

### LEGEND

- Additional Construction Disturbance Area for Access Roads and Associated Underground Collection to T4, T10 and T11 (Jan 2014)
- 120m Buffer around Additional Construction Disturbance Area
- Access Road (Jan 2014)
- Collection (Jan 2014)

**Site Plan (2012-11-21)**

- Access Road
- Construction Disturbance (Dec 2012)
- Underground Collection
- ELC Unit
- ELC
- Roadway
- Watercourse (LIO, 2012-06-19)
- Waterbody (LIO, 2012-06-19)

\*Description of communities included in App A.

### Ecological Land Classification in Areas of Proposed Changes to Project Location\*



Project	TA8119	Figure	4
Date	January, 2014	Prepared By:	KC
Scale	1:4,000	Verified By:	LKR

#### 4.1 Summary of Significant Natural Features Significant Wildlife Habitat within 120m of Proposed Changes

Significant features identified within 120m of the proposed changes to the project layout (Changes A to C, as presented in Figures 2 and 3) are displayed in Figures 7 and 8 and described below.

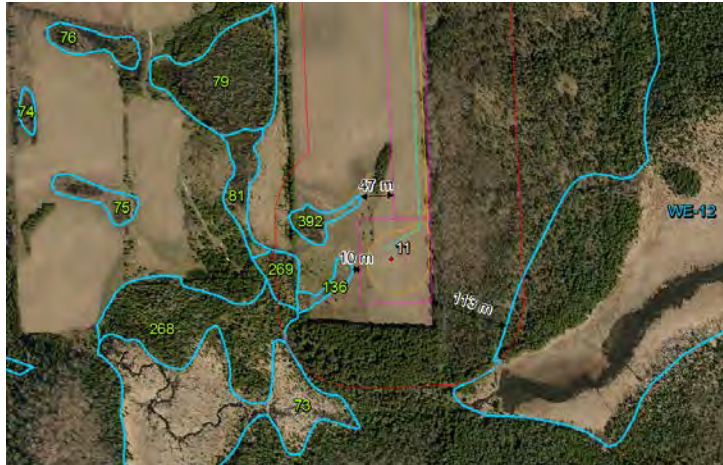
##### Change A (Access Road/Underground Electrical Collection to Turbine 10)

In response to discussion and comments received from the Municipality of West Grey regarding entrances to proposed access roads, the proponent has recognized that the access road to Turbine 10 may need to be shifted to the north slightly as it approaches The Glen Road. This area is currently under active agricultural use and no significant features (woodlands, wetlands or valleylands) are located within 120m of the additional construction disturbance area associated with Change A. As a result of Change A, a small area of additional Generalized SWH of the same type identified in existing NHA documentation for the Project (LGL 2012a, 2012b and 2013), was identified (Figure 8). No other SWH was identified within 120m of Change A.

##### Change B (Access Road/Underground Electrical Collection to Turbine 11)

In order to comply with Grey County's revised entrance permit policy for entrances to existing roads, the proponent has recognized that the access road to Turbine 11 may need to shift to the west slightly as it approaches County Road 4. As a result, the road right-of-way (ROW) directly adjacent to the property associated with Turbine 11, as well as additional land within the property parcel itself, are proposed for inclusion in the construction disturbance area for the Project. The area is currently under active agricultural use. A review of significant features (woodlands, wetlands or valleylands) located within 120m of Change B indicates that a significant wetland (WE-12) is located 95m to the southwest and a significant woodland (WO-05) is located 20m to the east (Figure 7).

The portion of WE-12 that lies within 120m of Change B is ELC unit 79 (Figure 4), a coniferous swamp that is part of the Beaver Meadow Provincially Significant Wetland (PSW). This PSW is a wetland complex made up of a number of wetland units to comprise the largest wetland feature identified in the project area. WE-12 has already been identified as being within 120m of the construction disturbance area of Turbine 11 that includes an access road and underground electrical collection in existing NHA documents for the Project (Figure 5). The distance of 95m from this feature identified as a result of Change B does not represent a greater impact than what was previously identified (47m); therefore no additional impacts or mitigation, beyond what is already identified in the Environmental Impact Study (EIS) for the Project, are identified.



