Tree Inventory, Protection & Removal Plan

Prepared for: Hillsburgh Heights Inc.

Site: 5916 Trafalgar Road North, Hillsburgh, Erin Ontario

Prepared By:
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1.0 Introduction

1.1 Purpose of Assignment

The Urban Arborist Inc was retained by Hillsburgh Heights Inc. to prepare a Tree Inventory, Protection Plan, and Removal Plan for a proposed subdivision. Two sections of land is to be left for future uses. Area of land to be developed is shown in Tree Inventory / Protection Plan Drawing TP-1.



Figure 1. Subject Lot at 5916 Trafalgar Road North. Erin, ON. Part 1 and Part 2 Lot 26 Concession 7

1.2 Existing Site Characteristics

The site consists of 1 detached home, with a large barn, and a secondary large garage. The lot has several large grade changes in the form of hills and valleys.

2.0 Methodology

All data used in this report is empirical in nature, unless stated otherwise. All measurements in this report utilize the metric system of measurement.

2.1 Field Study

Site inspection and data collection was initiated August 31, 2021. All significant trees measuring 20cm DBH and greater located on the subject lands. Trees were measured 1.37m from grade (DBH). All trees smaller than the 20cm DBH threshold are shown as groupings.

2.2 Tree Locations

The locations of all significant trees were surveyed and plotted and shown on drawing in appendix 2.

2.3 Tree Conditions

During field study a generalized assessment system was used to give each significant tree a rating based on structural condition and health condition.

The following 5 level assessment for health is listed below.

- Very Poor Tree displays severe dieback of branches, canopy is extremely sparse.

 May exhibit extreme pathogen infestation or infection. Or tree is dead.
- Poor Tree displays some dieback. Branches or canopy is sparse with little or no signs of new growth or vigour. Possible pathogen infestation or infection. Foliar canopy is sparse.
- Average Tree is developing in a manner typical to others in the area. Canopy is full.
- Good New growth is vigorous as evidenced by stem elongation and colour. Canopy is dense.
- Very Good In addition to the attributes of a good rating, tree is displaying extremely vigorous growth and trunk displays a pattern of vigour cracks or lines.

The following 5 level assessment for structural condition was as follows:

Very Poor - Trunk has large pockets of decay, is bifurcated or has a severe lean. Limbs or branches are poorly attached or dead. Possible hazard.

Poor - Limbs or branches are poorly attached or developed. Canopy is not

symmetrical. Trunk has a lean.

Average - Trunk, limb and branch development though flawed is typical of this

species.

Good - Trunk is well developed with well attached limbs and branches; some

flaws but are hardly visible.

Very Good - In addition to attributes of a good rating, the tree exhibits a well

developed root flare and a balanced canopy.

Factors Assessed were as follows:

Roots	Trunk	Foliage/Buds	Scaffold Branches	Small Branches/Twigs
· Collar/flare	· Cavities	· Size of foliage/buds	· Attachments/included	· Vigour/growth rates
· Mechanical injury	· Mechanical injury	· Foliage colour	bark	· Distribution
· Girdling roots	· Cracks	· Foliage injury	· Taper	· Appearance
· Insects/disease	· Swollen/sunken	· Dieback of	· Distribution	· Insects/disease
· Decay/fungi	areas	buds/foliage	· Decay/cavities	· Dieback
	· Insects/disease	· Insects/disease	· Deadwood	
	· Fungi		· Insects/disease	

3.0 Tree Inventory

A total of 80 trees were individually inventoried and 6 groupings of trees were inventoried. (See Tree Inventory Spreadsheet in appendix 1).

Groupings consisted of mostly juvenile trees less than 20cm in diameter.

3.1 Trees to Preserve

The trees in this section have been evaluated suitable for preservation and fall under the Tree Preservation, Protection and Management guidelines in this report. Different approaches of Tree Preservation can be carried out following tree health and structure evaluation. The following describes the differences in approaches to Tree Preservation.

1. Preserve, Protect & Maintain

Includes protection with tree preservation hoarding, as well as pre and post-construction arboricultural works.

2. Preserve & Protect

Includes the installation of tree protection hoarding; no maintenance will be required unless specified in the recommendations in Appendix 1

3. Retain

No protection or maintenance measures are required. Installation of tree protection barriers is optional.

