**ESS Group: Mammals and Habitat**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-501</td>
<td>C1-Wild-200</td>
<td>Moose Sensitive Area</td>
<td>Site: 13 to 14</td>
<td>E-389782 N-5770528</td>
<td>E-395210 N-5765631</td>
<td>14N</td>
<td>7310 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- GHA 14A Sensitive Moose Range

**Specific Mitigation:**

- For mitigation for this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

**ESS Group: Erosion**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-602</td>
<td>C1-Ceelo 200</td>
<td>Water Erosion Flats</td>
<td>Site: 24 to 28</td>
<td>E-397253 N-5763338</td>
<td>E-398794 N-5760723</td>
<td>14N</td>
<td>3039 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- Loss of topsoil due to water erosion (e.g. sheet, rill, gully) on disturbed surfaces.

**Specific Mitigation:**

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

**ESS Group: Archaeological**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-501</td>
<td>C1-Hert-102</td>
<td>arrowheads/Spearheads</td>
<td>Site: 15 to 20</td>
<td>E-394349 N-5766407</td>
<td>E-396683 N-5764303</td>
<td>14N</td>
<td>3142 m</td>
</tr>
<tr>
<td>C1-502</td>
<td>C1-Hert-102</td>
<td>arrowheads/Spearheads</td>
<td>Site: 15 to 20</td>
<td>E-394349 N-5766407</td>
<td>E-396683 N-5764303</td>
<td>14N</td>
<td>436 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- Loss of heritage resources due to inadvertent disturbance of sites. Ref: Duck Bay Group I - Lines - 1664 - 1752

**Specific Mitigation:**

- Larry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

**ESS Group: Cultural**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-501</td>
<td>C1-Hert-200</td>
<td>Gathering Area</td>
<td>Site: 1 to 2</td>
<td>E-397401 N-5769318</td>
<td>E-396683 N-5764303</td>
<td>14N</td>
<td>23149 m</td>
</tr>
<tr>
<td>C1-502</td>
<td>C1-Hert-200</td>
<td>Gathering Area</td>
<td>Site: 17 to 20</td>
<td>E-396683 N-5764323</td>
<td>E-397163 N-5763488</td>
<td>14N</td>
<td>946 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- Potential loss of vegetation during Project construction; potential for increased access to a traditional gathering area by non-community members

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible
**ESS Group: Archaeological**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Hert-103 Duck River</td>
<td>398020</td>
<td>576037</td>
<td>14N</td>
<td></td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential disturbance to Heritage Resources

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Implement excavation minimize or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

**ESS Group: Water Crossing**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Aqu-100 North Duck River</td>
<td>398014</td>
<td>5762047</td>
<td>14N</td>
<td>16.5m</td>
<td>15.5m</td>
<td>High</td>
<td>Important</td>
<td></td>
</tr>
</tbody>
</table>

**Potential Effects:**
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

**Specific Mitigation:**
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No in-stream works or fording from April 1 - July 15

**ESS Group: Erosion**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Solls-302 Water Erosion Risk</td>
<td>Site: 21 to 22</td>
<td>E-192253</td>
<td>E-198794 N-5760723</td>
<td>N-5760723</td>
<td>14N</td>
<td>3033 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Loss of topsoil due to water erosion (e.g. sheet, rill, gully) on disturbed surfaces.

**Specific Mitigation:**
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

**ESS Group: Forestry**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Ruse-301 ATK-97 Duck Bay</td>
<td>Site: 25 to 26</td>
<td>E-395660</td>
<td>E-400498 N-5719256</td>
<td>N-5757836</td>
<td>14N</td>
<td>1649 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential to disrupt access to fuel wood area

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Make fuel wood from ROW cleaning available to local community where demand exists

**MAP NUMBER:** 214
Potential Effects:

Removal in area of ROW Intersect

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber
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ESS Group: Archaeological

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Hert-104</td>
<td>North Duck River</td>
<td>400164</td>
<td>5758405</td>
<td>14N</td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Hert-105</td>
<td>Slater River</td>
<td>401057</td>
<td>5756891</td>
<td>14N</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential disturbance to Heritage Resources