47m – access road and underground electrical collection to turbine 11  
10m – access road surrounding turbine 11

**Figure 5: Distance from Project Location to WE-12 in the area of Turbine 11, December 2012**  
(Originally presented in Table 16 of the East Durham Wind Energy Centre Natural Heritage Assessment - LGL, 2012a)

In the case of WO-05 the project layout (access road and underground electrical collection) presented in existing NHA documentation for the Project was already identified as being immediately adjacent (>0m) to the feature (Figure 6). The distance of 20m from WO-05 identified as a result of Change B does not represent a greater impact than what was previously identified (>0m); therefore no additional impacts or mitigation, beyond what is already identified in the Environmental Impact Study (EIS) for the Project, are identified.



Distance to underground electrical collection and access road to Turbine 11 > 0m.

**Figure 6: Distance from Project Location to WO-05 in the area of Turbine 11, December 2012**  
(Originally presented in Table 16 of the East Durham Wind Energy Centre Natural Heritage Assessment - LGL, 2012a)

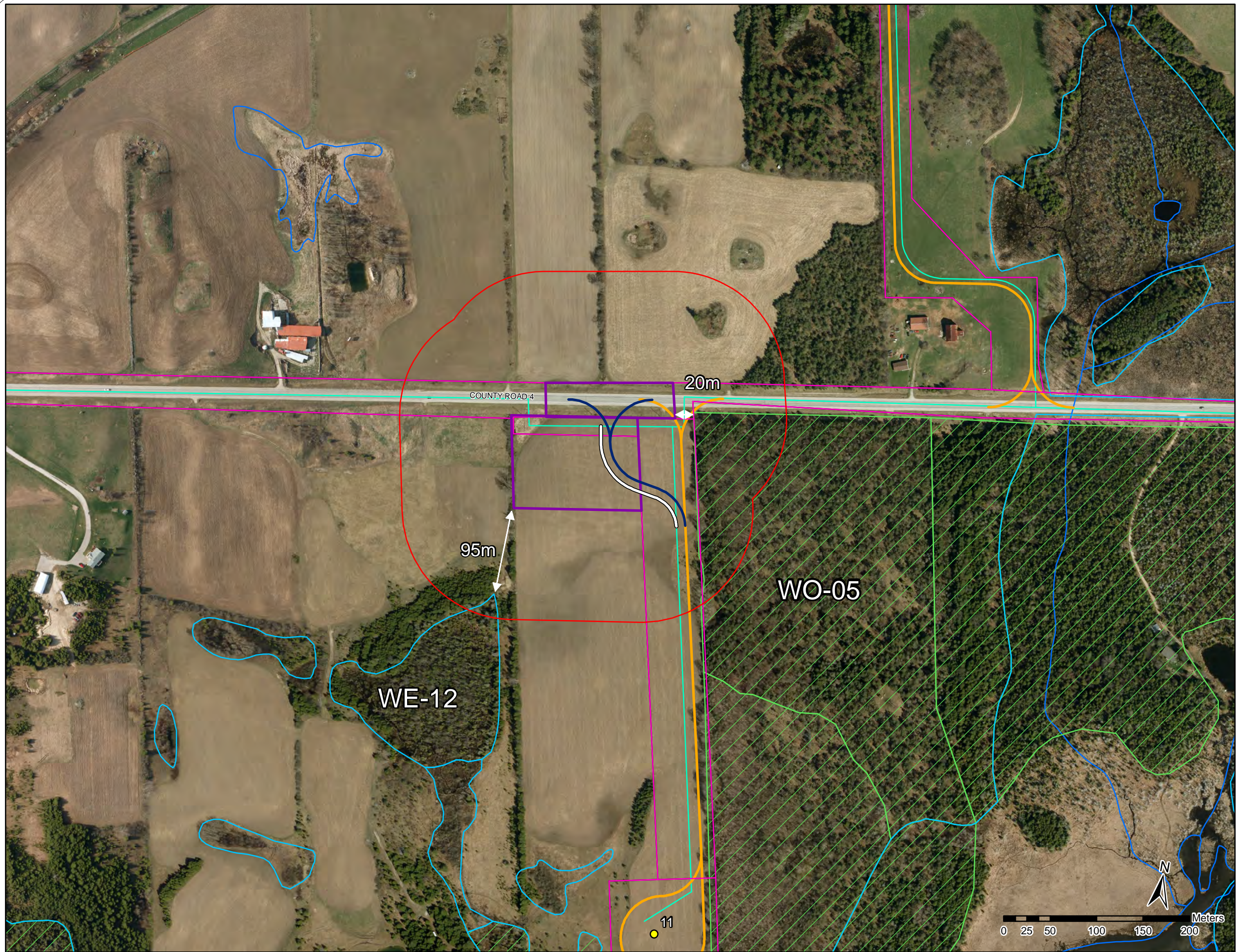
As a result of Change B, a small area of additional Generalized SWH of the same type identified in existing NHA documentation for the Project (LGL 2012a, 2012b and 2013), was identified (Figure 8). No additional SWH was identified within 120m of Change B.

