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URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

June 21, 2023

Jane Thompson, Principal Architect Jane Thompson Architect 404 MacKay Street Ottawa, ON K1M 2C4

RE: TREE CONSERVATION REPORT FOR 2009 & 2013 PRINCE OF WALES DRIVE, OTTAWA

This Tree Conservation Report (TCR) was prepared by IFS Associates Inc. (IFS) in support of the redevelopment of 2009 & 2013 Prince of Wales Drive in Ottawa. The need for this report is related to trees protected under the City of Ottawa's Tree Protection By-law (By-law No. 2020-340). The By-law reflects Section 4.8.2. of the City of Ottawa's Official Plan which calls for the retention of the City's urban forestry canopy and, in particular, the protection of large, healthy trees.

Under By-law No. 2020-340 a TCR is required for all plans of subdivision, site plan control applications, common elements condominium applications, and vacant land condominium applications where there is a tree of 10 cm in diameter at breast height (DBH) or greater on a site and/or if there is a tree on an adjacent site that has a critical root zone (CRZ) extending onto a development site. Trees of any size on City-owned lands must be documented in a TCR. A "tree" is defined in the By-law as any species of woody perennial plant, including its root system, which has reached or can reach a minimum height of at least 450 cm at physiological maturity. The CRZ is calculated as DBH x 10 cm.

The approval of this tree conservation report by the city and the issuing of a permit authorizes the removal of approved trees. Importantly, although this report may be used to support the application for a tree removal permit, it does not by itself constitute permission to remove trees or begin site clearing activities. No such work should occur before a tree removal permit is issued authorizing the injury or destruction of a tree in accordance with the Bylaw. Further, the removal of any trees shared with or fully on neighbouring properties will require written permission of the adjacent landowner.

The inventory in this report details the assessment of all individual trees on and adjacent to the subject property. Field work for this report was completed in September 2022 and May 2023. The second site visit followed heavy damage from an ice storm the previous month.

The proposed redevelopment of the subject property includes the demolition of the existing single-family dwelling at 2013, retention of the existing dwelling at 2009 and construction of six new houses. A new private road from Prince of Wales Drive follows the existing driveway to 2009 with a turnaround at the end.

The proposed construction will result in the removal of most existing trees due to conflicts with the footprints of the proposed new houses, the new private road and turnaround and the need for a major safety ditch within the easement along the southern property line adjacent to the Canadian National Railway (CNR) lands. Several trees are recommended for removal based on their current very poor condition and not due to conflicts with construction.

TREE SPECIES, CONDITION, SIZE AND STATUS

Table 1 below details the species, condition, size (diameter) and status of the individual trees on the subject property. Each of these trees is referenced by the numbers plotted on the tree conservation plan on page 8 of this report.

Table 1. Species, diameter, condition and status of trees at 2009 & 2013 Prince of Wales Drive.

Tree No.	Tree Species	DBH ¹ (cm)	Owner -ship	Tree Condition; Age Class; Condition Notes; Species Origin & Preservation Status (to be removed or preserved and protected)
1	White cedar (Thuja occidentalis)	17 avg.	Private	Fair; mature hedge of five multi-stemmed trees; fair crown density, growth increment and needle colour; native species / To be removed (conflicts with grading for storm water management pond)
2	Willow (Salix spp.)	110+	Private	Very poor; overmature; double-stemmed at grade; divergent form - very broad crown; major deadwood and broken hanging branches – tree is hazardous; native species / To be removed (conflicts with safety berm)
3	Willow (Salix spp.)	60 avg.	Private	Very poor; overmature; tri-stemmed at grade; divergent form - very broad crown; major deadwood and broken hanging branches – tree is hazardous; native species / To be removed (conflicts with safety berm)
4	White cedar (Thuja occidentalis)/ Manitoba maple (Acer negundo)	20 avg.	Private	Cedar: very poor; mature; heavily storm damaged and covered in heavy vine growth; native species; Maple: fair; maturing; covered in heavy vine growth; naturalized species / To be removed (conflicts with safety berm)
5	Crab apple (Malus <i>spp</i> .)	30 avg.	Private	Very poor; mature; double stemmed at grade – one dead, the other heavy storm damaged with vine growth throughout; cultivar / To be removed (conflicts with safety berm)
6	Silver maple (Acer saccharinum)	91	Private	Poor; very mature; co-dominant stems at 1m; north stem removed at 2.5m due to storm damage; south stem divergent towards south – with decay in upper crown; native species / To be removed (conflicts with safety berm)

