SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT:	**Sunterra Horticulture (Canada) Inc.**
PROPOSAL NAME:	**Sunterra Peat Mine Development**
CLASS OF DEVELOPMENT:	**2**
TYPE OF DEVELOPMENT:	**Mines, other than pits and quarries**
CLIENT FILE NO.:	**4254.10**

OVERVIEW:

The Environment Act Proposal for the project was dated December 8, 2011. The advertisement of the Proposal read as follows:

"On December 12, 2011 Manitoba Conservation received a Proposal dated December 8, 2011, from Sunterra Horticulture (Canada) Inc. for the expansion of its existing peat mine development at the Beaver Point Bog (Environment Act Licence no. 2288R) to include the Bullhead, Little Deer Lake and Ramsay Point Bogs. The proposed development is located on Crown Land and covers an area of approximately 715 ha. The targeted peatland is located approximately 40 and 80km north of Riverton, MB."

The proposal was distributed to the "Mining" Technical Advisory Committee (TAC) for review and was advertised in the Interlake Spectator on Thursday, June 21, 2012 and the Winnipeg Free Press on Saturday, June 16, 2012. It was placed in the following public registries: Conservation & Environment Library, Manitoba Eco-Network, Millennium Library, R.M. of Bifrost office, Selkirk - St Andrews Regional Library, and the Environmental Approvals Branch website. Comments were requested by July 24, 2012.

An information request was sent from the Environmental Approvals Branch (EAB) to the proponent on June 5, 2013. A clarification to this request was sent June 24, 2013. The proponent provided a response dated July 8, 2013. This response was distributed to the TAC for review. An additional information request was sent to the proponent on August 19, 2013. The proponent responded in a letter dated August 26, 2013. The information requests, TAC comments, and the proponent's responses were placed in the public registries.

ASSESSMENT OF PUBLIC COMMENTS:

Public Comments

Following is a summary of the public comments relating to the environmental assessment pursuant to the Environment Act received in response to the advertisement

of the Proposal. Copies of the original comments from the public are available in the Public Registries.

Green House Gases (GHGS) and Loss of Carbon Storage:
- Concern regarding loss of carbon storage within the peat;
- Concern regarding GHG emissions;
- There is no mitigation measure for the amount of carbon that will be released into the atmosphere from the peat being mined; and
- The amount of carbon that would be released is unacceptable.

Air Quality;
- A quantitative air quality analysis should be done to determine the increase in dust so the potential health risks can be assessed; and
- Concern regarding $C0_2$, $S0_2$, and NOx emissions.

Water Quality;
- Drainage of the bogs will result in the release of heavy metals into Lake Winnipeg;
- Water testing prior to discharge to Lake Winnipeg should include mercury;
- The allowable TSS for the drainage water is higher than the TSS in Lake Winnipeg, which would lead to sedimentation of fish habitat;
- It is uncertain whether draining of the peat will continue to be negligible given all of the peat mining operations in the area;
- The peat filters nutrients, reducing nutrients in Lake Winnipeg;
- Expansion of peat mining operations in the vicinity of Lake Winnipeg contradicts government's intensions to return the lake to its former state of health and function; and
- If we don't know the potential effects to Lake Winnipeg with certainty, why take the risk?

Plants and Wildlife:
- Concerns regarding reduction in wildlife habitat and impacts to wildlife;
- Destruction of moose habitat is unacceptable since moose are in decline throughout the province;
- Decimation of peat bogs goes against stated provincial objectives in regards to moose management;
- The peninsula is one of the last strongholds for moose;
- Concerns regarding loss of rare and unique vegetation;
- Peatlands are unique ecosystems that create habitat for unique species such as orchids and carnivorous plants;
- Transplanting of Manitoba Orchid has failed in the past, other mitigation measures need to be identified;
- Endangered species should not be disturbed, the mining should avoid these plants and the water table in the area cannot be changed;
- Altering the water table could kill the trees and other plants;
- Allowing the peat mine will permanently alter the ecology of the area;

- There are many traditional medicines and berries in these bogs and their loss will hamper traditional practices;
- Loss of biodiversity, habitat/nursery, and recreational hunting;
- More surveys are required to provide a complete ecological description of the area to be affected;
- The statement in the proposal that there is an abundance of peat in Manitoba does not account for the varying types of peat deposits within Manitoba. Muskegs tend to be located in northern regions; peat bogs in the southern regions, where existing access makes them more vulnerable to development; and
- While bogs and fens may be quite common in Manitoba and Canada, raise bogs such as these three bogs are not common.

Climate Change:
- More recent climate data should have been used in the assessment.

PR 234:
- A large number of trucks will travel PR 234 daily as a result of all of the peat mines in the area;
- Peat mine truck traffic will further degrade PR 243, impact safety, and increase dust, noise, vibration;
- Manitoba Infrastructure and Transportation has graders fixing the PR 234 continuously due to the truck traffic from the existing Sunterra operation, these costs are not justifiable;
- Revenue from the leases and royalties will not cover road maintenance costs; and
- Truck traffic should be limited and speed limits set at 50 km/hr north of Beaver Creek.

Cumulative Environmental Effects :
- The cumulative effects assessment provided in the proposal was not adequate;
- A study of the cumulative effects of the peat mines in the area on Lake Winnipeg should be done; and
- A cumulative effects assessment of all the existing, proposed, and potential peat mines should be done.

Economics and Policy:
- Economics will be affected due to loss of recreational visitors and fish populations from increased dust and impacts to fish habitat;
- Jobs created by the peat mine pale in comparison to the amount of jobs that rely on Lake Winnipeg being healthy;
- The long term effects of peat mining do not justify the short term economic gains;
- Recreational areas have been designated in this region by the government; incompatible industrial operations should not be allowed;
- Access road is too close to neighbouring cottage development;
- The buffer from the mining area to the road should be greatly increased;
- The proposed area to be mined should be greatly reduced;
- Investment of cottage owners versus company’s investment;

- There will be impacts to a potential future expansion of Fisher Bay Provincial Park and the related economic benefits to the FRCN;
- Pending quarry leases should not be included in the project approval;
- Does application of the consultation policy for Aboriginal Peoples mean that our concerns about the environmental impacts are ignored?;
- Peat leases in parks, protected areas, wildlife management areas, on crown land designations, and in the vicinity of Lake Winnipeg should no longer be granted;
- The Mill Creek Cottage development was not listed in the stakeholders in the proposal;
- Allowing peat mining is contradictory to the spirit and intent of the Save Lake Winnipeg Act;
- The Manitoba government acknowledged that peat mining is damaging to water quality by including a section in the Save Lake Winnipeg Act which places a two year moratorium on new peat mining leases;
- The peat mining would add nutrients to the lake at a time when the Premier has announced that the provincial government has set a goal to reduce 50% of the nutrients entering Lake Winnipeg;
- No further peat mining licences should be issued until the provincial Wetland Policy is completed;
- Current peat leases should be cancelled;
- Peat is not a necessary resource to be mined, it is non-essential and alternatives are available;
- A comprehensive assessment of the ecological value of peat lands to our province is needed;
- The development of a peat strategy is needed before new Environment Act licences are issued for peat mining operations; and
- The possibility of buying back some of the peat quarry leases, especially in the most sensitive habitats and in riparian areas needs to be considered.