Change C (Access Road/Underground Electrical Collection to Turbine 4)

In order to comply with Grey County’s revised entrance permit policy for entrances to existing roads, the proponent has recognized that the access road to Turbine 4 may need to be shifted to the west slightly as it approaches County Road 4. This area is currently under active agricultural use and no significant features (woodlands, wetlands or valleylands) are located within 120m of the additional construction disturbance area associated with Change C. As a result of Change C, a small area of additional Generalized SWH of the same type identified in existing NHA documentation for the Project (LGL 2012a, 2012b and 2013), was identified (Figure 8). No additional SWH was identified within 120m of Change C.

**Table 2: Summary of Significant Features within 120m of the Proposed Changes to the Project Location**

<b>Feature Type</b>	<b>Feature Identifiers</b>	<b>Distance to Nearest Project Component</b>	<b>Environmental Impact Study (EIS) Required?</b>
Significant Wetland	WE-12 as shown in Figure 5	95m from access road and associated underground electrical collection to Turbine 11	No - project layout was previously identified as 47m from this feature and already addressed in the EIS (LGL, 2012a)
Significant Woodland	WO-05 as shown in Figure 5	20m from access road and associated underground electrical collection to Turbine 11	No – project layout was previously identified as immediately adjacent (>0m) to this this feature and already addressed in EIS (LGL, 2012a)



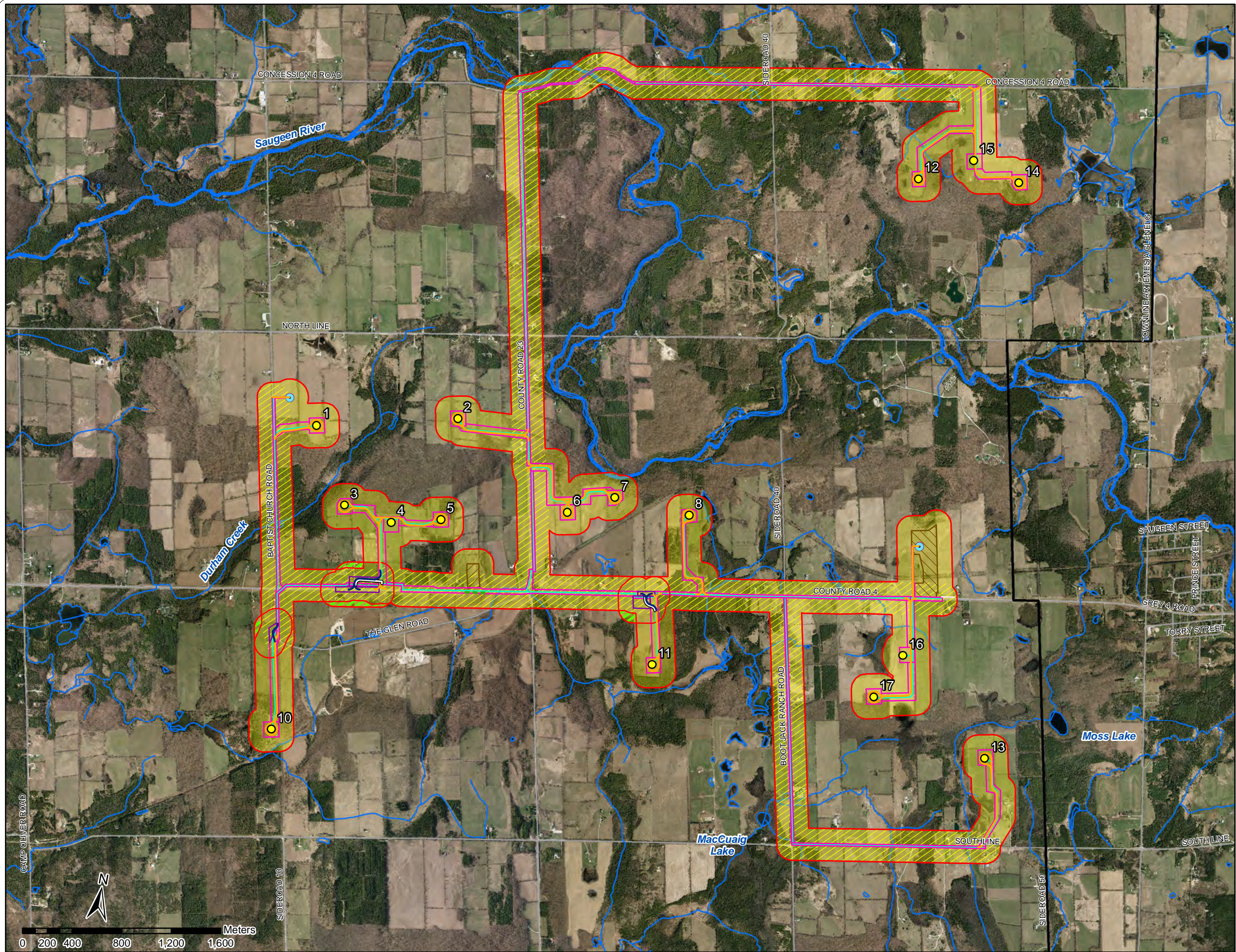
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- Collection (Jan 2014)
- Site Plan (2012-11-21)**
- Access Road
- Construction Disturbance (Dec 2012)
- Underground Collection
- Watercourse (LIO, 2012-06-19)
- Waterbody (LIO, 2012-06-19)
- Significant Wetland
- Significant Woodland