Table 1. Continued

Table I	. Continued			
Tree No.	Tree Species	DBH ¹ (cm)	Owner -ship	Tree Condition; Age Class; Condition Notes; Species Origin & Preservation Status (to be removed or preserved and protected)
7	Trembling aspen (<i>Populus tremuloides</i>)	38	Private	Poor; mature; partially windthrown; native species / To be removed (conflicts with safety berm)
8	Black walnut (Juglans cinerea)	37	CNR	Good; mature; upright form; generally symmetric crown; vine in lower crown; native species / To be preserved and protected
9	Crab apple (Malus <i>spp</i> .)	31	Private	Fair; mature; upright form with tri-dominant leaders at 3-4m; heavy storm damage; cultivar / To be removed (conflicts with safety berm)
10	White spruce (Picea glauca)	51	Private	Good; mature; good form; good crown density, annual increment and needle colour; native species / To be removed (conflicts with grading for lot 7)
11	White cedar (Thuja occidentalis)	21	Private	Fair; mature; cluster of three trees; native species / To be removed (conflicts with house footprint proposed for lot 7)
12	Amur maple (Acer tataricum subsp. ginnala)	27	Private	Fair; mature; central stem with broken lateral on south; introduced invasive species / To be removed (conflicts with grading for lot 6)
13	Catalpa (Catalpa speciosa)	13	Private	Good; maturing; central dominant stem; introduced species / To be removed (conflicts with house footprint proposed for lot 5)
14	Scots pine (Pinus sylvestris)	33	Private	Good; mature; good form; good crown density, annual increment and needle colour; introduced invasive species / To be removed (conflicts with grading for lot 5)
15	White pine (Pinus strobus)	33	Private	Fair; mature; fair crown density, annual increment and needle colour; native species / To be removed (conflicts with house footprint proposed for lot 5)
16	Silver maple (Acer saccharinum)	54 (at 0.5m)	Private	Fair; mature; co-dominant stems at 1m with suppressed laterals on north; crown asymmetric; native species / To be removed (conflicts with house footprint proposed for lot 4)
17	Scots pine (Pinus sylvestris)	50	Private	Fair; mature; good crown density, annual increment and needle colour; introduced invasive species / To be removed (conflicts with house footprint proposed for lot 4)
18	White cedar (Thuja occidentalis)	12	Private	Poor; immature; suppressed growth form; native species / To be removed (conflicts with house footprint proposed for lot 4)

Table 1. Continued

	. Continued			
Tree No.	Tree Species	DBH ¹ (cm)	Owner -ship	Tree Condition; Age Class; Condition Notes; Species Origin & Preservation Status (to be removed or preserved and protected)
19	Colorado spruce (Picea pungens)	28, 43, 39, 43, 31,48, 50, 41	Private	Fair; line of 8 mature trees; all upright with narrow forms and dead lower crowns due to tight spacing; fair crown density, annual increment and needle colour in upper crown; introduced species / To be removed (conflicts with house footprints and
20	Red maple (Acer rubrum)	60	Private	grading proposed for lots 3 and 4) Fair; mature; tri-dominant stems at 1.5m; native species / To be removed (conflicts with house footprint proposed for lot 2)
21	Red maple (Acer rubrum)	46	Private	Fair; mature; co-dominant stems at 0.7m; generally upright form; south stem bisects at 10m; native species / To be removed (conflicts with house footprint proposed for lot 2)
22	Red maple (Acer rubrum)	51	Private	Good; mature; single stem with competing leaders at 8m; native species / To be removed (conflicts with house footprint proposed for lot 2)
23	White cedar (Thuja occidentalis)	15 avg.	Private	Fair; mature; unmaintained hedge; fair crown density, annual increment and needle colour; partially within watercourse setback / To be removed (23A conflicts with house footprint proposed for lot 2 – 23B portion within setback to be retained)
24	White pine (Pinus strobus)	48	Private	Fair; fair crown density, annual increment and needle colour; native species / To be removed (conflicts with private road)
25	White spruce (Picea glauca)	52	Private	Fair; mature; poor crown density, fair annual increment and needle colour; single stem and leader / To be removed (conflicts with private road)
26	White spruce (Picea glauca)	54	Private	Fair; mature; fair crown density, annual increment and needle colour; single stem and leader / To be removed (conflicts with grading proposed for lot 5)
27	Scots pine (Pinus sylvestris)	12	Private	Fair; immature; introduced invasive species / To be removed (conflicts with house footprint proposed for lot 4)
28	White cedar (Thuja occidentalis)	12	Private	Fair; maturing; native species / To be removed (conflicts with house footprint proposed for lot 4)
29	White pine (Pinus strobus)	33	Private	Fair; mature; fair crown density, annual increment, and needle colour; native species / To be removed (conflicts with house footprint proposed for lot 4)

