Appendix D

Supplementary Mapping

NAPANEE ROAD
COUNTY ROAD 3
PINE GROVE RD
YOUNGS RD
KIDDS RD
HOWES RD
MCLAUGHLIN RD
FRIZZELL RD
Pennells Creek
Shibagau Creek
SHIBAGUA RD
COUNTY ROAD 4
SHEFFIELD BRIDGE RD
MILLER RD
MURPHY RD
Route 1
Route 3
Route 4
Route 5
Route 6
Route 2
HAGGERTY RD W
HAGGERTY RD E
Route 3
STONE HEDGE RD
HOLDEN RD
Black Creek
Route 1
Route 5
Route 6
Route 2
Route 3
COUNTY ROAD 41
COUNTY ROAD 14
Route 4
Route 1
Route 6
EDGES RD
WESTPLAIN RD
BAWN RD
MARLIN RD
MCCUTCHEON RD
TESKEY RD
Salmon River
HOMESTEAD RD
TOWNSHIP OF STONE MILLS
ROBLIN RD
Dry Lake
Route 5
Route 6
TOWN OF GREATER NAPANEE
Route 1
Route 2
Route 3
Route 4
BARRET RD
Perrys Lake
COUNTY ROAD 27
CENTREVILLE RD
SALMON RIVER RD
CLARA ST
CENTREVILLE RD
Mud Creek
RATTIE RD
LOCKRIDGE RD
MCGILL RD
HINCH RD
SHARPES CORNERS RD
DOWDLE RD
WARTMAN RD
HUNT RD
CRAIGEN RD

Railway
Area of Alternative Site Investigation
Project Location Boundary (subject to refinement)
Parcel Boundary
50 m Setback
Lower Tier Municipality
Mapped Watercourse
Mapped Water Body

Thunder Bay
Timmins
Sault Ste. Marie
Sudbury
North Bay
Ottawa
Peterborough
Barrie
Kingston
Toronto
Windsor
London