**Significant Features within 120m of Changes to Project Location**



<b>Project</b>	TA8119	<b>Figure</b>	7
<b>Date</b>	January, 2014	<b>Prepared By:</b>	KC
<b>Scale</b>	1:4,000	<b>Verified By:</b>	LKR



**LEGEND**

- Additional Construction Disturbance Area for Access Roads and Associated Underground Collection to T4, T10 and T11 (Jan 2013)
- Access Road (Jan 2014)
- Collection (Jan 2014)
- Site Plan (2012-11-21)**
- Turbine
- MET Tower
- Access Road
- Construction Disturbance
- Underground Collection
- Overhead Transmission
- MET Tower 200ft Disturbance Area
- Substation
- Laydown Area
- 120m Buffer from Project Components
- Study Area (Dec 2011)
- Watercourse (LIO, 2012-06-19)
- Waterbody (LIO, 2012-06-19)
- Generalized SWH for the following:
  - Waterfowl Stopover and Staging (Aquatic);
  - Colonial-Nesting Bird Breeding Habitat (ground);
  - Colonial Nesting Bird Breeding Habitat (tree/shrub);
  - Amphibian Breeding Habitat (wetlands);
  - Amphibian Breeding Habitat (woodlands);
  - Shrub/Early Successional Bird Breeding Habitat / Declining Guild Shrubland Birds;
  - Deer Movement Corridors;
  - Bald Eagle and Osprey Nesting, Foraging and Perching Habitat;
  - Turtle Nesting Areas;
  - Bat Maternity Colonies;
  - Turtle Wintering Areas;
  - Waterfowl Nesting Areas;
  - Marsh Breeding Bird Habitat; and,
  - Special Concern and Rare Wildlife.
- +  Generalized SWH for the following:
  - Terrestrial Crayfish; and,
  - Seeps and Springs.
- Additional Generalized SWH for all of the above mentioned types of Generalized SWH as a result of Proposed Changes to Project Layout

**SWH: Generalized**



<b>Project</b>	TA8119	<b>Figure</b>	8
<b>Date</b>	January, 2014	<b>Prepared By:</b>	KC
<b>Scale</b>	1:30,000	<b>Verified By:</b>	LKR