4. Transplanting

Where size of tree permits transplanting, it is recommended that moving a tree to a location that would suit the tree.

# of Trees evaluated as suitable for Preservation	31
# of Trees to use Method 1	
# of Trees to use Method 2	1241 – 1244, 1246 – 1267, 1303 – 1307,
# of Trees to use Method 3	Grouping 3
# of Trees to use Method 4	

In the case of 5916 Trafalgar Road North, 31 trees individually inventoried trees and 1 grouping of trees can be preserved on site. Trees that will be protected with hoarding are all trees the subject site that are not proposed to be removed. Trees suitable for preservation must be preserved only through the full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines contained in this report for trees to continue to survive.

3.2 Trees to Remove

All trees scheduled for removal shall be removed prior to any construction, earthworks or installation of tree protection hoarding. Due to site or development, tree condition or location, retention is not warranted. All trees and groupings of trees, except for tree 1241 - 1244, 1246 - 1267, 1303 - 1307, and Grouping 3 will be required to be removed due to development impact.

Total of number of Trees to Remove	All except 1241 – 1244, 1246 – 1267, 1303 –		
	1307, grouping 3		

3.3 Trees to Injure

There are no trees to be injured. All trees except those outside of development area or near the development limit are to be removed.

3.4 Trees to Replant (Replacement)

Replacement planting requirements must still be negotiated with the Town of Erin and will be coordinated into a Landscape Plan at the Design Stage.

3.5 Trees to Transplant

The only area where the stock of species is valuable enough to consider transplanting and where exists the appropriate sizing where transplanting may be successful is at the east area of proposed Block 4 (Swim Pond). Due to the extremely large and long slope where all of these tree exist and the densitiy of which they have grown, it is therefore not feasible to transplant any trees. All other areas on the property have trees that are too large, are considered invasive species, or are among other trees where transplanting would be to difficult to achieve with roots being intertwined with other trees.

4.0 Tree Preservation, Protection and Management

4.1 Tree Protection

All trees scheduled to be *Preserved Protected & Maintained* or *Preserved & Protected* shall have their critical rooting zones protected with the installation of tree protection barriers. Tree protection barriers shall be installed as per Town of Erin Barriers Detail.

5.0Conclusions and Recommendations

Based on all data collected from on-site field work and review of all site plans the following conclusions and recommendations are made and correspond with Tree Inventory in Appendix 1:

Conclusions	Recommendations
All trees within the development are to be removed except where tree protection is proposed.	Submit this plan to Town of Erin.
31 trees are to be preserved & protected to the ful extent of minimum tree protection distances and maintained during construction.	Install tree protection barriers as shown in Tree Protection Plan Drawing TP-1 in appendix 2.
Replacement trees are to be determined with the Town of Erin.	Create Replanting Plan at Design Stage.

Attachments are as follows:

Appendix 1 Tree Inventory

Appendix 2 Tree Protection Plan Drawing TP-1

This 7 page Report was written by

Robert Rafal Lis

The Urban Arborist Inc.