Table 1. Continued

Table 1	. Continued			
Tree	Tree Species	DBH^1	Owner	Tree Condition; Age Class; Condition Notes;
No.		(cm)	-ship	Species Origin & Preservation Status (to be
				removed or preserved and protected)
30	White pine	33	Private	Fair; mature; fair crown density, annual increment,
	(Pinus strobus)			and needle colour; native species / To be removed
				(conflicts with house footprint proposed for lot 4)
31	Silver maple	54 (at	Private	Fair; mature; co-dominant stems at 1m with three
	(Acer	0.5m)		suppressed laterals on north; native species / To be
	saccharinum)			removed (conflicts with house footprint proposed
				for lot 4)
32	Catalpa	18	Private	Fair; maturing; upright form; competing leaders;
	(Catalpa			introduced species / To be removed (conflicts with
	speciosa)			house footprint proposed for lot 4)
33	Norway spruce	29	Private	Good; maturing; good crown density, annual
	(Picea abies)			increment, and needle colour; lower crown
				asymmetric; native species / To be removed
				(conflicts with house footprint proposed for lot 4)
34	White cedar	33	Private	Fair; mature; fair crown density, annual increment,
	(Thuja			and needle colour; native species / To be removed
	occidentalis)			(conflicts with grading proposed for lot 4)
35	White cedar	27	Private	Fair; mature; fair crown density, annual increment,
	(Thuja			and needle colour; native species / To be removed
	occidentalis)			(conflicts with turnaround)
36	White cedar	Cedar:	Shared	Line of four mature trees straddling property line
	(Thuja	19 &		between 2005 and 2009; generally all with fair
	occidentalis);	17 avg.;		crown density, annual increment, and needle colour;
	White spruce	Pine:		pine missing top due to storm damage; native
	(Picea	45;		species / To be preserved and protected
	glauca); White	Spruce:		
	pine (Pinus	22		
	strobus)		<u> </u>	
37	Sugar maple	26	Shared	Fair; maturing; central dominant stem with
	(Acer			suppressed basal sprout on east; native species / To
a =	saccharum)	,		be preserved and protected
38	White spruce	+/-50	Neigh-	Fair; mature; poor crown density, fair annual
	(Picea glauca)		bour	increment and needle colour; native species / To be
a •	51.1.1	,		preserved and protected
39	Black walnut	+/-30	Neigh-	Poor; central with suppressed lateral at 3m on
	(Juglans nigra)		bour	southeast; - both topped in past; native species / To
				be preserved and protected



Table 1. Continued

Tree	Tree Species	DBH ¹	Owner	Tree Condition; Age Class; Condition Notes;
No.		(cm)	-ship	Species Origin & Preservation Status (to be
				removed or preserved and protected)
40	Black walnut	48	Shared	Poor, mature; co-dominant stems at 7m; south with
	(Juglans nigra)			large burn wound; third stem previously removed
				from east; native species / To be preserved and
				protected
41	White cedar	15 avg.	Shared	Fair; mature; infrequently maintained hedge; topped
	(Thuja			at 2.5m in past; fair crown density, annual increment
	occidentalis)			and needle colour; partially within watercourse
				setback / To be preserved and protected

¹Diameter at breast height, or 1.4m from grade.

Pictures 1 to 7 on pages 10 through 14 of this report show selected trees on and adjacent to the subject property.

FEDERAL AND PROVINCIAL REGULATIONS

Federal and provincial regulations can be applicable to trees on private and public property. In particular, the following two regulations have been considered for this property:

- 1) Endangered Species Act (2007): Butternut (*Juglans cinerea*) is listed as threatened under the Province of Ontario's Endangered Species Act (ESA, 2007) and so is protected from harm. No trees of this species were found on or adjacent to the subject property.
- 2) <u>Migratory Bird Convention Act (1994)</u>: In the period between April and August of each year nest surveys are required to be performed by a suitably trained person no more than five (5) days before trees or other similar nesting habitat are to be removed.

