



Talbot Mackenzie & Associates

Consulting Arborists

November 14, 2017

Wei Tu
1322 Rockland Avenue
Victoria, BC V8S 1V6

Re: Proposed subdivision at 1322 Rockland Avenue.

Assignment: Using the recently updated tree inventory of 1322 Rockland Avenue, review the proposed subdivision plans and identify the trees that will likely have to be removed and those trees that have the potential to be retained given the potential impacts from the proposal. Comment on the proposed new driveway to the existing residence on proposed Lot 1.

Methodology: We previously reviewed the inventory for the property in March 2017 and updated the tree resource spreadsheet. Information such as tree species, size (DBH), crown spread, critical root zone (CRZ), health and structural condition, relative tolerance to construction impacts, and general remarks and recommendations was recorded in the attached tree resource spreadsheet. The plans provided show the proposed subdivision layout but there is no potential building envelope for proposed Lot 2 and there are no house designs or servicing details available at this time.

Proposed New Driveway off Royal Terrace: On the plans provided, the driveway is shown within the critical root zone of Gary Oak number 373 and it may be necessary to remove the tree. If the tree is to be retained the driveway will have to be constructed using floating permeable techniques. Once more details are made available and we have a better understanding of the fill that will be necessary, we can provide a potential design that will allow for air and water exchange to the critical root zone of the tree.

Tree retention: At this time there is no proposed building envelope, house design or services shown on the plans provided. The ability to retain trees on proposed Lot 2 will depend on the house designs, the amount of necessary blasting, the servicing details and in some cases the existing health and structure of the trees. Once more detailed plans are available, we can further comment on the ability to retain these trees and provide a comprehensive tree retention and construction damage mitigation plan for the project.

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Victoria, BC V8Z 7H6
Ph: (250) 479-8733 ~ Fax: (250) 479-7050
Email: treehelp@telus.net

Please do not hesitate to call us at (250) 479-8733 should you have any further questions.
Thank you.

Yours truly,
Talbot Mackenzie & Associates



Tom Talbot & Graham Mackenzie
ISA Certified, & Consulting Arborists
Encl. 1-page site plan with proposed subdivision, 3-pages tree resource spreadsheet

Disclosure Statement

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve their health and structure or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an Arborist to identify every flaw or condition that could result in failure or can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

TREE RESOURCE
for
1322 Rockland Ave.

Tree #	d.b.h. (cm)	CRZ	Species	Crown spread	Condition Health	Condition Structure	Relative Tolerance	Remarks / Recommendations
372	83	8.3	Garry oak	10	Fair	Fair	Good	Asymmetric form, grows close to the existing building, large deadwood, old flush cut wounds.
373	142	14.2	Garry oak	14	Fair	Fair/Poor	Good	Mature tree, large limb failure, swelling at base, stunted form, some epicormic growth.
374	132	13.2	Garry oak	18	Fair	Fair	Good	Mature tree, large historic limb failure, large historic pruning wounds, likely impacted by servicing and sidewalk construction historically, some deadwood.
375	65	6.5	Garry oak	14	Fair	Fair	Good	Historic flush cut wounds, small deadwood, rooted in rock. Neighbours tree.
376	83	8.3	Garry oak	16	Fair	Fair	Good	Asymmetric form, large pruning wounds, history of large limb failure. Possible sulphur fungus in old wound.
no tag 1	80	8	Garry oak	14	Fair/poor	Fair	Good	Located on neighbouring property at 1353 Craigdarroch Road. Asymmetric form, historic pruning wounds, epicormic growth, health stress, poor annual shoot elongation.
no tag 2	64	6.4	Garry oak	14	Fair	Fair	Good	Located on neighbouring property at 1353 Craigdarroch Road. Clothesline reel embedded in trunk, pruning wounds.
377	91	9.1	Garry oak	16	Fair	Fair	Good	Large deadwood, history of large limb failure, co-dominant above 1.4 metres, some epicormic growth.
378	82	8.2	Garry oak	16	Fair	Fair/poor	Good	Large burl at base, some health stress, epicormic growth, history of large limb failure. Closer examination recommended if retained.
379	58	5.8	Garry oak	14	Fair	Fair	Good	Large deadwood, epicormic growth, rooted in rock.
380	60	6	Ponderosa Pine	9	Fair	Fair	Good	Some deadwood
381	80	8	Pine	15	Fair	Fair	Good	Some deadwood
382	110	11	Incense cedar	9	Good	Fair	Moderate	Multiple stems, no visible weakness at stem unions.