Fire
- Concerns regarding risk of peat fire, explosion, and forest fires.

Run-off and Flood
- Loss of storm water absorption;
- Loss of flood control; and
- Increase in run-off and run-off turbulence.

Closure plan
- Concern about effectiveness of restoration of peat;
- The closure plan does not provide enough detail for environmental assessment purposes;
- Manitoba-based data should be provided to substantiate the closure plan;
- Contingency funds for decommissioning should be paid upfront;
- There is not a feasible plan of how the land is to be restored, or criteria to assess the potential success of restoration; and

- The assessment report does not address or explain how the hydrological, ecological and carbon storage functions or the peatlands will be restored to their original condition.

Requests for Public Hearing:
- There were three requests for a public hearing on the proposal.

Public Comments in support of the proposal:
- Much of the operating expenses Sunterra incurs is spent locally, including fuel, equipment leases, repairs; building supplies, retail purchases, and subtrades;
- The company employs over 25 people from the region, a region with a high unemployment rate and few options for workers;
- Based on a review of the process, we are comfortable that Sunterra and the provincial government are working closely together to protect the environment;
- The peat harvesting method used by Sunterra is sustainable and friendly to the long term health of the Manitoba environment;
- Those opposing the operation need to research the whole story and get the facts on the contributing factors that affect Lake Winnipeg;
- Manitoba peat is valued in the US and if peat is no longer available from Manitoba, it will have to be obtained elsewhere;
- The business is very profitable and pays large amounts of taxes to the province;
- Sunterra is a small family operation that cares about the health of the bog;
- This operation has many stakeholders including truck drivers, railway workers, customs workers, and other shippers and receivers that benefit from the peat producers providing demand for shipping containers;
- Sunterra has been very environmentally conscious regarding servicing of their equipment and the disposal of used oil;
- Toromont CAT has approximately 175 employees in Manitoba that have benefitted from the peat moss producers;
- Is it not the object of government to help develop natural resources in a sustainable way?;
- If Manitoba does not develop its natural resources, businesses will move to other provinces;
- The industry has been in business in Manitoba for over 40 years with no proof of environmental problems;
- The negative reactions coming from the cottage developments are due to lack of information on the environmental impacts of the industry;
- There is little to no impact on Lake Winnipeg;
- When the mining is finished the land is put back to a natural state;
- Expansion of Sunterra's operations will increase employment and provide new opportunities to existing businesses;
- Sunterra has been operating in the area for over a decade and has had a spotless environmental and business record;
- Sunterra is vital to sustainable development in the Interlake and Gimli; and
- If Sunterra's operations are shut down, it would be a substantial loss to the St. Boniface Pallet Company.

Information Request and Proponent's Response

The following is from the June 24, 2013 information request and the July 8, 2013 response from the proponent. The August 19, 2013 information request did not pertain to the comments from the public.

1. Please provide a response to the following comments from the public (the original comments will provide context):

a. The proposed access road is too close to the neighbouring cottage development:

The comment from George Robson focuses on the proximity of the Bullhead Bog south staging area and access road to the Leaside Beach area. Sunterra is required to locate the staging area within their Quarry Lease boundary. The proposed staging area location as shown in Figure 3 of the EAP is the only location within Bullhead Bog south that has a large enough areas within appropriate base conditions to accommodate the 10 ha staging area. As shown in Figure 6 of the EAP the proposed staging area is located along the boundary between drainage basins. As such this area is slightly higher and better drained than the surrounding land and will have more mineral soil and less peat providing a better base to construct the staging area.

Similarly the access road between PR 234 and the Bullhead Bog south staging area was located along the drainage basin boundary for better soil conditions to construct the road. In addition to the proposed access road being on the most appropriate base soil conditions this provides the shortest distance. While this reduces costs for Sunterra it also minimizes potential environmental impacts because fewer trees need to be cleared and less road construction material is required. Based on the Transportation Association of Canada guidelines for spacing between access roads, given the volume of traffic the proposed access road should be at least 40 m from any nearby access roads. The proposed access road more that satisfies this guideline as it is approximately 450 m south of the Leaside Beach north access road. Additionally, Sunterra will comply with all of the Ministry of Infrastructure and Transportation (MIT) safety requirements that will be specified on the permit to construct the access off of PR 234.

b. Development would result in a loss of flood storage for the local area;

The proposed drainage system is designed to only lower the moisture content of the surficial peat by approximately 25%. During the initial construction of the field drains there will be a slight increase in drainage from the site. However, once the initial increased drainage is completed following drain cutting the amount of drainage from the developed areas would be the same as drainage prior to development. The timing of drainage, however, would be slightly modified.

During a rain event there will be a slight lag (delay in time) before drainage from a developed area begins compared to undeveloped peat land as the partially drained peat

is re-saturated and then the drainage rate would be slightly higher because of the constructed drains. As described in the EAP Section 3.6.1, the temporary drainage increase of 0.04 m3/s at the discharge point represents an increase of 2% to 10.0% compared to the design flow at each PR 234 culvert crossing (33 year rainstorm). Additionally as described in the EAP the sedimentation ponds are equipped with gates to control the flow and hold water back (flood storage), if required.

c. Mill Creek Cottage Development was not listed as a stakeholder in the proposal;

In the cumulative effects section of the EAP (pg 94) Mill Creek was identified as a known proposed cottage development in the area. However, when the field work was being conducted in fall of 2010 and spring of 2011 there was no evidence of active cottage construction. Attempts were made while preparing the EAP to identify any cottage associations that could be consulted as stakeholders. As noted in the comments from the Beaver Creek Cottage Association (BCCA) Mill Creek currently does not have a Cottage Association. As such there was no way for KGS Group to contact Mill Creek cottagers beyond the public notices posted as part of the licencing process. The BCCA comment that Mill Creek residents are in the process of building their recreation homes, apparently unaware that they are located in an industrial area is an invalid comment. The new Mill Creek cottage development is located adjacent the existing Sunterra Peat development at Beaver Creek that has been in operation long before the Mill Creek cottage development began in the area.

d. Clearly identify the drainage route and flow rate from Ramsay Point Bog, particularly any drainage through the Pebblestone Beach Cottage Development;

The constructed drainage proposed by Sunterra for Ramsay Point Bog is generally towards main drains adjacent the Ranger Lakes, which then flow toward two sedimentation ponds near the eastern edge of QL 2410, as shown in the EAP Figure 5. The outlet ditch from these two sedimentation ponds will discharge to the existing unnamed stream that flows east out of the Ranger Lakes to the existing roadside ditch on the west side of PR 234. The existing roadside ditch conveys the stream discharge south along PR 234, as shown in the EAP Figure 8. All of the Sunterra constructed drainage from the Ramsay Point Bog will be away from the Pebblestone Beach cottage area to a culvert crossing approximately 3.5 km south of Pebblestone Beach, which outlets to Lake Winnipeg.