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AREA OF ALTERNATIVE SITE INVESTIGATION
APPENDIX

DILLON CONSULTING

MAP CREATED BY: GM
MAP CHECKED BY: JP
DATA PROVIDED BY: MNRF
MAP PROJECTION: NAD 1983 UTM Zone 18N

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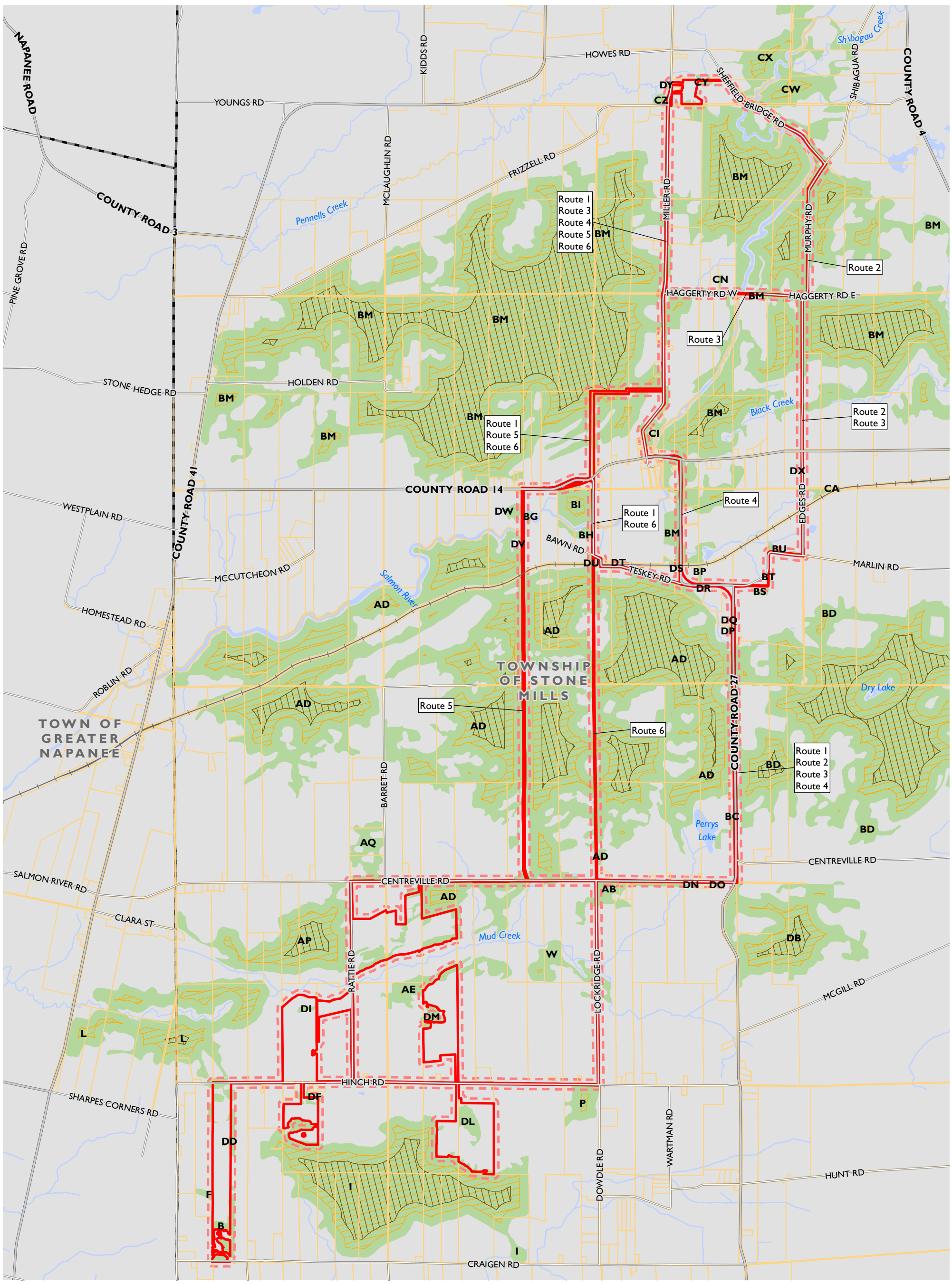
0 0.5 1 2 km

PROJECT: 163674 STATUS: DRAFT DATE: 8/2/2016

FILE LOCATION: I:\GIS\163674 - Loyalist Solar\mxd\Site Investigation\Area of Alternative Site Investigation.mxd



Railway
Project Location Boundary (subject to refinement)
Parcel Boundary
50 m Setback
Lower Tier Municipality
200 m Woodland Interior
100 m Woodland Interior
Woodland
Mapped Watercourse
Mapped Water Body

