

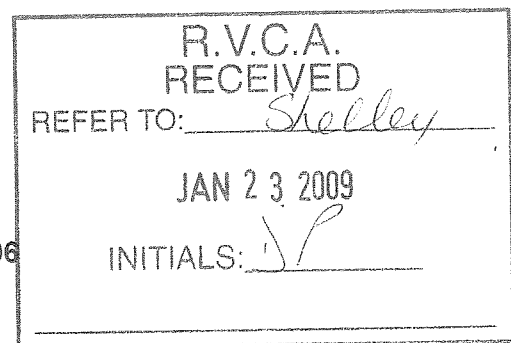
January 23, 2008
Our File: 07-303

Rideau Valley Conservation Authority
3889 Rideau Valley Drive, P.O. Box 599
Manotick, ON
K4M 1A5

Attention: Shelley MacPherson

Dear Shelley,

Re: Mattamy (Jock River) Limited, Richmond
Application Form For Development, O.Reg. 174/06
Relocating Berm/Placement of Fill



Description of Work

Mattamy Homes owns the lands known as Mattamy (Jock River) Limited in the Village of Richmond. The said lands are located in the southern western corner of Richmond Village, south of Ottawa Street, adjacent to the Jock River, as depicted on **Figure 1**.

This Application Form for Development has been submitted to the Rideau Valley Conservation Authority under Ontario Regulation 174/06 to obtain permission to remove the existing berm and relocate a berm further north on the property as depicted on **Figure 2**. The existing flap gate and culvert located in the drainage easement will be removed as part of these works. Additionally, fill is to be placed north of the newly constructed berm in the existing 100-year flood plain area. The proposed fill work is depicted on **Figure 2**. The fill work will not commence until the new berm has been constructed and the existing berm has been removed and reinstated. These works were discussed and agreed upon at a meeting held on January 16, 2009 between Mattamy Homes and the Rideau Valley Conservation Authority (RVCA).

The existing berm, which is to be removed, consists is approximately 1000m^3 in volume. The proposed berm to the north is approximately $1,275\text{m}^3$ in volume. The proposed amount of fill is in the order of $3,900\text{m}^3$. These volumes were calculated as indicated on **Figure 3**.

Grading Reinstatement

Where the existing berm is removed, the grades will be reinstated to their existing condition prior to work being done in the area. The existing grades are depicted on **Figure 3**. The plan indicates that the elevation will be reinstated to approximately 96.00m, reflecting conditions prior to the construction of the berm. The grading reinstatement reflects the agreement reached between Mattamy and the RVCA regarding conveyance and storage capacity.

as shown (as per ~~the~~ ^{Barnes} survey)

Restoration

As part of this agreement, the RVCA has requested a revegetation plan that includes measures to fully restore the riparian zone and re-establish vegetative cover in the area of the existing berm using appropriate native indigenous species of ground cover plants, shrubs and trees. When final grading and moisture conditions are confirmed, field conditions will be verified and a revegetation drawing will be prepared for the RVCA's approval.

The revegetation plan is contained in this submission based on the following recommendations provided by the environmental consultant, Bruce Kilgour & Associates Ltd:

Since the final site grading from the cut and fill will determine the moisture content at a very local scale, recommendations of species for both wetland and upland areas are provided. It is expected that most of the area after grading would look more like Communities 4, 5 & 7 (i.e. wetland) in the Kilgour & Associates Natural Environment Existing Conditions Report (November 2008) prepared for Mattamy lands in Richmond. Please refer to Figure 4 from the Kilgour & Associates which is attached that shows the Ecological Land Classifications for the property.

Above all, any plantings should use local seed sources or stock of native species listed in the report's plant list (e.g. from somewhere such as the Ferguson Forest Centre in Kemptville). Nursery stock with an unknown origin should be avoided, since these can sometimes be horticultural cultivars, and aside from not being appropriate for the site, they also might not be locally adapted.