The flow rate at any given time will depend on meteorological conditions, however, as part of the hydrological assessment conducted by KGS Group the flow rate during the design runoff (1:33 year return period) was calculated for each drainage basin of each bog area. The proposed Sunterra Ramsay Point Bog is primarily in a 3,284 ha drainage basin as shown in the EAP Figure 8. The Rational Method was used for flow calculations, as noted in the EAP (pages 14 and 15), utilizing the nearest recorded precipitation data at the City of Gimli. This method considers the precipitation and the land characteristics to calculate the anticipated runoff. Due to the prevalence of bog area, a reduction factor was applied to the flow value to account for water retention.

The 1:33 year design runoff for this 3,284 ha drainage based was calculated to be 2.9 m3/s.

e. Cottage communities are a significant economic contributor for the area and should be included in the economic analysis.

The contribution of tourism and recreational activities to employment and the economy in the regional area was noted in Sections 6.4.1 and 6.4.8 of the EAP. We acknowledge and appreciate the rough estimate of the local cottage economy provided by the Pebblestone Beach Cottagers (PBC). However, inclusion of the Grindstone cottage developments is not appropriate as these are outside of the Regional Study Area, are not accessed along PR 234 and will not be affected in any way by the proposed development. Using the numbers provided by the PBC for lot revenue, new cottage construction and operating costs at the remaining cottage developments the estimated local cottage economy is approximately $2.4 million/year when averaged over the 30 year life of the proposed development. The existing Sunterra Beaver Point Bog operation currently employs 35 to 40 residents from the surrounding communities with an aggregate seasonal payroll in excess of $1 million, as noted in the EAP Section 6.4.1. Additionally, Sunterra supports local businesses by purchasing supplies and contracting local companies for service works (e.g. trucking, sewage and waste disposal) having a minimum total annual expenses of $3 million with at least 50% of this spent within the Interlake area and another 25% within Manitoba. Based on these values the current Sunterra contribution to the local economy is approximately $2.5 million/year. Development of the proposed Sunterra expansion is not expected to decrease the value of recreational and residential property in the area or decrease the amount of cottage development, as suggested by the PBC comments, as the existing Sunterra operation, which is within 10 km of the cottage areas, was already operating when most of these lots started to be purchased and developed.

f. The statement in the proposal that there is an abundance of peat in Manitoba does not account for the varying types of peat deposits within Manitoba. Muskeg tend to be located in northern regions and peat bogs in the southern regions, where existing access makes them more vulnerable to development;

The term Muskeg is not used in either the Canadian Wetland Classification System (Second Edition) or the Terrestrial Ecozones, Ecoregions and Ecodistricts of Manitoba but it is synonymous with bogland. There are five classes of wetlands including bog, fen, marsh, swamp and shallow water, which can be grouped as either peatland or mineral wetland. Peatlands include wetlands ecosystems characterized by an accumulation of peat which includes bogs, fens and swamps. Bogs and fens are very similar as they are both peatland dominated by bryophytes and graminoids, with the main difference being fens have more graminoids present because they receive water that is richer in dissolved minerals, whereas swamps are peatlands dominated by trees, shrubs and forbs with waters rich in dissolved minerals.

Manitoba has approximately 19.3 million ha of peatland, as noted in the EAP Section 3.3. This accounts for approximately 35% of Manitoba's land surface, ranking second

to glacial till. The organic deposits are distributed throughout the cool, Subhumid Boreal Forest Region of eastern and central Manitoba and in the cold, humid, Subarctic Region of the Hudson's Bay Lowland in the northeastern corner of the province. Approximately 5.1 million ha of these peatlands are located in the area north of Lake Winnipeg leaving approximately 14.2 million ha of peatland throughout eastern and central Manitoba. In, particular, the proposed development is located in an area where 81 to 100% of the land area is covered by peatland, as shown in EAP Figure 1.

g. While bogs and fens may be quite common in Manitoba and Canada, bogs such as these three bogs are not common;

Based on the biological investigations conducted as part of the environmental assessment the Bullhead, Little Deer Lake and Ramsay Point Bogs can predominately be described as lightly to moderately treed raised bog areas with open areas of Sphagnum moss, as described in the EAP Section 4.1.7. The observation that the bog areas were raised was provided just as a general description of the land form as a detailed classification of the wetland down to form and type (ie beyond class) was beyond the scope of this project. Regardless, the land forms and species observed at the proposed bogs are typical and consistent with the numerous other bogs present in the Washow Bay Peninsula area, which consists of 81 to 100% peat land as noted above. Additionally, there were no known historic resources or rare to very rare and federal protected vegetation and mammals in the vicinity of the proposed peat harvesting development to distinguish the three proposed bog areas.

h. The assessment report does not address or explain how the hydrological, ecological and carbon storage function of the peatlands will be restored;

Fully harvested areas will be restored based on the experience gained by Sunterra through the guidance of Canadian Sphagnum Peat Moss Association (CSPMA) and restoration research, and following the requirements of The Preservation and Reclamation Policy of the CSPMA. Sunterra will re-vegetate fully harvested plots in accordance with the Peatland Restoration Guide (2nd Edition) and conduct annual re-vegetation surveys at each re-vegetated plot in compliance with the Environment Act Licence. To restore the hydrological, ecological and carbon storage function of the peatlands, as noted in the Mine Closure Plan provided in the EAP Appendix C, progressive restoration activities will include;

- Backfilling the field ditches and leveling the field using a Profiler drawn by a tractor.
- Perimeter ditching will be backfilled whenever that section of perimeter ditch is no longer required for site drainage.
- When all production from a bog is complete, all drainage ditches and sedimentation ponds will be backfilled, leveled, and prepared for re-vegetation.
- Water levels will be allowed to rise and flood the surface due to the backfilling of the drainage ditches. Blocking ditches to form pools as part of restoration is strongly encouraged because it can increase the biodiversity in a bog area.

- Topspit (Sphagnum Moss mulch) will be spread over the leveled field to promote natural re-vegetation on the bog surface. Transfer of the moss layer from donor sites also transfers the plants and propagates from the donor bog which ensures the continued presence of typical bog plants in the restored bog. Within 7 to 10 years, the bog surface will return to a functioning wetland ecosystem.