LOYALIST SOLAR PROJECT
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WOODLANDS
APPENDIX D

DILLON CONSULTING

MAP CREATED BY: GM
MAP CHECKED BY: JP
DATA PROVIDED BY: MNRF
MAP PROJECTION: NAD 1983 UTM Zone 18N

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0 0.5 1 2 km

PROJECT: 163674 STATUS: DRAFT DATE: 8/2/2016

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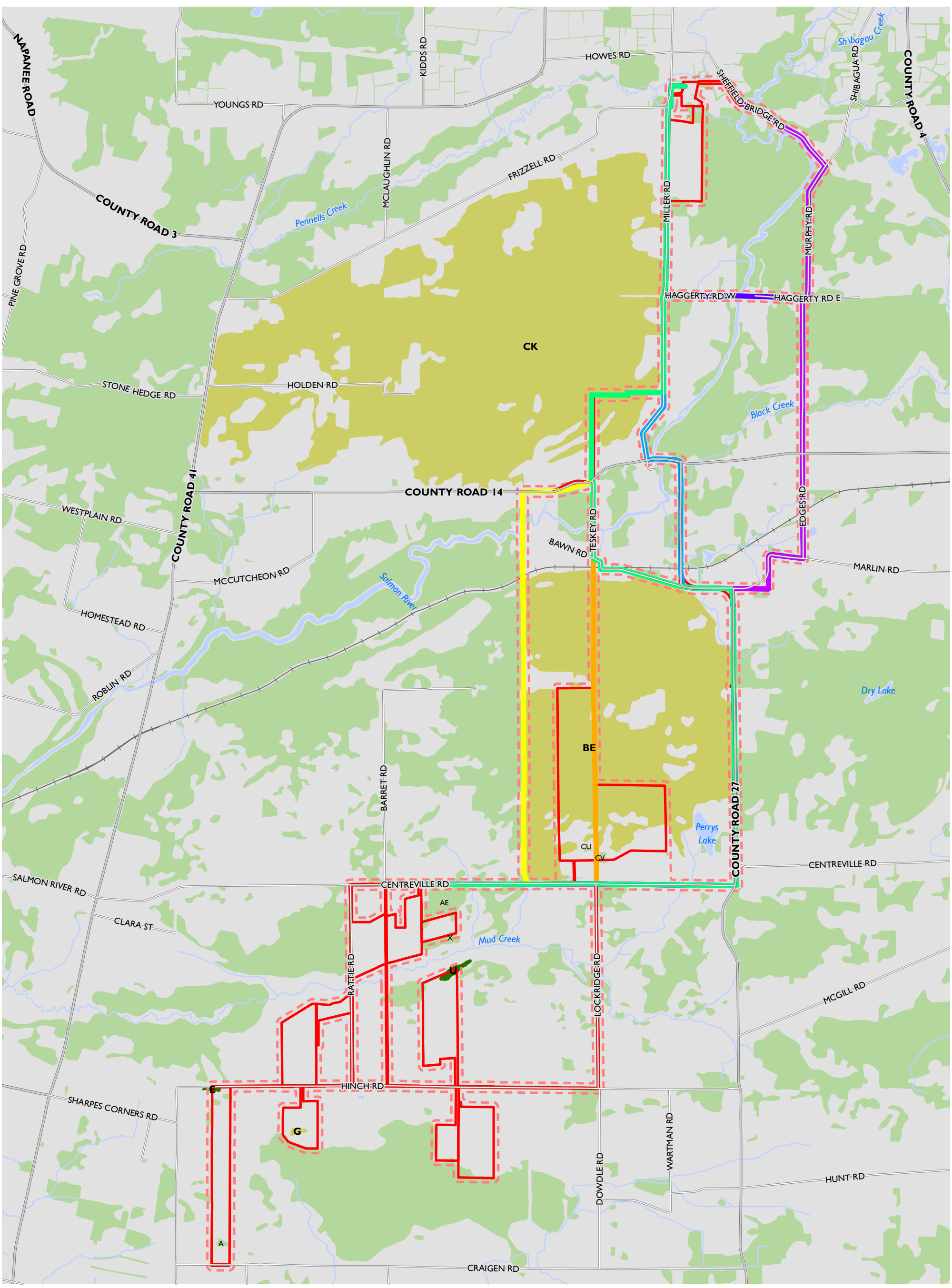
Bats

Wildlife tree plots and snag density searches have been completed for the Project where property access was permitted. Based on these searches, it was determined that the density of wildlife trees does not meet the density for consideration as candidate significant bat maternity colony habitat (<10 snags per ha). See **Figure E1** for locations of density searches completed. Most areas surveyed were found to be dominated by coniferous tree species and generally lack quality cavity trees/ snags. The majority of woodlands surveyed were determined to be dense White Cedar (*Thuja occidenatlis*) forests with primarily small trees (Diameter at Breast Height (DBH) of <25 cm). For the limited number of deciduous woodland areas surveyed, the dominant tree species was Sugar Maple with occurrences of Silver Maple, Ash, Basswood, and Oak. **Table E1** below provides additional details on the woodlands within the Project area.