TREE PRESERVATION AND PROTECTION MEASURES

Preservation and protection measures intended to mitigate damage during construction will be applied for the trees to be retained on and adjacent to the subject property. The following measures are the minimum required by the City of Ottawa to ensure tree survival during and following construction:

- 1. As per the City of Ottawa's tree protection barrier specification, erect a fence as close as possible to the CRZ of each tree (see City of Ottawa Tree Protection Barrier specifications on page 9).
- 2. Do not place any material or equipment within the CRZ of the tree(s).
- 3. Do not attach any signs, notices or posters to any tree.
- 4. Do not raise or lower the existing grade within the CRZ without approval.
- 5. Tunnel or bore instead of trenching within the CRZ of any tree.
- 6. Do not damage the root system, trunk or branches of any tree.



7. Ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy.

¹ critical root zone (CRZ) is established as being 10 centimetres from the trunk of a tree for every centimetre of DBH. The CRZ is calculated as DBH x 10 cm.

This report is subject to the attached Limitations of Tree Assessments and Liability to which the reader's attention is directed.

Please do not hesitate to contact me with any questions concerning this Tree Conservation Report.

Yours,

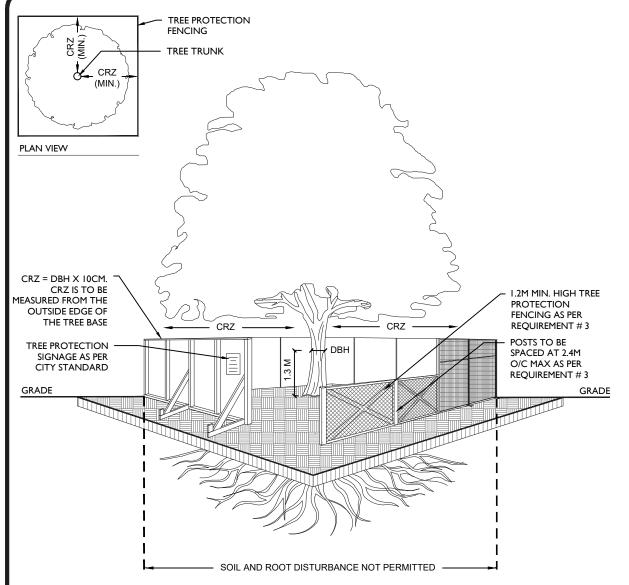
Andrew K. Boyd, B.Sc.F, R.P.F. (#1828)

Certified Arborist #ON-0496A and TRAQualified

Consulting Urban Forester







TREE PROTECTION REQUIREMENTS:

- PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
- 2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
 - DO NOT PLACE ANY MATERIAL OR EQUIPMENT INCLUDING OUTHOUSES;
 - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
 - DO NOT RAISE OR LOWER THE EXISTING GRADE;
 - TUNNEL OR BORE WHEN DIGGING;
 - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE:
 - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARD ANY TREE CANOPY.
 - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
- 3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC STEEL, PLYWOOD HOARDING, OR SNOW FENCE ON A 2"X4" WOOD FRAME) WITH POSTS 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
- 4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE INFORMATION REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
- 5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.

THE CITY'S TREE PROTECTION BY-LAW, 2020-340 PROTECTS BOTH CITY-OWNED TREES, CITY-WIDE, AND PRIVATELY-OWNED TREES WITHIN THE URBAN AREA. PLEASE REFER TO WWW.OTTAWA.CA/TREEBYLAW FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.

ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST



TREE PROTECTION SPECIFICATION

TO BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF WORK ACTIVITIES ON SITE.

SCALE: NTS

DATE: MARCH 2021

DRAWING NO.: 1 of 1





Picture 2. Trees #2 & 3 (right to left) at 2009 & 2013 Prince of Wales Drive



Picture 3. Line of spruce trees #19 at 2009 & 2013 Prince of Wales Drive





Picture 4. Cedar hedge #23 with trees #20-22 in background at 2009 & 2013 Prince of Wales Drive



Picture 5. Trees #25-29 and #14 (left to right) at 2009 & 2013 Prince of Wales Drive



Picture 6. Trees #36-38 (right to left) at 2009 & 2013 Prince of Wales Drive





Picture 7. Cedar hedge #41 at 2009 & 2013 Prince of Wales Drive



LIMITATIONS OF TREE ASSESSMENTS & LIABILITY

GENERAL

It is the policy of *IFS Associates Inc.* to attach the following clause regarding limitations. We do this to ensure that our clients are clearly aware of what is technically and professionally realistic in assessing trees for retention.