## **5.0 ENVIRONMENTAL IMPACT STUDY**

Given that the changes proposed to the Project do not entail the installation or operation of components not previously addressed, the construction, operation and decommissioning activities as they are described in the Environmental Impact Study within the East Durham Wind Energy Centre NHA (LGL, 2012a) for the Project remain accurate. No new significant wetlands, woodlands or valleylands have been identified in this report; and, new project components proposed are not any closer in proximity to the significant wetland, woodland and valleyland features than the closest components previously identified in the original NHA documentation (LGL 2012a, 2012b and 2013). For example, although the additional area identified for construction of the proposed access road to Turbine 11 is within 120m of WE-12, the access road to Turbine 8 remains as the closest project component of this type to that feature (6m); and associated impacts, mitigation, monitoring and contingency plans have been previously determined for that feature in the original NHA (LGL, 2012a). Likewise, although additional areas are included, no new types of Generalized SWH have been identified in this report compared to what has previously been documented; therefore, no new impacts, mitigation, contingency or monitoring plans are included herein. Figure 8 indicates the additional areas to be included in the mitigation, monitoring and contingency measures prescribed for Generalized SWH in the original NHA document.

## **6.0 REFERENCES**

Genivar Inc. 2013a. Project Description Report: East Durham Wind Energy Centre. January 2013.

Genivar Inc. 2013b. Construction Plan Report: East Durham Wind Energy Centre. January 2013.

LGL Limited. 2012a. East Durham Wind Energy Centre Natural Heritage Assessment, November 2012.

LGL Limited. 2012b. East Durham Wind Energy Centre Natural Heritage Assessment – Addendum, December 2012.

LGL Limited. 2013. East Durham Wind Energy Centre Natural Heritage Assessment 2013 Pre-Construction Surveys, July 2013.

Ontario Ministry of Natural Resources (OMNR). 2012 Significant Wildlife Habitat Draft Ecoregion 6E Criterion Schedule. As posted on the Environmental Registry at: <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE1ODc5&statusId=MTczNDgy> .



**APPENDIX A**  
**ELC DESCRIPTION TABLE**

**Table 1: Ecological Land Classification (ELC) Vegetation Community Descriptions**

(Data presented below is an excerpt taken from the East Durham Wind Energy Centre Natural Heritage Assessment (LGL, 2012a) and the East Durham Wind Energy Centre Natural Heritage Assessment – Addendum (LGL, 2012b)

ELC Unit #	ELC Code	Size (ha)	Attributes	Composition
35	CUP3	1.0369	coniferous plantation	not within 120m - n/a
42	CUP3	0.8631	coniferous plantation	White spruce and white pine dominated planted.
43	CUP3	0.4493	coniferous plantation	White spruce and white pine dominated planted.
44	CUP3	3.7758	coniferous plantation	White spruce and white pine dominated planted.
45	CUP3-2	4.6828	white pine plantation	White pine dominated plantation
46	CUP3-8	3.8291	white spruce coniferous plantation	White spruce dominated plantation.
48	MAS2-1	1.9372	cattail shallow marsh	Broad leaved cattail dominated wetland. Balsam poplar are found occasionally throughout with wet meadow species colonizing the area near reed canary grass ( <i>Phalaris arundinacea</i> ), ( <i>Scirpus atrovirens</i> ), and lance leaved goldenrod ( <i>Euthamia graminifolia</i> ).
49	CUP3-3	1.8085	Scotch pine coniferous plantation	Scotch pine dominated feature with little to no understory or ground cover. Gaps contain early colonizing meadow species.
76	SWD4	0.4426	balsam poplar deciduous swamp	not within 120m - n/a
77	FOC2-2	0.4089	white cedar coniferous forest	not within 120m - n/a
78	FOC2-2	0.7004	white cedar coniferous forest – Located southeast of County Road 23 & 4 intersection	Tree canopy dominated by white cedar. Subcanopy and understory with little vegetation cover. Groundcover species include agrimony, black knapweed, sedges ( <i>Carex</i> sp.), and silverweed ( <i>Argentina anserina</i> ).
79	SWC3-1	2.0311	white cedar coniferous swamp – wetland contains seepage indicator plants	Canopy dominated by white cedar, and accompanied by a few red maple, balsam fir, and trembling aspen ( <i>Populus tremuloides</i> ). Canopy gaps contain red elderberry ( <i>Sambucus racemosa</i> var. <i>racemosa</i> ), red-osier dogwood, and slender willow ( <i>Salix petiolaris</i> ) in the understory. Groundcover includes species like reed-canary grass, jewelweed, sedges, rough-leaved goldenrod ( <i>Solidago rugosa</i> ssp. <i>rugosa</i> ) and skunk cabbage ( <i>Symplocarpus foetidus</i> ).