Final site closure will be initiated and completed after all phases of the bog have been fully harvested by approximately 2053 with the following closure activities:

- Decommissioning of all remaining drainage ditches, drainage flow control weirs, and drainage settling ponds constructed for the development.
- Removal/Decommissioning, reclamation and restoration of the affected operations area including parking facilities, office/lunchroom facility, chemical toilet/washrooms, septic storage tank, groundwater well (if installed), fuel storage and fuel transfer facility, equipment maintenance areas, generator, and any additional site infrastructure, concrete, and electrical services.
- Decommissioning of the site access roads and stream crossings from PR 234, unless Manitoba Conservation wants to retain this access.
- All waste material from decommissioning activities will be removed from the site and taken to a licensed waste disposal ground.
- Soil testing and remediation (if required) of pollutants from the harvesting operations of the development to the satisfaction of Manitoba Conservation Authorities.
- Restoration of any wildlife habitat disturbed as per the requirements of the Environment Act Licence.
- Seeding or transplanting with higher plant species will be completed in areas that may not re-vegetate naturally to Sphagnum if needed and as directed by Manitoba Conservation.

i. Provide examples of the effectiveness of restoration of peat in similar environments;

Restoration is still a developing science in Canada (and Manitoba) as noted in the EAP Section 6.2.6 Reclamation and Restoration, Canadian industries have little experience in reclamation and restoration of peat harvesting developments because only a few developments have reached the end of their production life. The Peatland Restoration Guide (2nd Edition), Appendix A, provides a list of 11 large-scale restoration sites in Canada, predominately in Quebec and New Brunswick. The Peatland Restoration Guide indicates that establishing a full plant carpet dominated by peatland species including Sphagnum and stabilizing the water table near the surface can be achieved in about five years. According to a recent study by the North American Wetlands Conservation Council (Canada), harvested peatlands can be restored to ecologically balanced systems within 5 to 20 years after peat harvesting.

The Peatland Ecology Research Group (PERG), working with the CSPMA and governmental agencies is conducting research to restore mined peatlands into

functional peat accumulating systems. A restoration project on the 11.5 ha mined section of the Bois-des-Bel peatland (BDB), located close to Rivière-du-Loup, Québec was initiated in 1999. Mining activities at BDB were stopped in 1980 and since then, the mined section was left abandoned. A large data base is being built at BDB for the long term intensive monitoring regarding the evolution of the vegetation cover, hydrology, carbon fluxes, microbiology and chemistry, as well as the return of fauna. Eight years post-restoration, restored areas at BDB were found to have a small peat accumulation potential, although still lower than natural peatland. The restoration techniques tested at BDB contributed to the recovery of hydrological conditions necessary for Sphagnum re-colonization however it was noted that successful application at different sites may be limited by specific peat and climate characteristics. Results of vegetation monitoring at BDB indicated that the moss carpet thickness increased from 2003 to 2007 and the amount of bare peat decreased indicating vegetation recovery. Establishment of Sphagnum diaspores resulted in Sphagnum cover of restored areas close to the range of cover found in natural sites. The restoration also successfully reintroduced numerous ericaceous and other shrub species and herbaceous species that should drive the restored peatland towards a functional and typical peatland ecosystem. The restoration success to re-establish vegetation at BDB is demonstrated in the following pictures showing the fields at ages 1, 4 and 8 (left to right).

Disposition:

The proponent's response to the information requests addresses the concerns regarding the location of the access road, flooding, Mill Creek Cottage Development, drainage, economic analysis, varying types of peat deposits, and restoration.

The proponent adequately addressed GHG emissions, carbon storage, and potential cumulative effects in the Proposal.

Concerns related to existing highways fall outside the scope of The Environment Act; however concerns regarding PR 234 were forwarded to Manitoba Infrastructure and Transportation.

Potential impacts from dust generation are adequately addressed in the Proposal and licence conditions.

Regarding the concerns of $C0_2$, $S0_2$, and NOx emission, significant impacts to air quality from the Development are not expected.

Monitoring of the effluent drained from the peat has been included in the licence to address concerns that the project may affect Lake Winnipeg. Clauses requiring flow rate monitoring and buffer zones to water bodies and adjacent lands address concerns regarding drainage impacts.

A vegetation and wildlife survey was conducted at the site of the Development. No species classified as being provincially very rare (S1) or rare (S2), listed under Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or federally protected under the Species at Risk Act (SARA) were found.

To reduce the potential effects on the flora and fauna in the area of the Development, only existing Quarry Leases held by the proponent were included in the licence. Pending Quarry Leases were not included.

The Province of Manitoba has placed a moratorium on new Environment Act Proposals for peat mining projects on Crown mineral land while the department evaluates the adverse cumulative effects that may be caused by increased development of Manitoba's peat resources.

The licence requires the proponent to develop an emergency response plan to address fire suppression and control and cleaning up spills involving dangerous goods.

The licence addresses concerns regarding noise from the operation by restricting truck traffic at night and on weekends and Holidays.

ASSESSMENT OF COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE (TAC):

Following is a summary of the assessment of TAC comments received pertaining to the proposal. Copies of the original comments from TAC are available in the Public Registries.

Manitoba Conservation and Water Stewardship, Air Quality Section

Comments on the proposal:

Potential dust generation (or suspended particulate matter) and emissions from heavy equipment and vehicles during the construction and subsequent operation are adequately addressed in the proposal. No significant impact on air quality is expected provided that the measures cited in the proposal are implemented.

Disposition:

No action required.

Manitoba Conservation and Water Stewardship, Groundwater Management

An exploratory water well should be drilled into the uppermost bedrock aquifer at each of the proposed development sites, to determine baseline hydrogeological conditions.

Baseline water table conditions should be established in the peat lands immediately surrounding each of the development sites.

Disposition:

Exploratory water wells were not deemed necessary at this time since the proposal states that a low permeability clay cover forms a very good barrier between the perched water within the peat layer and the groundwater in the aquifers underlying the proposed Development. This is said to essentially isolate the peat from the groundwater so the proposed development will have minimal effects on the groundwater table. Therefore, the potential adverse effects of the project on groundwater quality were assessed to be minor. Groundwater quality in the development area was not analyzed for parameters as it was assumed to be good quality as cottagers east of the development use it as a potable water source.

Manitoba Conservation and Water Stewardship, Office of Drinking Water

Office of Drinking Water's comments on the proposal:

On behalf of Office of Drinking Water, I reviewed the above noted EAP, focusing primarily upon possible effects on safety of drinking water sources and water systems. The EAP noted that there are a number of domestic wells at distances between 3 and 5 kilometres from the proposed peat mines. It also noted that these wells are generally believed to be drilled and cased into carbonate bedrock and that the peat mines will not be excavated deeply enough to risk exposing the carbonate bedrock. Although the EAP Report did not mention it, there are several public and semi-public water systems in the area which use groundwater as a drinking water source, including the community of Pine Dock, Matheson Island, the Beaver Creek Provincial Park and Beaver Creek Bible Camp. The horizontal distance and depth of the wells at these systems will probably protect them from any effects from the proposed peat mines. There are no public or semi-public water systems in the area known to use surface water as a water source.

Based upon this, ODW does not see any cause for concern respecting drinking water safety with the proposed development.

Disposition:

No action required.