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Forestry

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-RUse-301</td>
<td>ATK-97 Duck Bay</td>
<td>Site: 25 to 26</td>
<td>E-395660</td>
<td>E-400498</td>
<td>14N 1640m</td>
<td></td>
</tr>
</tbody>
</table>

Potential Effects:
Potential to disrupt access to fuel wood area

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Make fuel wood from ROW clearing available to local community where demand exists

ESS Group: Mammals and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Wild-201</td>
<td>Moose Sensitive Area</td>
<td>Site: 27 to 28</td>
<td>E-400330</td>
<td>E-404690</td>
<td>14N 8579 m</td>
<td></td>
</tr>
</tbody>
</table>

Potential Effects:
GHA 19A Sensitive Moose Range

Specific Mitigation:
- For mitigation for this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

Potential Effects:
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of flushplain

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate NH Veg Clearance Requirements.
- 3m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No in-stream works or f Ording from April 1 - July 15

MAP NUMBER: 215
ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Anue-104</td>
<td>Unnamed tributary of South Arm</td>
<td>403650</td>
<td>5755497</td>
<td>14N</td>
<td>N/A</td>
<td>29m</td>
<td>Moderate</td>
<td>Important</td>
</tr>
</tbody>
</table>

Potential Effects:
- Material loss and contamination from structure foundations & installations
- Increased erosion & sedimentation of stream
- Damage to stream banks
- Loss of riparian vegetation
- Fish habitat disturbances and impeded fish movement
- Rutting of floodplain

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within
  Riparian Buffers areas shall be delineated using white sheets that do not violate PPS veg clearance requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- No instream works or fording from April 1 - July 15

ESS Group: Archaeological

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northng</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Fish Habitat Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Hert-106</td>
<td>Wastyliuk Drain</td>
<td>403653</td>
<td>5752490</td>
<td>14N</td>
<td>14N</td>
<td>14N</td>
<td></td>
</tr>
</tbody>
</table>

Potential Effects:
- Potential disturbance to Heritage Resources

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Ensure excavated materials or surface disturbance for Heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Mammals and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Wild-201</td>
<td>Moose Sensitive Area</td>
<td>Site: 27 to 28</td>
<td>E-400330 N-5755121</td>
<td>E-400690 N-5750732</td>
<td>14N</td>
</tr>
</tbody>
</table>

Potential Effects:
- GHA 19A Sensitive Moose Range

Specific Mitigation:
- For mitigation for this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document
ESS Group: Mammals and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1:502</td>
<td>C1-Wild:201</td>
<td>Moose Sensitive Area</td>
<td>Site: 27 to 28</td>
<td>E-400330, N-5758121</td>
<td>E-404690, N-5750732</td>
<td>14N</td>
<td>8579m</td>
</tr>
</tbody>
</table>

Potential Effects:

GHA 19A Sensitive Moose Range

Specific Mitigation:

- For mitigation for this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document
ESS Group: Archaeological

**Potential Effects:**
Potential disturbance to Heritage Resources

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

**ESS Group: Water Crossing**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-105</td>
<td>Unnamed tributary of North Pine River</td>
<td>405898</td>
<td>5743687</td>
<td>14N</td>
<td>6.6m</td>
<td>3.5m</td>
<td>Moderate</td>
<td>Marginal</td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-106</td>
<td>North Pine River</td>
<td>406691</td>
<td>574444</td>
<td>14N</td>
<td>1.0m</td>
<td>10m</td>
<td>Moderate</td>
<td>Important</td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-107</td>
<td>North Pine River</td>
<td>406755</td>
<td>5747235</td>
<td>14N</td>
<td>N/A</td>
<td>7m</td>
<td>Moderate</td>
<td>Important</td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-108</td>
<td>South Pine River</td>
<td>406789</td>
<td>5747177</td>
<td>14N</td>
<td>N/A</td>
<td>7m</td>
<td>Moderate</td>
<td>Important</td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-109</td>
<td>South Pine River</td>
<td>407691</td>
<td>5745651</td>
<td>14N</td>
<td>7m</td>
<td>7m</td>
<td>Moderate</td>
<td>Important</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impacted fish movement; Rutting of floodplain