TREE RESOURCE
for
1322 Rockland Ave.

Tree #	d.b.h. (cm)	CRZ	Species	Crown spread	Condition Health	Condition Structure	Relative Tolerance	Remarks / Recommendations
383	38	3.8	Norway Maple	10	Fair	Fair	Moderate	Asymmetric crown.
384	60	6	Ponderosa Pine	11	Fair	Fair	Good	Co-dominant at approximately 12 metres, weak union, sparse foliage.
385	76	7.6	Garry oak	16	Fair	Fair/poor	Good	Large deadwood, large historic pruning wounds, asymmetric form, history of large limb failure.
386	95, 31	13.6	Incense cedar	8	Fair	Poor	Moderate	Previous top failure, short tree.
387	17, 10	2	Elm	4	Good	Fair	Moderate	Co-dominant tree.
388	23	2	Elm	6	Good	Good	Moderate	Asymmetric form. Neighbour's tree has uprooted and is leaning on this tree.
389	17	2	Elm	6	Good	Fair	Moderate	Previously topped, asymmetric form.
390	74	7.4	Maple	7	Fair	Poor	Moderate	History of large stem failure, non-by-law protected size, large basal cavity. Hazard evaluation recommended if retained.
391	29	3	Ash	6	Poor	Poor	Moderate	Functionally dead.
982	33, 30	5.1	Garry oak	12	Fair	Fair	Good	Co-dominant.
981	43	4.3	Garry oak	12	Fair/poor	Fair	Good	Health stress, rooted in rock.
980	38	3.8	Garry oak	16	Fair	Fair	Good	Rooted in rock, surface rooted, large deadwood.
983	54	6	Garry oak	10	Fair	Fair	Good	Large deadwood, rubbing adjacent tree, leaning.

November 14, 2017

TREE RESOURCE
for
1322 Rockland Ave.

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<i>Tree #</i>	<i>d.b.h. (cm)</i>	<i>CRZ</i>	<i>Species</i>	<i>Crown spread</i>	<i>Condition Health</i>	<i>Condition Structure</i>	<i>Relative Tolerance</i>	<i>Remarks / Recommendations</i>
984	39,34	8	Big Leaf Maple	13	Fair	Fair	Moderate	Co-dominant, large deadwood.
985	33	6	Big Leaf Maple	9	Fair	Fair	Moderate	Suppressed by adjacent tree, asymmetric.
986	42	5	Ash	14	Fair	Fair	Moderate	One stem declining, epicormic growth.

Prepared by:
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Issue	Date: YYYY-MM-DD
Subdivision Application	Dec 22, 2016
DP Application	Jan 30, 2017
Review	Mar 9, 2017
Municipal Response	Mar 14, 2017