Manitoba Conservation and Water Stewardship, Water Quality Management Section

Comments on the proposal:

The baseline data provided with the report was informative. What was noticeably missing from the report is a summary of data collected from the existing Beaver Point Peat Mine. Environment Act License 4254.10 requires monitoring of water quality downstream of the site a minimum of three times per year at two creek locations and 20 meters off shore of the discharge to Lake Winnipeg. We would feel more assured of the proponent's conclusion that the proposed projects are not likely to have adverse effects if they could demonstrate the same for the existing development with actual data. The proponent should have been collecting discharge data since 1997. In light of the major expansion proposed we would respectfully request a summary of these data to be provided such that potential impacts could be determined.

As with other peat harvest applications we recommend that this proposal be deferred until the Province completes the Boreal Peatland Stewardship Strategy to ensure that this and any other peat harvest applications are not in contravention of this new policy direction.

As this proposal is one of a number of peat mining developments proposed for the area. It is important that environmental impacts be considered in concert with other mines proposed and currently under development within the area.

Peatland development and environmental consequences must be evaluated on a case by case bases as each bog area may encompass differing concerns. However, generally, peatland development impacts water quality and local hydrology.

Water quality in peat bogs tends to be acidic and during the de-watering phase of each quarry lease, there is an impact to the receiving body of water by increasing suspended sediments, increase nutrient (nitrogen and phosphorus) and lowering the pH thus potentially increasing dissolved metals. Loss of ecological functioning of wetlands is also a concern. The ability of wetlands to filter nutrients becomes less as their function is lost. Further, draining, ditching, de-watering, and harvesting can increase nutrient loading to receiving watercourses.

Sedimentation is a concern for receiving water bodies as areas of quarry leases are drained. Effective sediment and erosion control technologies and measure must be implemented as part of the overall development plan.

- Peatland development must respect government's Wetland policies.
- Nutrient loading to surface waters is a major concern in Manitoba. The project proposal must demonstrate with actual data that the impact to surface water quality will be negligible.

These projects are in close in proximity to Lake Winnipeg and the report includes several unsubstantiated statements regarding how this project will not adversely affect water quality. Samples collected from the bogs indicated that the water includes several parameters that do not meet Manitoba Water Quality Objectives and or Water Quality Guidelines namely ammonia, silver, manganese, aluminum, iron, lead, and pH. During initial drainage this poor quality water could be flushed directly into Lake Winnipeg. Although this individual project would not be expected to significantly alter water quality of Lake Winnipeg as a whole, research indicates current issues experienced on Lake Winnipeg are due to the cumulative effects of many inputs. Ameliorative action is required to ensure that if this project is approved the water quality leaving the mine sites is at a minimum is no worse than baseline water quality in Lake Winnipeg.

The proponent would be required to ensure any discharge meets water quality criteria as specified in the Manitoba Water Quality Standards, Objectives and Guidelines (2011) or any future amendments.

Regarding mitigation, little information is provided regarding the effectiveness of the proposed settling basins. The report indicates these have been used elsewhere however no performance data is provided. The report shows that the proposed settling basins are expected to have a residence time of 2 hours. A 2 hour residence time is likely insufficient for nutrient removal and would not likely result in pH meeting objectives or a decrease in metal concentrations.

For pH mitigation the proponent indicates that a limestone lined ditch could be used to raise pH sufficiently, however no performance criteria or design is provided.

Although as noted above we recommend deferral of project review pending the Provinces Boreal Peatland Stewardship Strategy, should this project be licensed we recommend the following minimum water quality monitoring.

While the proponent identifies pH and totals suspended solids will be measured periodically. A comprehensive monitoring plan is required should this mine be granted a License. This monitoring plan should include but is not limited to weekly pH, and total suspended sediment monitoring at outlet ditches, and sedimentation ponds, but also includes the following additional parameters measured on a monthly basis during the open water season (April to November).

- Total alkalinity
- Acidity
- Conductivity
- Total dissolved solids
- Total suspended solids
- 5-day biochemical Oxygen Demand
- Hardness
- Total Phosphorus

- Total Kjeldahl Nitrogen
- Total ammonia as (N)
- Nitrate +Nitrite (as N)
- Sulphates
- Total organic carbon
- Complete Scan for total and dissolved metals and metalloids by ICPMS or similar method

In addition total mercury (cold vapour) should be sampled once per year at the outlet ditch and receiving waters.

Detection limits should be commensurate with interpretation of Canadian Environmental Quality guidelines.

Additional sampling locations would include the outlet ditch(s), and upstream/ downstream receiving waters including the confluence with Lake Winnipeg. A monitoring plan should be prepared by a qualified aquatic ecologist and submitted to Manitoba Conservation and Water Stewardship for review and approval and be appended as a requirement in the License.

Monitoring data should be summarized in an annual report including trend analysis of previous years monitoring data. In addition an electronic copy of all monitoring data should be submitted to Manitoba Conservation and Water Stewardship in a spreadsheet compatible format.

All water quality analysis shall be performed by an accredited laboratory.

Other comments:

- The facility should have a comprehensive emergency response plan including, spill response kits within each vehicle.
- All work within or near waterways should be accordance with the Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat
- The proponent shall have a sediment control plan during initial construction specifying the use of erosion mats, barriers, and other materials, to reduce sediment transport into receiving waters.
- Consideration should be given to the proponent entering into a Wetland Compensation Agreement with an approved habitat conservation organization to reflect the relative long nature of this development.

The following was sent to the proponent in the June 24, 2013 information request:

a. Please provide responses to the following, referring to the June 25, 2012 comments from the Water Quality Management Section for context: Provide a summary of water quality data from the sampling required in Licence No. 2288R and describe how it supports the environment assessment report conclusion that the proposed project is not likely to have adverse effects on downstream surface waters;

b. Provide background information to support the effectiveness of the settling ponds to achieve surface water quality objectives and guidelines in the water discharged from the
ponds for nutrients, pH and metals given the proposed two hour residence time; and

c. Provide performance and design criteria for the potential mitigation of pH through the
use of a limestone lined ditch.

The proponent provided the following in response:

The results of the Water Quality sampling conducted by Sunterra at their existing sites are currently sent to Katie Martin, Environment Officer, Central Region (Selkirk), prior to which they were sent to various people within Manitoba Conservation. Ms. Martin indicated that the Central Region has 9 files for the Sunterra operation containing the raw data sheets sent by the lab and the annual summary reports. Given the large quantity of data since Sunterra began operation, the data summary being provided in the enclosed excel spreadsheet, in response to this request, is only for data collected during 2011 and 2012. Mr. Kevin Jacobs, Water Quality
Management Section indicated that providing the two years of data would satisfy his request for supporting water quality data. Ms. Martin indicated that when Manitoba Conservation receives the data a quick scan for compliance with the licence limits for pH and total suspended solids (TSS) or exceedance of the Manitoba Surface Water Quality criteria is completed. Additionally, Sunterra will normally contact the environment officer in the event that water quality results indicate parameters outside the licenced limits, to see what course of action Manitoba Conservation would approve or recommend.