This report was prepared by *IFS Associates Inc.* at the request of the client. The information, interpretation and analysis expressed in this report are for the sole benefit and exclusive use of the client. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the client to whom it is addressed. Unless otherwise required by law, neither all or any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through public relations, news or other media, without the prior expressly written consent of the author, and especially as to value conclusions, identity of the author, or any reference to any professional society or institute or to any initialed designation conferred upon the author as stated in his qualifications.

This report and any values expressed herein represent the opinion of the author; his fee is in no way contingent upon the reporting of a specified value, a stipulated result, nor upon any finding to be reported. Details obtained from photographs, sketches, *etc.*, are intended as visual aids and are not to scale. They should not be construed as engineering reports or surveys. Although every effort has been made to ensure that this assessment is reasonably accurate, the tree(s) should be reassessed at least annually. The assessment presented in this report is valid at the time of the inspection only. The loss or alteration of any part of this report invalidates the entire report.

LIMITATIONS

The information contained in this report covers only the tree(s) in question and no others. It reflects the condition of the assessed tree(s) at the time of inspection and was limited to a visual examination of the accessible portions only. *IFS Associates Inc.* has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the forestry and arboricultural professions, subject to the time limits and physical constraints applicable to this report. The assessment of the tree(s) presented in this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground portions of each tree for structural defects, scars, cracks, cavities, external indications of decay such as fungal fruiting bodies, evidence of insect infestations, discoloured foliage, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the proximity of people and property. Except where specifically noted in the report, the tree(s) examined were not dissected, cored, probed or climbed to gain further evidence of their structural condition. Also, unless otherwise noted, no detailed root collar examinations involving excavation were undertaken.

While reasonable efforts have been made to ensure that the tree(s) proposed for retention are healthy, no warranty or guarantee, expressed or implied, are offered that these trees, or any parts of them, will remain standing. This includes other trees on or off the property not examined as part of this assignment. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or groups of trees or their component parts in all circumstances, especially when within construction zones. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure in the event of root loss due to excavation and other construction-related impacts. This risk can only be eliminated through full tree removal.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms, and their health and vigour constantly change over time. They are not immune to changes in site conditions, or seasonal variations in the weather. It is a condition of this report that *IFS Associates Inc.* be notified of any changes in tree condition and be provided an opportunity to review or revise the recommendations within this report. Recognition of changes to a tree's condition requires expertise and extensive experience. It is recommended that *IFS Associates Inc.* be employed to re-inspect the tree(s) with sufficient frequency to detect if conditions have changed significantly.

ASSUMPTIONS

Statements made to *IFS Associates Inc*. in regards to the condition, history and location of the tree(s) are assumed to be correct. Unless indicated otherwise, all trees under investigation in this report are assumed to be on the client's property. A recent survey prepared by a Licensed Ontario Land Surveyor showing all relevant trees, both on and adjacent to the subject property, will be provided prior to the start of field work. The final version of the grading plan for the project will be provided prior to completion of the report. Any further changes to this plan invalidate the report on which it is based. *IFS Associates Inc*. must be provided the opportunity to revise the report in relation to any significant changes to the grading plan. The procurement of said survey and grading plan, and the costs associated with them both, are the responsibility of the client, not *IFS Associates Inc*.

LIABILITY

Without limiting the foregoing, no liability is assumed by *IFS Associates Inc.* for: 1) any legal description provided with respect to the property; 2) issues of title and/or ownership with respect to the property; 3) the accuracy of the property line locations or boundaries with respect to the property; 4) the accuracy of any other information provided by the client or third parties; 5) any consequential loss, injury or damages suffered by the client or any third parties, including but not limited to replacement costs, loss of use, earnings and business interruption; and, 6) the unauthorized distribution of the report.

INDEMNIFICATION

An applicant for a permit or other approval based on this report shall agree to indemnify and save harmless *IFS Associates Inc.* from any and all claims, demands, causes of action, losses, costs or damages that affected private landowners and/or the City of Ottawa may suffer, incur or be liable for resulting from the issuance of a permit or approval based on this report or from the performance or non-performance of the applicant, whether with or without negligence on the part of the applicant, or the applicant's employees, directors, contractors and agents.

Further, under no circumstances may any claims be initiated or commenced by the applicant against *IFS Associates Inc.* or any of its directors, officers, employees, contractors, agents or assessors, in contract or in tort, more than 12 months after the date of this report.

ONGOING SERVICES

IFS Associates Inc. accepts no responsibility for the implementation of any or all parts of the report, unless specifically requested to supervise the implementation or examine the results of activities recommended herein. In the event that examination or supervision is requested, that request shall be made in writing and the details, including fees, agreed to in advance.