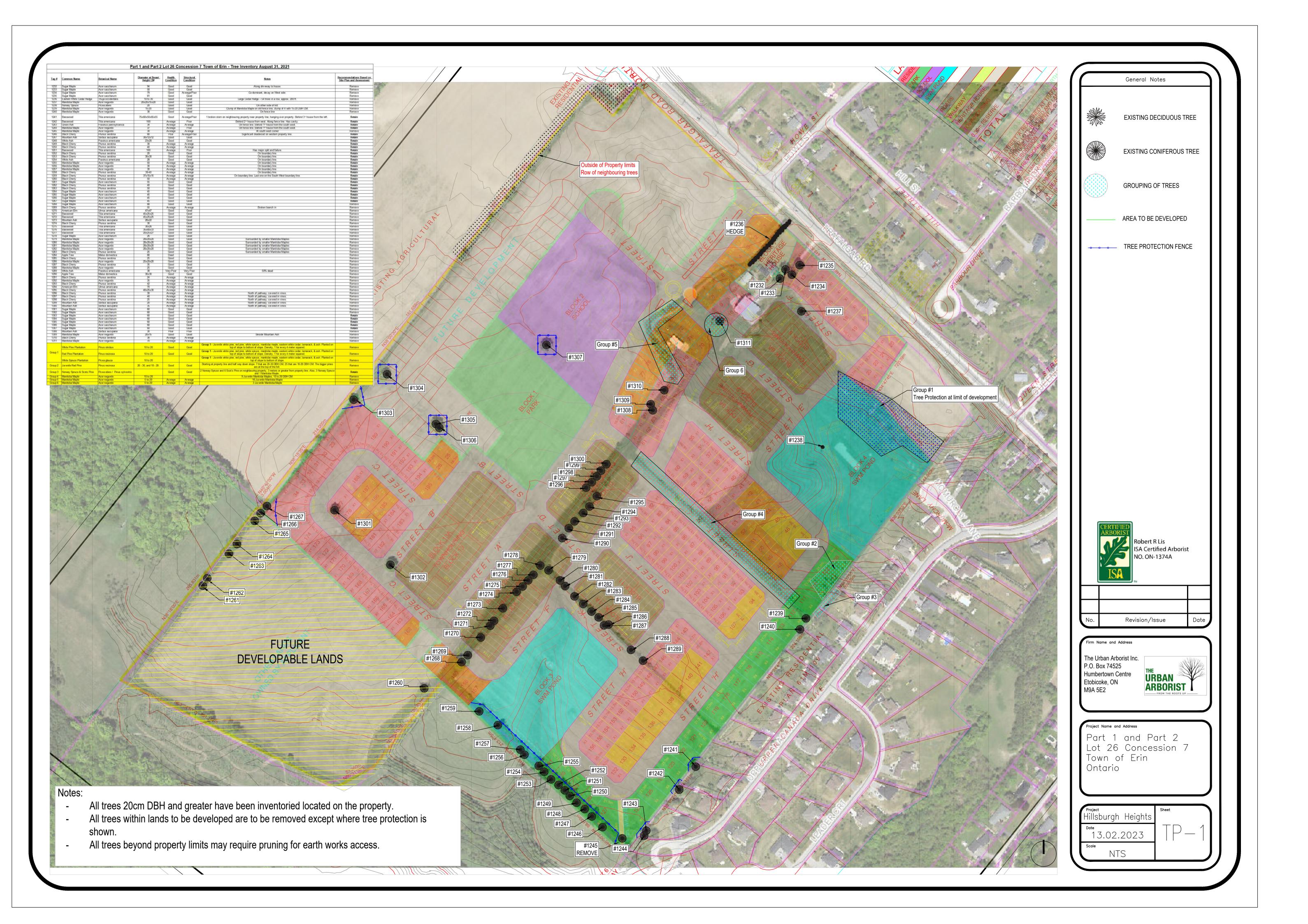
URBAN ARBORIST

ISA Certified Arborist No. ON-1374A MTCU Qualified Arborist 18004025 Butternut Health Assessor #644

Part 1 and Part 2 Lot 26 Concession 7 Town of Erin - Tree Inventory August 31, 2021