Based on the 2011 and 2012 water quality monitoring the pH and TSS were typically within the licence limits and the other parameters were generally below the water quality criteria with a few exceptions described as follows;

- September 6, 2012 sample from Bog C Settling Pond had a pH of 4.6. This occurred as Sunterra began constructing the initial drainage for this bog in August of 2012. Constructing initial drainage typically results in lower pH, which was mitigated by adding limestone as discussed further in response 2.c. The effluent discharge did not appear to have had any effect as the downstream receiving water sample (#6 Drainage at Lake) had a pH of 7.44. Additionally, the limestone mitigation was effective as the pH (5.04) during the next weekly sampling on September 13, 2012 was again within the licence limit.
- There were two samples in the local creek downstream of Bog B and five samples in Mill Creek (downstream of Bog A) where the pH was less than 6.5. These lower pH values in the downstream receiving water are generally existing background conditions and not a result of the bog drainage as the sedimentation pond effluent typically had similar of higher pH values.
- July 11, 2012 sample from Bog B Settling Pond, the TSS of 93 mg/L exceeds the

licence limit of 30 mg/L for discharge of effluent. This was likely a result of a sampling error (disturbing the sediment while sampling) and not a representative measure of TSS as the downstream receiving water sample (Drainage @ PR234) had no detectable TSS (<5.0 mg/L) indicating no effect from sediment pond effluent. Additionally, the prior (July 5) and subsequent (July 20) sampling events had TSS concentrations of <5.0 mg/L and 6 mg/L, respectively, which is more typical.

- There were two samples in the local creek (downstream of Bog B), three samples in Mill Creek (downstream of Bog A) and one sample in the Lake (downstream of Bog C) where the TSS was greater than the licence limit of 25 mg/L for the allowable discharge from the settling ponds. However, in each of these cases the TSS levels in the associated settling ponds were less than in the downstream receiving water so the effluent would dilute the TSS and not be the cause of the elevated levels.
- Aluminum concentrations measured at each sample location and Iron concentrations measured at most sample locations during each sample event exceeded the applicable Manitoba Surface Water Quality Objectives for Freshwater Aquatic Life (Note the table shows CCME as that is what ALS provides in their summary tables). Additionally, elevated Cadmium concentrations were measured at two locations (during separate events) and an elevated Copper concentration was measured at one location. However, elevated concentrations of these metals is typical of surface water quality in the region, as noted during the baseline water quality sampling KGS conducted, as described in the EAP Section 4.1.6. Additionally all of the concentrations for these parameters are within the range of concentrations observed in Lake Winnipeg as measured during 2008 and 2009 by Manitoba Water Stewardship (EAP, Appendix D). As such the elevated concentrations should not be adversely effecting Lake Winnipeg water quality, it is simply consistent with regional conditions

The sedimentation ponds will be constructed to the typical design criteria as noted in Section 3.6.1 (pg 17) of the EAP, which includes a minimum retention time of two hours. The retention time will vary in response to the inflow rate of drainage water; however it will never be less than the minimum two hours to ensure adequate time to allow settling. Also as noted in the EAP sedimentation ponds proposed to mitigate potential TSS effects are also equipped with floating booms and have a control culvert with a sliding gate located in the inlet ditch upstream of the sedimentation pond which can be used to reduce or stop inflow to the sedimentation pond in the event that inflow rates exceed the design flow criteria. Sunterra has found that by providing a larger basin volume than the design standard of 25 cubic meters per hectare of drained peatland that monitoring results for TSS at their existing Beaver Creek Bog area are typically 7 mg/L or less. The results of the 2011 and 2012 water quality monitoring, as discussed in the response above (2.a.) shows the effectiveness of the settling ponds.

If control of the discharge rate from the sedimentation pond is not sufficient in maintaining the water chemistry, in particular the pH levels, a limestone or carbonate lined drainage ditch can be installed as noted in EAP Section 6.3.4, to mitigate the pH

of the draining bog water before entering the sedimentation pond. As part of Sunterra's existing operation, when constructing the initial drainage to reduce the water level and open a new area of the bog, if the pH is too low, they have placed 15 to 20 yards of limestone in the sedimentation pond outlet ditch so that the water draining must pass over the limestone before reaching the downstream receiving water.

During the spring of 2013, based on discussions with the former Regional Environment Officer, J.P. Perrault, an additional one to two yards of limestone was placed at the end of each field ditch in Bog A2 (referred to as Bog C) where it intersects the main ditch. In Sunterra's experience these mitigation measures have been enough to raise the pH to meet the licence limits. Once the water level has been brought down by initial drainage Sunterra has not had to take further corrective action and generally incidences of low pH, approaching the limit, corrects itself once it rained. Regardless as discussed Sunterra would also contact the Environment Officer for Central Region (currently Katie Martin), and ask them how Sunterra proceed. Typically Sunterra has not been directed to do anything different.

Water Quality Management Section's comments on the Proponent's response:

I reviewed the response to the information request you provided regarding the proposed Sunterra Peat Mine. I have nothing further to add at the present time.

Disposition:

The comments are addressed in the proponent's response to the information request and in the licence conditions. Regarding the comment that the proposal be deferred until the Province completes the Boreal Peatland Stewardship Strategy, in July 2013 the Province placed a moratorium on new Environment Act Proposals for peat mining projects on Crown mineral land while the department evaluates the adverse cumulative effects that may be caused by increased development of Manitoba's peat resources.

Manitoba Conservation and Water Stewardship, Parks and Natural Areas Branch

Comments on the proposal:

No comments.

Disposition:

No action required.

Manitoba Conservation and Water Stewardship, Sustainable Resource and Policy Management Branch and Lands Branch

Comments on the proposal:

3.6.1 Project Components Main Access Roads

Any permanent road development on Crown Land will require a Crown Land General Permit in addition to any other permit and approvals. Any Crown Land disposition in the area affected by this EAP is within the Peguis First Nation notification area and is therefore subject to the TLE and consultation processes. Any disposition that is located with the Lake Winnipeg Water Power Storage Reservoir will require approval of Water Stewardship.

If an Environment Licence is approved the proponent should be provided with a detailed list of ancillary approvals, permits, licences that are required in addition to the Environment Act Licence and the contact information for these approvals as well.

Facility and Equipment Required at Proposed Peat Development Sites.

The areas identified for the staging site are within the lands held by Quarry Lease. Any surface disposition for these facilities is assumed to be the responsibility of IEM and subject to their process of review.

Main Drainage Ditches

A Water Rights licence is required for surface water drainage. A drainage plan should be provided to Water Stewardship.

Site Preparation

The proposed 100 meter buffer around Ranger Lake, unnamed creeks connecting them to the unnamed lake along Beaver Creek should be expanded to 300m to accommodate leopard frog migration around these water bodies. The increase in buffer width will be an additional sediment mitigation for discharge waters from the sediment ponds.

Construction

Crown Land Work Permits are required for any work on Crown Land. A pre-construction meeting with the proponent and IRMT is recommended to deal with regional resource operational issues if the EAP receives the required Environment licence. Where merchantable timber resources will be impacted from associated developments, under authorization of the Crown Land General Permit or Crown Lands Work Permit, all impacts will be subject to applicable timber royalties where applicable.