TABLE E1: CAVITY TREE DENSITY SURVEY SUMMARY

Woodland ID	Woodland Type	Description	Size (ha)	# of Plots	# of Cavity Trees Observed	Density (snags/ha)
E	Deciduous Forest	A young aged forest dominated by Hop Hornbeam (*Ostrya virginiana*) averaging 10-15 cm DBH. A couple larger Shagbark Hickory, Sugar Maple, Common Apple and Oak were also observed. The number of tree >25 DBH only equaled 23 specimens, four of which had cavities/crevices etc.	1.05	Transects walked throughout the forest, spaced approx. 20-25 m apart.	4	4/ha
G	Deciduous Swamp	Was assessed prior to the high level ELC. Primarily Silver Maple/Ash swamp.	1.08	10 pre-mapped random plots were established to assess the woodland; high level ELC was undertaken after and determined that Woodland G was part of the greater deciduous swamp complex (Hinch Swamp PSW). The greater swamp complex would require 35 plots to assess.	0	0/ha
AE	Deciduous Forest/ Coniferous Forest	Primarily a dense white cedar coniferous forest with a pocket of young sugar maple (1.15 ha) dominated forest closer to Centreville Road. Outside of the current developable area but was walked through and very few trees >25 cm DBH, mostly young maples, ironwood.	14.27	n/a	n/a	n/a

Woodland ID	Woodland Type	Description	Size (ha)	# of Plots	# of Cavity Trees Observed	Density (snags/ha)
U	Coniferous Forest/ Deciduous Forest	Primarily a dense white cedar coniferous forest with a small pocket of mature sugar maple (0.18 ha) dominated forest. The small mature forest is just within the NE corner of the current developable area and was walked through using a grid pattern.	2.16	Transects walked throughout the forest, spaced approx. 20-25 m apart.	2	<1/ha
BE	Coniferous Forest/ Deciduous Forest/ Coniferous Woodland/ Mixed Forest	Mix of several ELC communities. The coniferous forest is comprised of dense White Cedar. The survey was focused on the large patch of deciduous forest (28 ha) that contained small inclusions of mixed forest. This deciduous forest site is primarily young Hop Hornbeam and maple with scattered larger trees of Maple, Basswood, and Ash.	586.6	30 pre-mapped random plots were established within the deciduous forest ecosite. A couple of smaller polygons of deciduous forest were walked through with transects but did not contain cavity trees, most trees were young 10-15 cm DBH with very few over 25 cm DBH.	7	9/ha
CV	Coniferous Forest	Dense White Cedar forest; property was walked prior to receiving protocol from MNRF Peterborough. Used 2011 protocol and 2015 ecoregion criteria which doesn't include FOC. Surveying White Cedar FOC for cavities is challenging due to the close proximity of trees and obstructions from branches. The interior of these communities are quite shaded, making it even more difficult to detect cavities in the canopy.	1.54	n/a	n/a	n/a
CK	Coniferous Forest/ Deciduous Forest/ Coniferous Woodland/ Mixed Forest/ Treed Rock Barren	Assessment carried out concurrently with high level ELC so plots were spaced out for the greater woodland community and not focused on individual ecosites. Majority of the t-line area +50 m is covered in dense White Cedar forest, coniferous woodland or treed rock barren. A linear ecosite of maple deciduous forest (3.23 ha) is primarily located in the southeastern portion of the larger woodland. This ecosite contained abundant young maples 10-15 cm DBH with few >25 cm DBH.	1045.81	35 pre-mapped random plots were placed throughout the greater woodland area but only two cavity trees were observed.	2	1/ha



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SNAG DENSITY SEARCHES WITHIN THE LOYALIST SOLAR PROJECT

FIGURE 2

- Primary Route
- Route B
- Alternate 1
- Alternate 2
- Alternate 4
- Alternate 5
- Preliminary Project Boundary
- 50 m Setback
- Watercourse
- Water Body
- Railway
- Woodland with Plot Density Search
- Woodland with Transect Search
- Woodland

DILLON CONSULTING

MAP CREATED BY: GM
MAP CHECKED BY: JP
MAP PROJECTION: NAD 1983 UTM Zone 18N

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PROJECT: 163674 STATUS: DRAFT DATE: 6/8/2016

FILE LOCATION: I:\GIS\163674 - Loyalist Solar\mxd\SAR Memo\Figure 2 Snag Density Searches within the Loyalist Solar Project.mxd