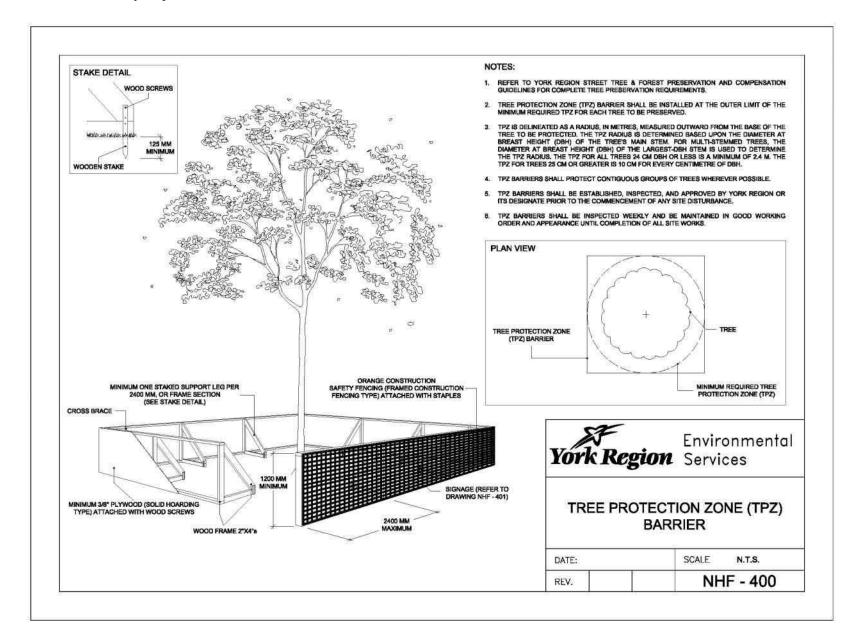
1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	Along driveway to house. Remove Co-dominant, decay on West side. Remove Remove Remove Remove Remove Remove Remove Con other side of hill. Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. Remove On fence line Remove Retain
1234 Sugar Maple Acer saccharum 79 Good Average/Poor 1235 Sugar Maple Acer saccharum 81 Good Good 1236 Eastern White Cedar Hedge Thuja occidentalis 10 to 30 Good Good 1237 Manitoba Maple Acer negundo 20x20x15x20 Good Good 1238 Norway Spruce Picea abies 20 Good Good 1239 Manitoba Maple Acer negundo 15-20 Good Good 1240 Manitoba Maple Acer negundo 38 Good Good 1241 Basswood Tilia americana 75x60x50x65x55 Good Average/Poor 1 broken seed 1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Average 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	Co-dominant, decay on West side. Remove Remove Large Cedar Hedge – 54 trees in a row, approx. 200 ft. Remove On other side of hill. Remove Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. Remove On fence line Remove
1235 Sugar Maple Acer saccharum 81 Good Good 1236 Eastern White Cedar Hedge Thuja occidentalis 10 to 30 Good Good 1237 Manitoba Maple Acer negundo 20x20x15x20 Good Good 1238 Norway Spruce Picea abies 20 Good Good 1239 Manitoba Maple Acer negundo 15-20 Good Good 1240 Manitoba Maple Acer negundo 38 Good Good 1241 Basswood Tilia americana 75x60x50x65x55 Good Average/Poor 1 broken seed 1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serolina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good 1248 Good Good Good Good 1249 Mountain Ash Sorbus aucuparia 30x12x12 Good Good 1240 Good Good Good Good Good Good 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good Good 1248 Good Good	Large Cedar Hedge – 54 trees in a row, approx. 200 ft. Remove On other side of hill. Remove Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. On fence line Remove
1236	Large Cedar Hedge – 54 trees in a row, approx. 200 ft. Remove On other side of hill. Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. Remove On fence line Remove Retain
1237 Manitoba Maple Acer negundo 20x20x15x20 Good Good 1238 Norway Spruce Picea abies 20 Good Good 1239 Manitoba Maple Acer negundo 15-20 Good Good 1240 Manitoba Maple Acer negundo 38 Good Good 1241 Basswood Tilia americana 75x60x50x65x55 Good Average/Poor 1 broken s 1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 37 Average Poor 1246 Black Cherry Prunus serotina 80 Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good 1250 Good Good Good Good 1260 Good Good Good Good Good 1270 Good Good Good Good Good 1287 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	On other side of hill. Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. Remove On fence line Remove stem on neighbouring property near property line, hanging over property. Behind 3rd house from the left. Retain Behind 2rd house from west. Along fence line. Has cavity. Retain
1238 Norway Spruce Picea abies 20 Good Good 1239 Manitoba Maple Acer negundo 15-20 Good Good 1240 Manitoba Maple Acer negundo 38 Good Good 1241 Basswood Tilia americana 75x60x50x65x55 Good Average/Poor 1 broken s 1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	On other side of hill. Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. Clump of Manitoba Maple on old fence line clump of 4 with 15-20 DBH CM. Remove On fence line Remove stem on neighbouring property near property line, hanging over property. Behind 3 rd house from the left. Behind 2 rd house from west. Along fence line, Has cavity. Retain
1239 Manitoba Maple Acer negundo 15-20 Good Good 1240 Manitoba Maple Acer negundo 38 Good Good 1241 Basswood Tilia americana 75x60x50x65x55 Good Average/Poor 1 broken s 1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	Clump of Manitoba Maple on old fence line, clump of 4 with 15-20 DBH CM. On fence line Remove stem on neighbouring property near property line, hanging over property. Behind 3rd house from the left. Behind 2rd house from west. Along fence line. Has cavity. Retain
1240 Manitoba Maple Acer negundo 38 Good Good 1241 Basswood Tilia americana 75x60x50x65x55 Good Average/Poor 1 broken s 1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	On fence line Remove stem on neighbouring property near property line, hanging over property. Behind 3rd house from the left. Retain Behind 2rd house from west. Along fence line. Has cavity. Retain