For wetter sites (e.g. communities 4, 5, 7), the focus will be on plantings of local native wetland shrubs to provide soil stability and kick-start natural regeneration. Willows and dogwoods both spread rapidly, even within a season. The species mix that is selected from the list below is not critical, any or all can be used, as long as they are locally sourced. Also listed are some suitable ground cover species as they are quite fast to re-establish naturally in suitable locations. The RVCA will be consulted for a good local seed or seedling source for these species. There would likely be good water dispersal from the current wetland areas (depending upon how disturbed they are) and there are not many non-native species to be concerned about invading in this location. Another option is to collect seeds from these species in the season before construction and then spread the seed mix when operations are complete. This option will be dependent on locating a good local seed source.

Shrubs:

- Slender Willow (*Salix petiolaris*)
- Pussy Willow (*Salix discolor*)
- Red Osier Dogwood (*Cornus stolonifera*)
- Gray Dogwood (*Cornus racemosa*)
- Meadowsweet (*Spiraea alba* var. *alba*)

Ground cover:

- Canada bluejoint (*Calamagrostis canadensis*)
- Reed Canary Grass (*Phalaris arundinacea*)
- Jewelweed (*Impatiens capensis*)
- Black bulrush (*Scirpus atrovirens*)

If the new area below the existing berm results in any drier sites that may still be seasonally flooded, trees will likely re-establish naturally. Plantings of any of the following would help stabilize the soil and prevent agricultural weeds from establishing:

Trees (saplings):

Balsam poplar (*Populus balsamifera*)

White elm (*Ulmus americana*)

White cedar (*Thuja occidentalis*)

Green ash (*Fraxinus pennsylvanica*)

In drier areas replanting ground cover species is not necessary, but instead allow native species to regenerate naturally over time.

Erosion and Sediment Control

Erosion and sediment control measures, as indicated on **Figure 4**, will be undertaken, monitored and maintained to protect the Jock River and the drainage easement.

The contractor is to erect heavy duty silt fence in the locations indicated on the Erosion and Sediment Control plan. Silt fence consists of a non-woven synthetic fabric material (geotextile) stretched across and attached to supporting post and wire fence. The non-woven geotextile must be entrenched. This measure acts as a linear barrier creating upstream ponding which allows soil particles to settle out, thereby reducing the amount of soil leaving a disturbed area. The silt fence also decreases the velocity of sheet flow.

Straw bales are to be installed in the drainage easement on the north side of the proposed berm and the south side of the existing berm. Straw bales consist of a line of organic material, implemented along the contours of mild slopes to assist in reducing flow and increasing the interception of suspended sediments. Straw bales are to be oriented end to end and in multiple layers to form a consistent and continuous permeable barrier to flow. Straw bales are to be firmly butted together and staked with wooden stakes or t-bars.

The erosion and sediment control measures will remain in place for the duration of the berm relocation and fill operation. They will be monitored on a regular basis and will be maintained and repaired as required. The intention of erosion and sediment control monitoring is to provide environmental protection and compliance with all applicable legislation while contributing to the overall success of the project. This includes inspection at the prior to the start of construction to ensure that the erosion and sediment control plan is initiated at the start of the project. Monitoring during construction must be done to ensure that the erosion and sediment control measures are properly installed, well-maintained and functioning as intended on a daily basis. Regular inspection will determine when erosion and sediment control measures need maintenance and/or repair. The contractor will respond in a timely manner to any noted deficiencies.

The erosion and sediment control inspections will occur at all construction stages and the frequency is as follows:

- On a weekly basis;
- Before and after every rainfall event;

All damaged erosion and sediment control measures will be repaired and/or replaced within 48 hours after inspection.

The proposed work is to be undertaken in May 2009.

EMERGENCY CONTACTS

Owner

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Project Civil Consultant

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Yours truly,

David Schaeffer Engineering Ltd.



Per: Jennifer Ailey, P.Eng.