Revision No.	Description	Date
1	Municipal Response	Mar 14, 2017

Consultant

1322 Rockland Avenue

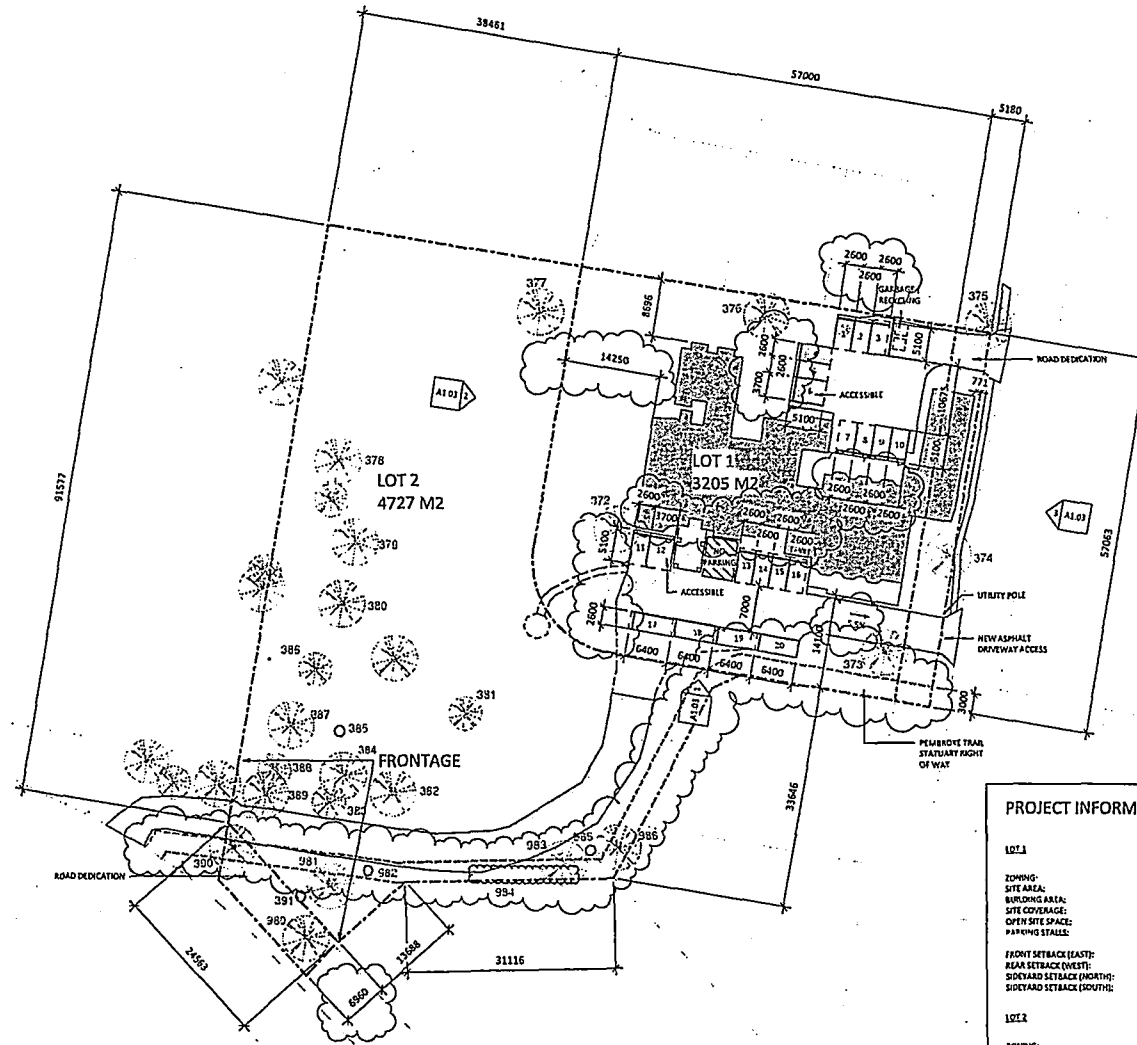
1322 Rockland Ave
Victoria, BC

Site Plan - Proposed

Project number: SLA-15-33
Date: March 9, 2017
Drawn by: JMG
Checked by: Checker

A1.03

Scale: 1:350



PROJECT INFORMATION	
LOT 1	
ZONING:	RN-2
SITE AREA:	3205m ²
BUILDING AREA:	560m ²
SITE COVERAGE:	26%
OPEN SITE SPACE:	52%
PARKING STALLS:	20
FRONT SETBACK (EAST):	0.77m
REAR SETBACK (WEST):	14.25m
SIDEYARD SETBACK (NORTH):	6.70m
SIDEYARD SETBACK (SOUTH):	14.10m
LOT 2	
ZONING:	RN-2
SITE AREA:	4727m ²
TOTAL PERIMETER LENGTH:	310.65m
FRONTAGE PERIMETER LENGTH:	31.33m
FRONTAGE PERCENT:	10.4%