1241 Basswood Tilia americana 75x60x50x65x55 Good Average/Poor 1 broken s 1242 Basswood Tilia americana 100 Average Poor 1243 Green Ash Fraxirus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	stem on neighbouring property near property line, hanging over property. Behind 3 rd house from the left. Retain Behind 2 rd house from west. Along fence line. Has cavity. Retain
1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	
1243 Green Ash Fraxinus pennsylvanica 34 Average Average 1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	
1244 Manitoba Maple Acer negundo 37 Average Poor 1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	
1245 Manitoba Maple Acer negundo 30 Average Average 1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	On fence line. Behind 1st house from the south west. Retain
1246 Black Cherry Prunus serotina 80 Poor Average/Poor 1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	At south west corner Remove
1247 Mountain Ash Sorbus aucuparia 30x12x12 Good Good	Significant deadwood on western property line. Retain
	Retain
1248 White Ash Fraxinus americana 23x20 Good Good	Retain
1249 Black Cherry Prunus serotina 30 Average Average	Retain
1250 Black Cherry Prunus serotina 40 Average Average	Retain
1251 Basswood Tiila americana 100 Average Poor	Has major split and failure. Retain
1252 Black Cherry Prunus serotina 20 Good Good	On boundary line. Retain
1253 Black Cherry Prunus serotina 30x30 Good Good	On boundary line. Retain
1254 White Ash Fraxinus americana 28 Good Good	On boundary line. Retain
1255 Manitoba Maple Acer negundo 50 Average Average	On boundary line. Retain
1256 Manitoba Maple Acer negundo 30 Average Average	On boundary line. Retain
1257 Manitoba Maple Acer negundo 30 Average Average	On boundary line. Retain
1258 Black Cherry Prunus serotina 30-40 Average Average	On boundary line. Retain
1259 Black Cherry Prunus serotina 37x15x15 Average Average	On boundary line. Last one on the South West boundary line. Retain
1260 Black Cherry Prunus serotina 50 Average Average	Retain
1261 Sugar Maple Acer saccharum 55 Good Good	Retain
1262 Black Cherry Prunus serotina 40 Good Good	Retain
1263 Black Cherry Prunus serotina 50 Good Good	Retain
1264 Sugar Maple Acer saccharum 45 Good Good	Retain
1265 Sugar Maple Acer saccharum 45 Good Good	Retain
1266 Sugar Maple Acer saccharum 45 Good Good	Retain
1267 Sugar Maple Acer saccharum 45 Good Good	Retain
1268 Sugar Maple Acer saccharum 88 Good Good	Remove
1269 Black Cherry Prunus serotina 55 Average Average	Broken branch in Remove
1270 American Elím Ulmus americana 47x47 Good Good	Remove
1271 Basswood Tilia americana 45x25x25 Good Good	Remove
1272 Basswood Tilia americana 45x25x25 Good Good	Remove
1273 Mountain Ash Sorbus aucuparia 28x22 Good Good	Remove
1274 Black Cherry Prunus serotina 30 Good Good	Remove
1275 Basswood Tilia americana 30x26 Good Good	Remove
1276 Basswood Tilia americana 35x40x33 Good Good	Remove
1277 Basswood Tilia americana 20x25x27 Good Good	Remove
1278 Sugar Maple Acer saccharum 26 Good Good	Remove
1279 Manitoba Maple Acer negundo 28x20x20 Good Good	Surrounded by smaller Manitoba Maples Remove
1280 Manitoba Maple Acer negundo 28x20x20 Good Good	Surrounded by smaller Manitoba Maples Remove
1281 Manitoba Maple Acer negundo 28x20x20 Good Good	Surrounded by smaller Manitoba Maples Remove
1282 Manitoba Maple Acer negundo 28x20x20 Good Good	Surrounded by smaller Manitoba Maples Remove
1283 Black Cherry Prunus serotina 25 Good Good	Surrounded by smaller Manitoba Maples Remove
1284 Apple Tree Malus domestica 80 Dead Dead	Remove
1285 Black Cherry Prunus serotina 25 Good Good	Remove
1286 Manitoba Maple Acer negundo 25x20x20 Good Good	Remove
1287 Black Cherry Prunus serotina 35 Good Good	Remove
1288 Manitoba Maple Acer negundo 25 Good Good	Remove
1289 White Ash Fraxinus americana 38 Very Poor Very Poor	50% dead Remove
1290 Apple Tree Malus domestica 30x30 Good Good	Remove
1291 Black Cherry Prunus serotina 24 Average Average	Remove
1292 Manitoba Maple Acer negundo 35 Average Average	Remove
1293 Black Cherry Prunus serotina 42 Average Average	Remove
1294 American Elm Ulmus americana 70 Average Average	Remove
1295 Black Cherry Prunus serotina 40x25x30 Average Average	Remove
1296 Black Cherry Prunus serotina 30 Average Average	North of pathway, covered in vines. Remove
1297 Black Cherry Prunus serotina 40 Average Average	North of pathway, covered in vines. Remove
1298 Black Cherry Prunus serotina 25 Average Average	North of pathway, covered in vines. Remove
1299 Mountain Ash Sorbus aucuparia 20 Average Average	North of pathway, covered in vines. Remove
1300 Mountain Ash Sorbus aucuparia 35 Average Average	
1301 Sugar Maple Acer saccharum 60 Good Good	North of pathway, covered in vines. Remove

