank looking south	Southeast corner of site along top of bank looking north
	
Top of bank condition looking north (south of most easterly building)	Top of bank condition looking north (tree# 2 in background)
	
(Tree #2)	Top of bank condition looking south from behind most easterly building

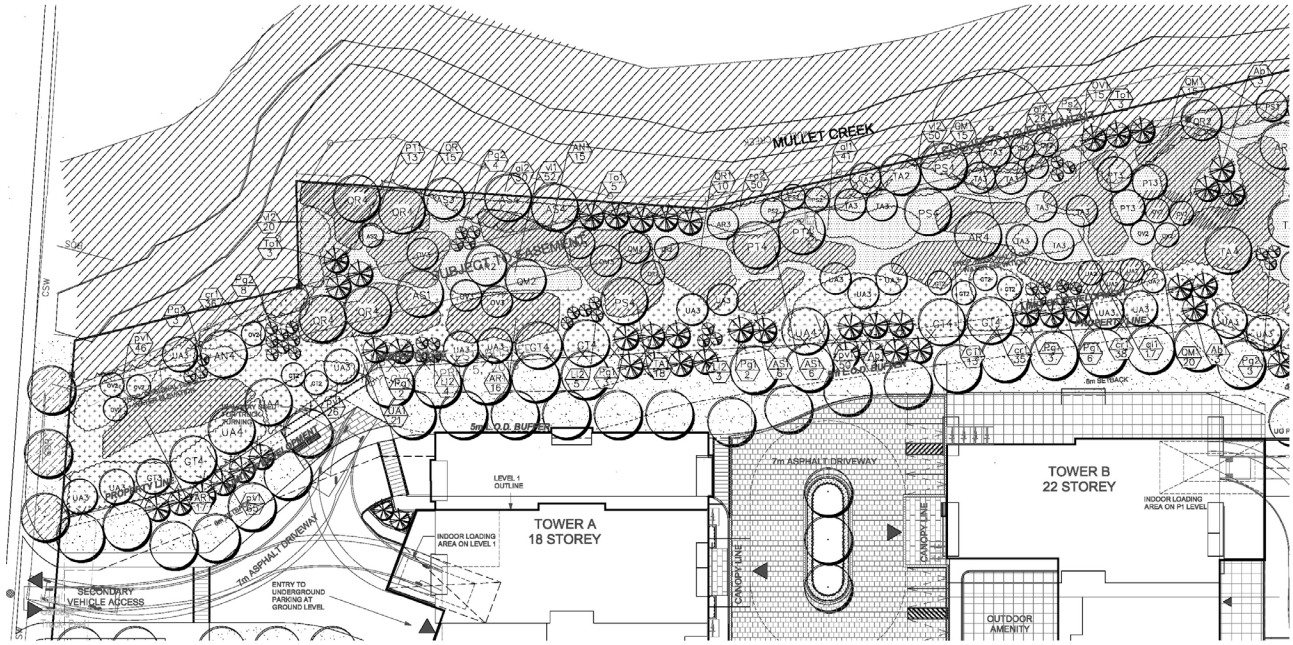
	
Top of bank condition looking north (north of most easterly building)	Tree #13
	
Tree #14	Tree #s 10-12

ARBORIST REPORT
Proposed New Townhouse Residential Development
66 Thomas Street, Mississauga

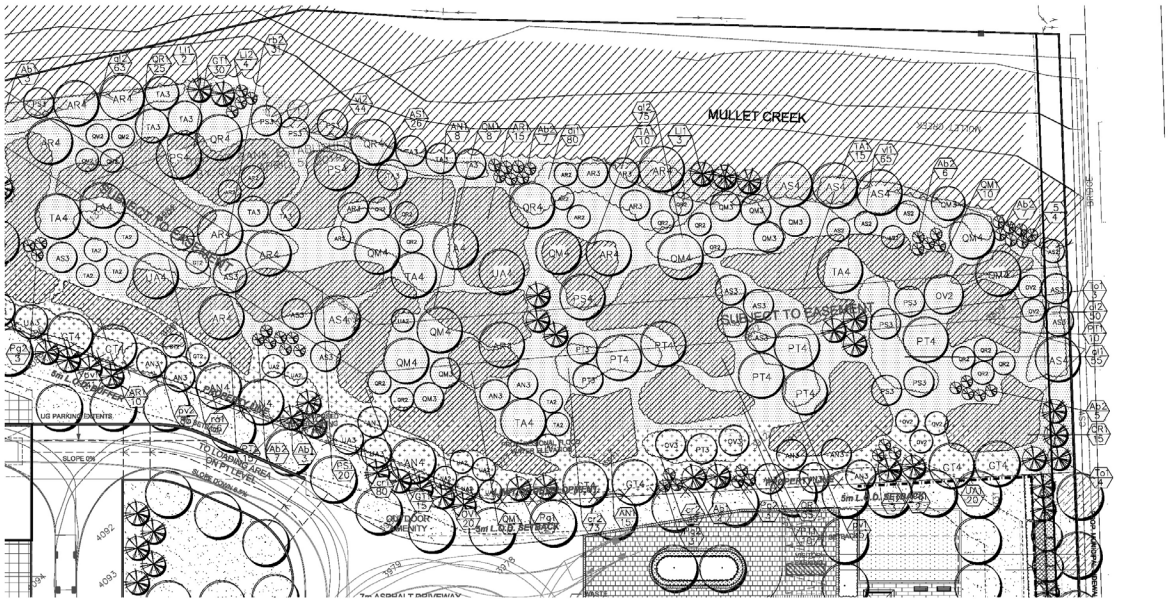
Appendix B – CONTEXTUAL TREE PRESERVATION & REMOVAL PLAN (NTS)



Appendix C – CONTEXTUAL RESTORATION PLANTING PLAN (NTS)



1/L100 RESTORATION PLAN 1: 300



2/L100 RESTORATION PLAN 1: 300

Appendix D - TREE PROTECTION HOARDING DETAILS