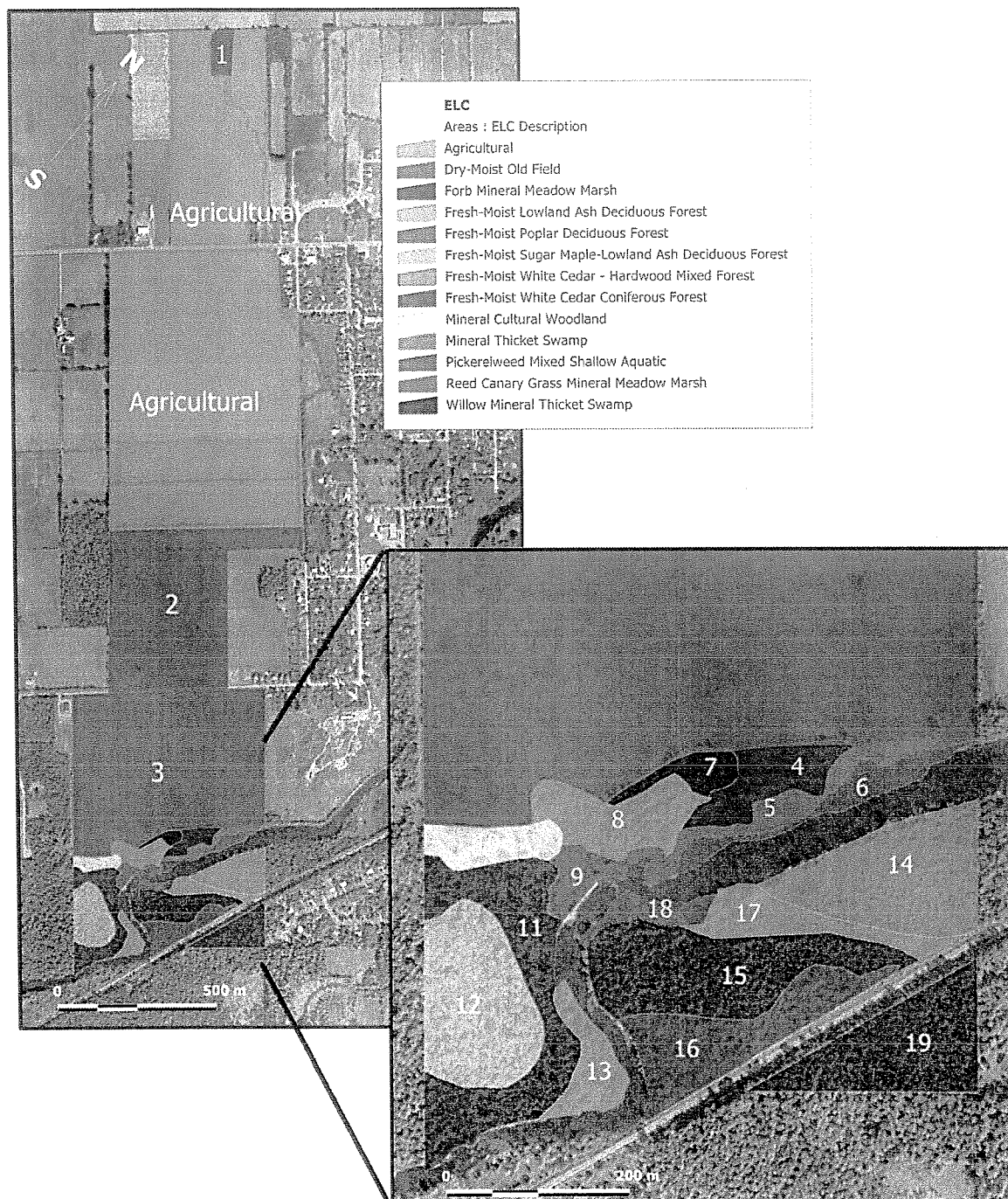


Figure 4. Ecological Land Classification, Mattamy land holding, Richmond.