1302	Sugar Maple	Acer saccharum	60	Good	Good		Remove
1303	Sugar Maple	Acer saccharum	60	Good	Good		Retain
1304	Sugar Maple	Acer saccharum	60	Good	Good		Retain
1305	Sugar Maple	Acer saccharum	60	Good	Good		Retain
1306	Sugar Maple	Acer saccharum	60	Good	Good		Retain
1307	Sugar Maple	Acer saccharum	60	Good	Good		Retain
1308	Mountain Ash	Sorbus aucuparia	30	Poor	Poor		Remove
1309	Manitoba Maple	Acer negundo	20x15	Good	Good	Beside Mountain Ash	Remove
1310	Black Cherry	Prunus serotina	38	Average	Average		Remove
1311	Manitoba Maple	Acer negundo	70	Average	Average		Remove
	White Pine Plantation	Pinus strobus	10 to 20	Good	Good	Group 1 - Juvenile white pine, red pine, white spruce, manitoba maple, eastern white cedar, tamarack, & ash. Planted on top of slope to bottom of slope. Density, 1 for every 4 meter squared.	Remove
Group 1	Red Pine Plantation	Pinus resinosa	10 to 20	Good	Good	Group 1 - Juvenile white pine, red pine, white spruce, manitoba maple, eastern white cedar, tamarack, & ash. Planted on top of slope to bottom of slope. Density, 1 for every 4 meter squared.	Remove
	White Spruce Plantation	Picea glauca	10 to 20			Group 1 - Juvenile white pine, red pine, white spruce, manitoba maple, eastern white cedar, tamarack, & ash. Planted on top of slope to bottom of slope.	Remove
Group 2	Juvenile Red Pine	Pinus resinosa	20 - 30, and 10 - 20.	Good	Good	Starting at property line and half way down slope. 7 that are 20-30 DBH CM, 25 that are 10-20 DBH CM. The bigger pines are at the top of the hill.	Remove
Group 3	Norway Spruce & Scots Pine	Picea abies / Pinus sylvestris		Good	Good	2 Norway Spruce and 6 Scot's Pine on neighbouring property, 3 meters or greater from property line. Also, 3 Norway Spruce and 1 Manitoba Maple .	Retain
Group 4	Manitoba Maple	Acer negundo	10 to 20			9 Juvenile Manitoba Maples, 10 to 20 DBH CM.	Remove
Group 5	Manitoba Maple	Acer negundo	5 to 20	Average	Average	16 Juvenile Manitoba Maple	Remove
Group 6	Manitoba Maple	Acer negundo	5 to 20	Average	Average	3 Juvenile Manitoba Maple	Remove



Appendix 1: Typical Detail Drawings

NHF-400: Tree Protection Zone (TPZ) barriers



Healthy Trees, Healthy Communities 27