Talbot Mackenzie & Associates

Consulting Arborists

January 10, 2018

Wei Tu
1322 Rockland Avenue
Victoria, BC V8S 1V6

Re: Proposed subdivision at 1322 Rockland Avenue.

Assignment: To review the location of the proposed new driveway off Royal Terrace (see attached site plan) and provide recommendations for mitigating any potential impacts to Garry oak number 373.

Methodology: Using the plans provided, we visited the site and measured from existing structures to approximate the location of the proposed new driveway. It is our understanding that the existing parking elevations will not change and the proposed new driveway will enter from the existing road grades to reach the grades of the parking area. There are no servicing upgrades or proposed new sidewalks in this area shown on the plans provided.

Observations: The majority of the proposed driveway will be located within an area that has had a retaining wall installed, fill soil added and a laurel hedge planted (see attached sketch 1). There will be a portion of the driveway nearest the road that will be installed where there is no existing retaining wall.

Although no exploratory excavations were completed behind the retaining wall, we anticipate the wall was likely installed due to shallow soils and existing rock as a means to provide a suitable planting area for the hedge. Due to the previous soil disturbance and retaining wall installation in this area, we do not anticipate the proposed new driveway will have any negative impact on the health or stability of the tree beyond the impacts that may have already occurred historically providing the driveway is installed using the following specifications.

Recommendations: We recommend that any excavation for the proposed driveway be completed under the direction of the project arborist and may involve a combination of digging by hand and small machine excavation. This will include the removal of any portions of rock wall that must be removed and the removal of the existing laurel hedge. If any roots from Garry oak 373 are encountered during the excavation the proposed new driveway must be designed to retain them.

The amount of fill soil that can be removed without encountering roots from the oak tree will dictate the final design of the new driveway. We recommend using the following floating driveway specifications to minimize any impacts the proposed new driveway may have on Garry oak 373. We do not anticipate that any significant roots will be encountered from Garry oak 374.

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There is a portion of the proposed new driveway that will be constructed on municipal property in the road dedication area. If during the excavation, significant roots are encountered that cannot be pruned without negatively impacting the tree, we recommend that floating permeable construction techniques be incorporated, if permitted by the City.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions. Thank You.

Yours truly,
Talbot Mackenzie & Associates



Tom Talbot & Graham Mackenzie
ISA Certified, & Consulting Arborists
Encl. site sketch 1, site plan showing proposed driveway location, floating driveway specifications

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Issue	Date: YYYY-MM-DD
Subdivision Application	Dec 22, 2016
DP Application	Jan 30, 2017
Review	Mar 9, 2017
Municipal Response	Mar 14, 2017
Resubmission	Oct 31, 2017
Municipal Response	Dec 18, 2017