ELC Unit #	ELC Code	Size (ha)	Attributes	Composition
82	FOM2	14.8482	Scotch pine and sugar maple mixed forest	Scotch pine mixed forest that contains occasional black cherry and sugar maples within the canopy gaps. Some areas demonstrating transition between cultural plantation and deciduous forest. Southeast edge borders onto Beaver Meadow PSW.
84	CUP3-8	2.9789	white spruce coniferous plantation	Dense plantation dominated by white spruce with little to no understory and ground cover.
137	CUM1-1	3.0839	Cultural meadow - Located south of County Road 4, and east of County Road 23.	This is a transition area between upland meadow and meadow marsh that slopes towards the Beaver Meadow PSW. <i>Cleared area now dominated by early colonizing and contains species such as wild strawberry (Fragaria virginiana), knapweed (Centaurea nigra), black eyed susan (Rudbeckia hirta), goldenrods, and grasses (B. inermis, A. gigantea, E. repens, P. pratense, Panicum capillare).</i>
158	AGR	3.6807	Agricultural field and associated hedgerow	soy
160	AGR	2.6603	Agricultural field and associated hedgerow	not within 120m - n/a
161	AGR	2.4209	Agricultural field and associated hedgerow	
162	AGR	2.4962	Agricultural field and associated hedgerow	soy
165	AGR	3.2827	Agricultural field and associated hedgerow	not within 120m - n/a
166	AGR	4.0651	Agricultural field and associated hedgerow	Pasture
169	AGR	4.7417	Agricultural field and associated hedgerow	soy
170	AGR	3.9353	Agricultural field and associated hedgerow	
172	AGR	4.3829	Agricultural field and associated hedgerow	hay
173	AGR	4.2625	Agricultural field and associated hedgerow	soy
176	AGR	1.2298	Agricultural field and associated hedgerow	Pasture
185	AGR	8.1692	Agricultural field and associated hedgerow	Wheat
186	AGR	10.3922	Agricultural field and associated hedgerow	Wheat

<b>ELC Unit #</b>	<b>ELC Code</b>	<b>Size (ha)</b>	<b>Attributes</b>	<b>Composition</b>
190	AGR	2.3327	Agricultural field and associated hedgerow	Pasture
191	AGR	2.8811	Agricultural field and associated hedgerow	Pasture
192	AGR	4.7468	Agricultural field and associated hedgerow	Pasture
193	AGR	5.2465	Agricultural field and associated hedgerow	Pasture
195	AGR	3.1420	Agricultural field and associated hedgerow	soy
196	AGR	9.0563	Agricultural field and associated hedgerow	soy
197	AGR	10.9776	Agricultural field and associated hedgerow	Wheat
239	AGR	16.8505	Agricultural field and associated hedgerow	Agricultural Field
307	AGR	5.5326	Agricultural field and associated hedgerow	Agricultural Field
308	AGR	4.3872	Agricultural field and associated hedgerow	Agricultural Field
309	AGR	3.8763	Agricultural field and associated hedgerow	Agricultural Field
310	AGR	2.2681	Agricultural field and associated hedgerow	Agricultural Field
324	AGR	5.9715	Agricultural field and associated hedgerow	Agricultural Field
325	AGR	8.7683	Agricultural field and associated hedgerow	Agricultural Field
381	CUT1	21.3098	Cultural thicket – Located along County Rd 4 west of County Rd 23.	Cultural thicket dominated by low-lying shrubs. Ground cover is dominated by meadow species.
398	CUP3-2	3.4683	white pine plantation - Located north of County Rd 4, west of turbine 8 access rd.	White pine dominates the canopy, with small numbers of sugar maple, trembling aspen, and Scotch pine.
458	FOM2	5.73	Scotch pine and sugar maple mixed forest	Scotch pine mixed forest that contains occasional black cherry and sugar maples within the canopy gaps. Some areas demonstrating transition between cultural plantation and deciduous forest. Southeast edge borders onto Beaver Meadow PSW.