Operation

If the proposal reaches development the activities are proposed to operate 7 days a week. Existing recreational cottage developments in the area of this proposal may be

affected by the increase in vehicle traffic on PR 234 as the proposed peat operating schedule will be during the same period of time as summer recreational cottage season.

4.2.2 First Nations

The proposal is within Peguis Notification area as identified by the Treaty Land Entitlement Agreement and is subject to the terms of the agreement in regards to notification of land dispositions and activities.

4.2.6 Areas of Interest

There are five Crown Recreational Cottage subdivisions in the area and all of which use PR 234. These subdivisions are Little Deer, Mill Creek, Pebblestone, Lee Side Beach and Islandview. There are approximately 250 recreational cottages in this area in addition to the Cottages at Beaver Creek.

5.2 Stakeholders

Fisher River First Nation, and Kinonjeoshtegon First Nation should also be considered as stake holders. The cottage subdivisions listed in 4.2.6 are also considered as stakeholders. It is the understanding of the IRMT that Consultation with the affected First Nations is required and that IEM is the lead agency in regards to consultation.

5.4 Mitigation Measures

Traffic mitigation proposed is to follow road rules existing signage and support the cottagers to lobby MIT to upgrade 234. etc. Considering the potential increase in truck traffic on 234 if all the proposed peat operations become operational additional mitigation measures by the proponent should be developed to address the issues identified by the stakeholders.

The proponent should provide details and examples in regards to the claim that restoration of a site often results in a wider diversity of flora which results in wider variety of habitats to support more diverse fauna.

6.2.1 Loss of Wetland and 6.6.6 Reclamation and Restoration

The proponent should provide a Manitoba example of where restoration activities have resulted in a functioning wetland ecosystem within 5-7 years following restoration.

6.2.7 Peat Fire

An emergency fire plan should be provided to Conservation. If the proposal receives the required Environment licence it is recommended the fire plan be discussed with Conservation.

6.3.4 Surface Water

The drainage plan should contain information on how the plan will avoid drawdown affects on adjacent lands.

6.3.7 Mammals

A road management plan should be provided that deals with development of harvest roads, access control methods and a road retirement and closure plan.

6.4.7 Areas of Interest

Any development of peat that is within areas under Order In Council will be subject to the approval of the responsible authority in addition to any other approvals. Please note that QL-2410PEND borders the Moose Creek Wildlife Management Area. Staff of Wildlife Branch can provide information on permits/conditions that may be required to operate next to the wildlife management area to ensure the hydrology is not adversely affected by the development.

Cumulative Environmental Effects

The report suggests the effects are relatively small in consideration to the entire area. With the number of operations proposed for the area west of PR234 the IRMT defers to the department expertise (Boreal Peat Land Strategy) to confirm if the cumulative environmental effects are small relative to each other and the regional land use study areas.

The development proposal may cause or have concerns for species protected under the Species at Risk Act (Federal Legislation) or Provincial Endangered Species Act. Wildlife concerns and assessed risks to endangered species; protected under legislation, should be considered and evaluated for in the development proposal and proposed mitigation efforts.

The following was sent to the proponent in the June 24, 2013 information request:

Please provide responses to the following, referring to the July 27, 2012 comments from the Lands Branch and the Sustainable Resources and Policy Management Branch for context: Provide details and examples in regards to the claim that restoration of a site often results in a wider diversity of flora, which results in a wider variety of habitats to support more diverse fauna.

The proponent provided the following in response:

With regards to biodiversity bog pools are important because they support a wide variety of organisms that greatly contribute to the biological richness of peatlands. In southeastern Canada, natural bogs average 35 plant species but this figure drops to 24 if surveys around pools are omitted. Many plant and insect species are found only in or around bog pools and nowhere else in peatlands. As such, blocking ditches to create pools as part of restoration is strongly encouraged by the Peatland Restoration Guide because it can increase the biodiversity in a bog area. This is particularly true if there was an absence of pools prior to development, such as at the bullhead and little deer lake bog areas. The restoration of the Bois-des-Bel experimental site, as previously introduced (response 1.i.), included the creation of eight pools that appeared to be

successful since many amphibians, insects and micro-organisms had settled back into pools after two years. They are also visited by migrating birds, ducks, geese and small and large mammals.

Disposition:

The licence conditions address the concerns regarding hours of operation and related traffic, emergency response plan, and endangered species. The proposal provides a description of the location and proposed construction of access and bog roads. Closure of the roads is to be addressed in the Closure Plan submitted to the Mines Branch. Regarding increasing the buffer around Ranger Lake, this bog is associated with the Ramsey Bog which was proposed to be located on pending Quarry Leases that are not included in the licence. Crown-Aboriginal Consultation is being conducted for the project. The proponent's response addresses the concerns regarding the restoration of the diversity of flora. Information regarding approvals and permits was forwarded to the Proponent for their information.

Manitoba Conservation and Water Stewardship, Wildlife Branch

Wildlife Branch's comments on the proposal:

The environmental assessment indicates that wildlife surveys were conducted between September 2010 and October 2011, with site visits occurring in September, May and June (p22). Wildlife Branch biologists request that the proponent provide more specific information regarding the exact days that site visits occurred.

Uncontrolled access to these site is of great concern to the Wildlife Branch. Moose and other big game species become vulnerable with increased access into remote areas. A traffic gate must be erected and maintained at the proposed access roads from PTH #243. This gate must be closed when access is not required, and diligently monitored to prevent vandalism and damage. Trails or access roads are not be developed outside or around the project area. Please request a response from the proponent, as to whether they are prepared to abide by this mitigation condition.

The following was requested in the June 24, 2013 information request:

Please provide responses to the following, referring to the July 27, 2012 comments from the Wildlife Branch for context: The environmental assessment indicates that wildlife surveys were conducted between September 2010 and October 2011, with site visits occurring in September, May and June. Provide more specific information regarding the exact days that site visits occurred.

The proponent provided the following in response:

The EAP Section 3.6.2 indicated that site investigations were completed between September 2010 and October 2011, while vegetation and wildlife surveys were

conducted during site visits in September 2010 and May and June 2011. As requested the specific dates of all of the site investigations described in the EAP were as follows;

- September 6 to 10, 2010; biological survey for plants, birds, mammals, amphibians and reptiles.
- May 17 and 18, 2011; biological survey for fish.
- June 6 to 10, 2011; biological survey for plants, birds, mammals, amphibians and reptiles.
- October 11 to 13, 2011; baseline water quality sampling (was not conducted because of flooding in 2011).

The following was requested in the August 19, 2013 information request based on additional comments from the Wildlife Branch:

The assessment report does not address or explain how the hydrological, ecological and carbon storage function of the peat lands will be restored; bullet 5: Topspit (Sphagnum Moss mulch) will be spread over the leveled field to promote natural re-vegetation on the bog surface. Transfer of the moss layer from donor sites also transfers the plants and propagates from the donor bog which ensures the continued presence of typical bog plants in the restored bog. Within 7 to 10 years, the bog surface will return to a functioning wetland ecosystem.