Revision		
No.	Description	Date
1	Revised Driveway	Dec 18, 2017

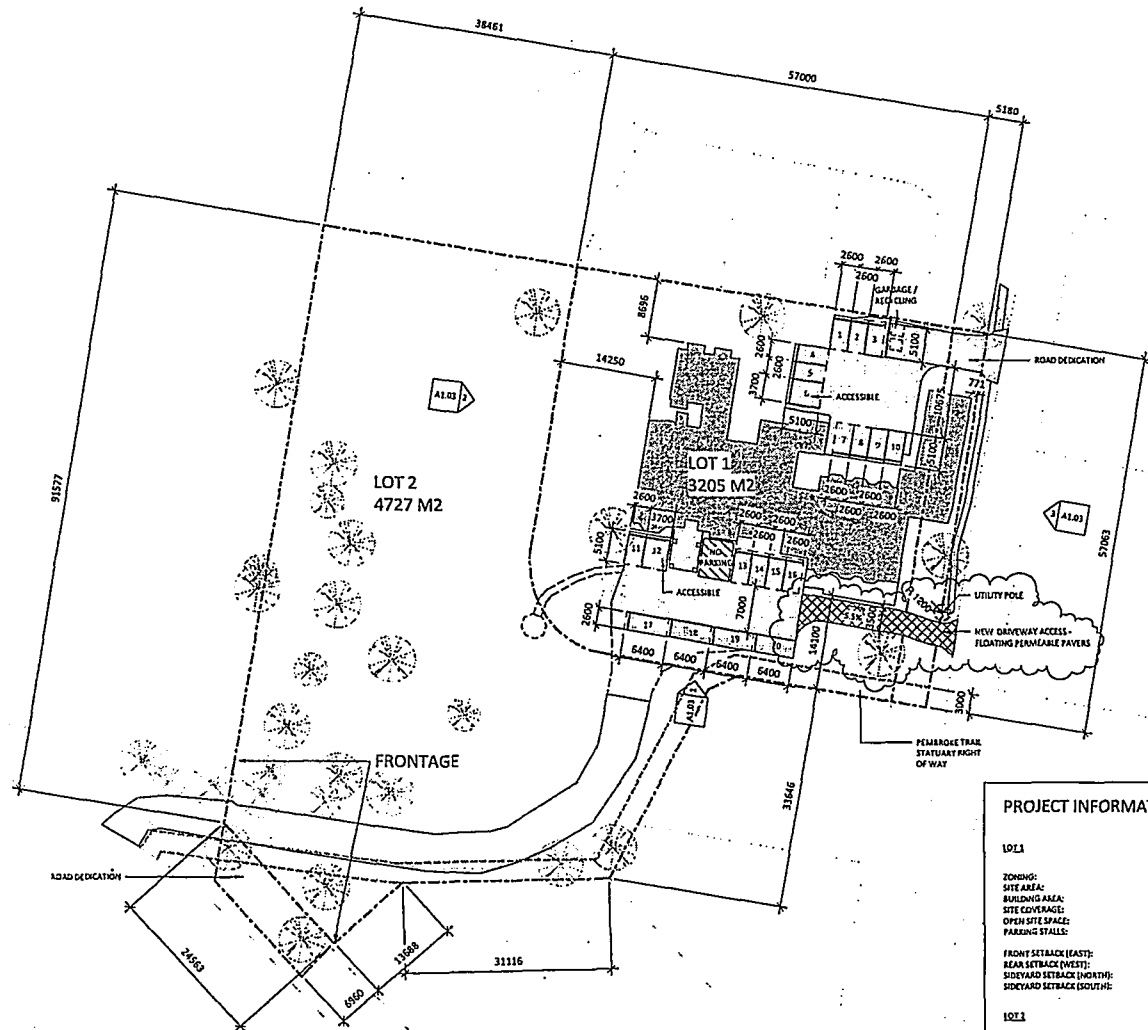
1322 Rockland
Avenue

Site Plan - Proposed

Project Number	CIA-163
Date	December 18, 2017
Drawn by	JMC
Checked by	Checke

A1.03

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PROJECT INFORMATION

1011

ZONING:	RH-2
SITE AREA:	3205m2
BUILDING AREA:	860m2
SITE COVERAGE:	26%
OPEN SITE SPACE:	52%
PERMITTED TRAILS:	10

FRONT SETBACK (EAST):	0.77m
REAR SETBACK (WEST):	14.25m
SIDEYARD SETBACK (NORTH):	8.70m
SIDEYARD SETBACK (SOUTH):	14.10m

LOT 2

ZONING:	RH-2
SITE AREA:	4727m ²
TOTAL PERIMETER LENGTH:	320.65m
FRONTAGE PERIMETER LENGTH:	33.92m
FRONTAGE PERCENT:	10.6%

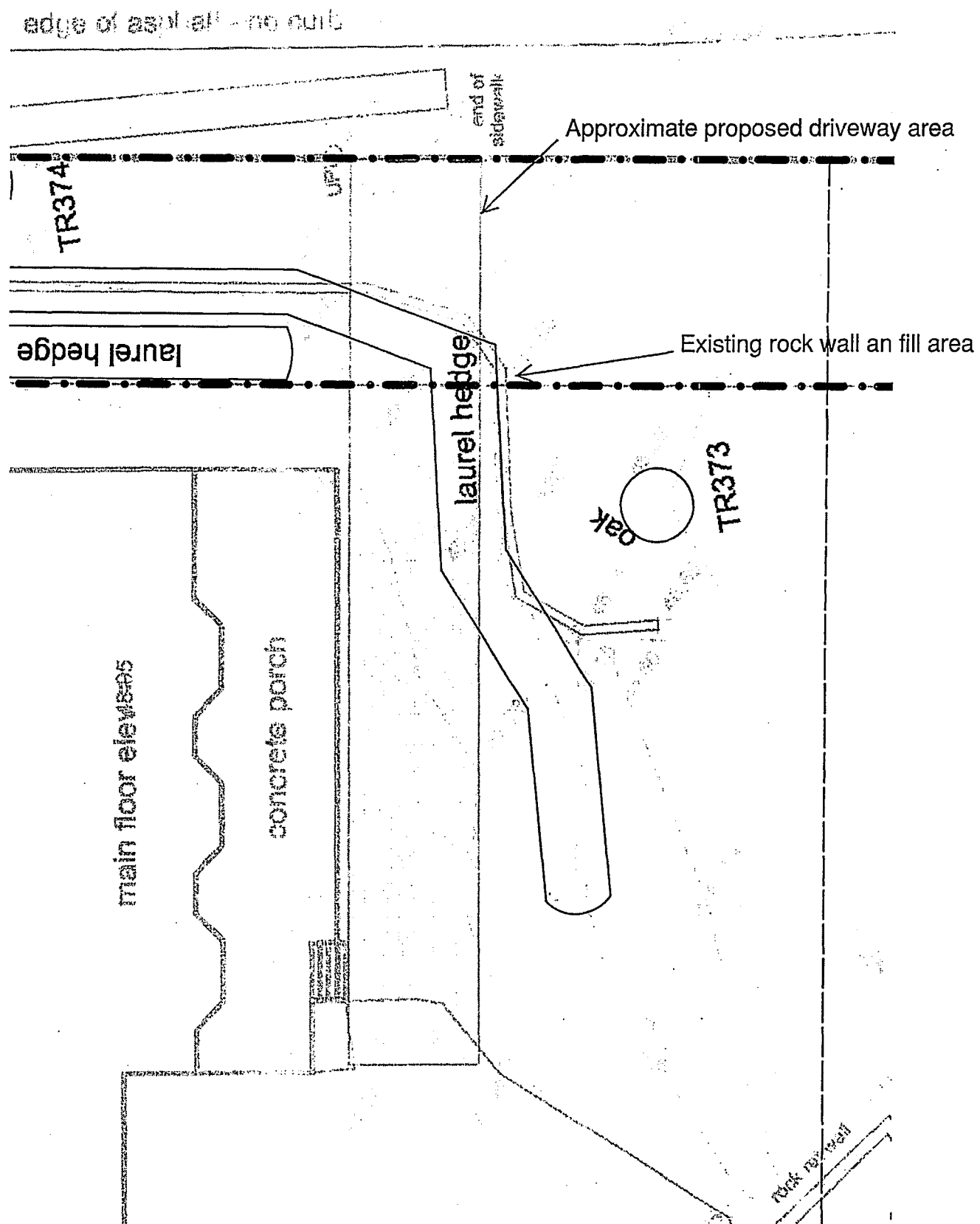
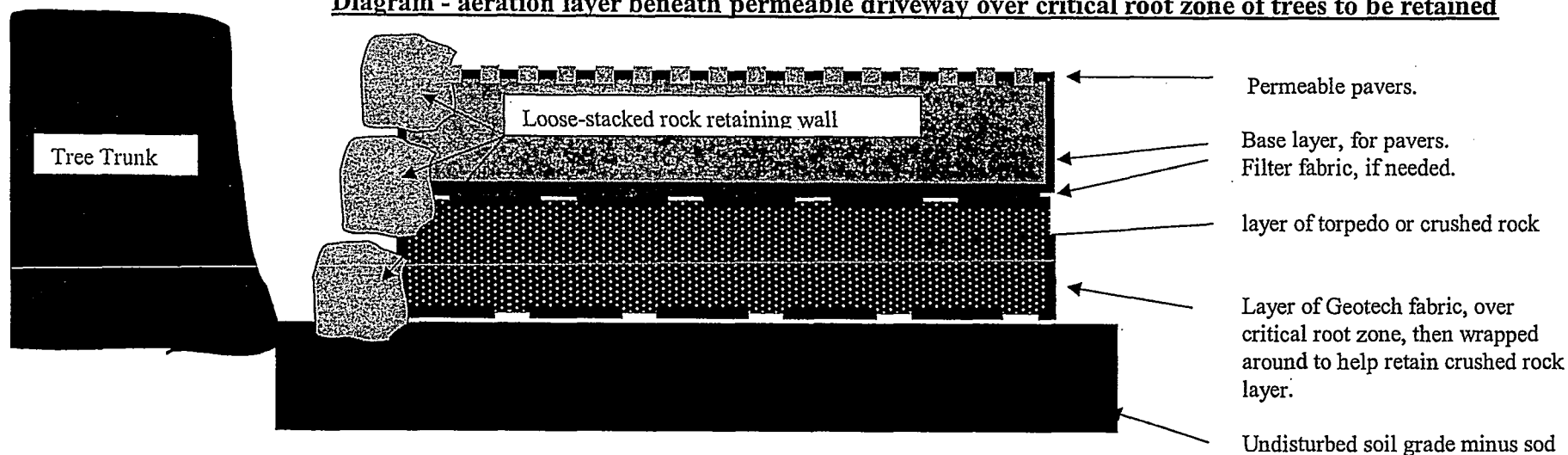


Diagram - aeration layer beneath permeable driveway over critical root zone of trees to be retained



Specifications for boulder retained floating driveway.

1. Excavation for driveway area must remove only the sod layer, where the driveway bisects the critical root zones of the protected trees.
2. A layer of geotech fabric installed over the existing soils with enough extra material extending from the sides of the driveway to wrap around and retain the next aeration fill layer.
3. An aeration layer of 10cms of torpedo rock, or 20-mm clean crushed drain rock, or larger material in bigger fill situations.
4. Wrap the geotech fabric around the sides of the fill layer, with material ends overlapping at the top of the aeration fill layer.
5. A layer of felted filter fabric can then be installed over the aeration layer to prevent fine particles of sand and soil from infiltrating this layer if necessary.
6. The permeable paver base layer can be installed directly on top of this aeration layer and the pavers installed over top.
7. Suitable edging material such as a loose-stacked rock wall is required to retain the fill away from the trunks of the trees.
8. It should be noted that if installed correctly the geotech fabric will help to displace weight and reduce driveway settling over the organic layer, but in some situations settling may still occur over time. If any driveway settling cannot be tolerated you may wish to consult with a geotechnical engineer.

Prepared by:

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