The proponent proposes to use material from a donor bog to promote natural re-vegetation during the progressive rehabilitation process. Where is the donor bog and what authority does the company have to remove material from the donor bog? This strategy may work quite well if the donor bog is the portion of the lease that will next be stripped prior to extraction, assuming the new area is large enough to ensure sufficient material for the rehabilitation process. However, what will happen during the final stage of rehabilitation if no further lease area is available?

It is my understanding from discussions with the proponent that occurred during a site visit of the existing Sunterra Beaver Point Bog operation on 9 May 2013 that:

- the normal development process involves the mulching and mixing of the surface layer of vegetation, including sphagnum moss, into the upper peat layer. This would result in the sphagnum moss layer being un-available for use in the progressive rehabilitation process, and
- donor material for use in the progressive rehabilitation process at an existing operation must come from a subsequent new development. This strategy presumes that the new development, such as the one proposed by Sunterra in the Bullhead area, will be approved and go forward. At the least, this strategy places additional pressure on government to approve new peat extraction sites because it is critical to the progressive rehabilitation process. How can a review of the EAP for a new peat development be conducted in an objective manner when decision-making is influenced by the impact it may have on the success of rehabilitation of existing operations.

The proponent should be required to design a progressive rehabilitation process that

uses donor material from the next development area from within their existing operation, rather than mulching and mixing this material into the peat layer to be extracted. This strategy would eliminate the need to obtain donor material from other bogs, but require that the operator to design the final rehabilitation phase in the absence of sphagnum moss, which could be a more water oriented wetland scenario."

The proponent provided the following in response:

Donor material can come from two places as follows;

- When developing a new field, once the trees have been mulched, but before putting in the field ditches, all the live moss remains and can be used for areas to be restored.
- There are several other areas within the quarry leases such as the buffer zones and areas that do not have sufficient depth of peat for commercial development that are not actively harvested but which can be accessed for live moss as a donor site. As noted in the EAP Section 3.4 (pages 11 and 12) only approximately 54% (715 ha) of the total quarry lease areas (1324 ha) is proposed to be harvested leaving a substantial area that can be used as donor areas.

For the final stage of rehabilitation if no further lease area is available to be developed and used as a donor source then donor materials can be obtained for the undeveloped areas within the quarry leases (the second source noted in my previous response).

Disposition:

The proponent's responses to the information requests are satisfactory. Concerns regarding access are addressed in the licence conditions.

Manitoba Conservation and Water Stewardship, *Aboriginal Relations* Branch

We understand that an initial assessment has been completed and that consultation is underway with the First Nations of interest in the area.

Disposition:

No action required.

Manitoba Infrastructure and Transportation

Comments on the proposal:

- The existing structure of Provincial Road (PR) 234 may not be adequate for the resulting loading from the proposed project and the overall development of peat moss mines along PR 234. Currently, the Region has received three similar proposals along this stretch of PR 234.
- The traffic volumes indicated in the EAP did not reflect the total increase in traffic. No traffic volumes were provided for the secondary traffic accessing the sites, such

as vehicles used for the delivery of materials, fuels, shipments of finished products, employees required to run their operations, etc. The current traffic data (2010) indicate a current traffic volume of 170 vehicles per day (vpd). The Proponent indicated an increase in volume between 1420 and 2347 truckloads per year (Page 81, Section 6.4.3 Traffic of the EAP). This suggests an increase of between 2840 to 4694 one way truck trips (or between 7.8 to 12.9 vpd). The increase in overall traffic volumes may require intersection improvements and an upgrade to the existing PR's structure.

Disposition:

These comments were forwarded to the proponent for their information.

Manitoba Innovation, Energy and Mines, Mines Branch

No concerns.

Disposition:

No action required.

Manitoba Local Government, Community and Regional Planning

Comments on the proposal:

The proposed peat development sites are located approximately 40 and 80 km north of Riverton within unorganized areas of Crown Land. The harvesting sites are within the Bullhead, Little Deer Lake and Ramsay Point Bogs and total approximately 715 ha.

The entire development area is located within the Peguis First Nation Community Interest Zone, and except for Deer Lake Bog, the areas are within the Water Power Reserve. The Ramsay Point Bog Project Area is partially located within the Moose Creek Wildlife Management Area (WMA) and the Beaver Creek Provincial Park.

The proposal includes areas subject to Section 128.1(1) of the Mines and Minerals Act as amended by the Save Lake Winnipeg Act:

Moratorium on permits or leases for peat and peat moss
128.1(1) For two years after this section comes into force, and for any longer period prescribed by regulation,

(a) no quarry permit for peat or peat moss may be issued under subsection 14(7) or 133(2);

(b) no quarry lease for peat or peat moss may be granted under subsection 139(2); and

(c) no application to enlarge the area covered by an existing quarry lease for peat or peat moss may be approved under subsection 139(2.1).

Consideration should be given to this recently approved legislation. Additionally, the protection of designated Wildlife Management Areas and Provincial Parks should be given the utmost priority.

Community and Regional Planning has concerns regarding the potential environmental ramifications of the proposed operations given the proximity to Lake Winnipeg, and would defer to the Department of Conservation and Water Stewardship for the provision of mitigation measures and/or additional requirements that might be imposed upon the developer.

Disposition:

No action required.

Canadian Environmental Assessment Agency (CEAA)

Comments on the proposal:

CEAA indicated the project does not meet the definition of a designated project under The Regulations Designating Physical Activities of CEAA 2012. Therefore, no formal federal coordination exercise was undertaken for the file. However, the proposal was sent to federal departments that may have had a potential interest in the project (Transport Canada, Fisheries and Oceans, and Environment Canada) to give them the opportunity to comment directly to EAB.

CEAA noted that the proponent would be responsible for confirming its regulatory responsibilities in developing the project.

Environment Canada provided comments and recommendations in a letter dated August 8, 2012 reminding the proponent of their responsibilities regarding legislation and policy related to Species at Risk, migratory birds, wetlands, and water quality.

Disposition:

No action required.

PUBLIC HEARING:

A public hearing is not recommended as the comments received from the public can be addressed by the proposed mitigation measures and in the conditions of licensing.

CROWN-ABORIGINAL CONSULTATION:

Crown-Aboriginal Consultation for the project is being carried out by the Mine's Branch of the Department of Innovation, Energy and Mines. The Final Consultation

Report will be reviewed prior to a final licensing decision. Also, additional conditions may be included to the draft licence in order to address concerns identified through the consultation process.

RECOMMENDATION:

The TAC and public comments received on the proposal can be addressed in the mitigation proposed by the proponent, as conditions of licensing for the project, or have been forwarded to the proponent for information where applicable. Therefore, it is recommended that the Development be licensed under The Environment Act, pending the review of the Final Consultation Report, subject to the limits, terms, and conditions as described in the attached Environment Act Licence. It is further recommended that enforcement of the Licence be assigned to the Central Region prior to construction.

PREPARED BY:

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