**ESS Group: Groundwater**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-201</td>
<td>Artisan areas with uncertain water quality</td>
<td>Site: 29 to 30</td>
<td>E-4065018</td>
<td>E-407883</td>
<td>N-5748482</td>
<td>N-5745321</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface. Also, wetting the surface environment (ground saturation)

**Specific Mitigation:**
- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

**ESS Group: Crown Land Encumbrance**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Lise-200</td>
<td>Campground – Crown land encumbrance</td>
<td>Site: 31 to 32</td>
<td>E-4065017</td>
<td>E-406521</td>
<td>N-5748442</td>
<td>N-5747528</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential disruption to recreational use activities

**Specific Mitigation:**
- Notify Manitoba Conservation, local authorities and operator regarding construction activities and schedule, and address concerns prior to construction
- Observe municipal and local by-laws and protocols including noise and work scheduling
- Minimize noise, dust and other emissions from work activities and maintain clean and aesthetic appearance of work site
- Provide warning signage for vehicle traffic and public safety

**MAP NUMBER:** 218
ESS Group: Forestry

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-502</td>
<td>C1-RUse-302</td>
<td>Shelterbelt</td>
<td>Site: 33 to 34</td>
<td>E-407349</td>
<td>N-57462265</td>
<td>14N</td>
<td>21 m</td>
</tr>
<tr>
<td>C1-502</td>
<td>C1-RUse-303</td>
<td>Shelterbelt</td>
<td>Site: 35 to 36</td>
<td>E-407350</td>
<td>N-5746207</td>
<td>14N</td>
<td>29 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Removal in area of ROW intersect

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut linear whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

MAP NUMBER: 218
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ESS Group: Archaeological

Sec-Seg ID  ESS ID  ESS Name  Easting  Northing  UTM Zone
C1-S02  C1-Hert-112  Duck River  409566  574471  14N

Potential Effects:
Potential disturbance to Heritage Resources

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Groundwater

Sec-Seg ID  ESS ID  ESS Name  Location  Start  Stop  UTM Zone  Distance
C1-S02  C1-Aqua-201  Artesian areas with uncertain water quality  Site: 29 to 30  E-407883  N-5745321  14N  3670 m

Potential Effects:
Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface, risk, wetting the surface environment (ground saturation)

Specific Mitigation:
- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

ESS Group: Water Crossing

Sec-Seg ID  ESS ID  ESS Name  Easting  Northing  UTM Zone  Channel Width  Wet Width  Fish Habitat Class  Habitat Sensitivity
C1-S02  C1-Aqua-110  Unnamed pond  408377  574487  14N  N/A  N/A  Low  No Fish Habitat
C1-S02  C1-Aqua-111  Unnamed tributary of Garland River  409568  574246  14N  N/A  N/A  Moderate  Marginal

Potential Effects:
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 - July 15

ESS Group: Historic

Sec-Seg ID  ESS ID  ESS Name  Location  Start  Stop  UTM Zone  Distance
C1-S02  C1-Hert-300  Coal Mine  Site: 29 to 40  E-409509  N-5742555  14N  1841 m

Potential Effects:
Potential loss of heritage resources. Pine Creek Group A - Lines - 2662 - 2795

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector

MAP NUMBER: 219
ESS Group: Residential

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Use-201</td>
<td>Remote Cottage – Crown land encumbrance</td>
<td>Site: 37 to 38 E-408955</td>
<td>E-408959</td>
<td>N-5743502</td>
<td>14N</td>
<td>4 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential disruption to recreational use activities

Specific Mitigation:

- Notify Manitoba Conservation, local authorities and operator regarding construction activities and schedule, and address concerns prior to construction
- Observe municipal and local by-laws and protocols including noise and work scheduling
- Minimize noise, dust and other emissions from work activities and maintain clean and aesthetic appearance of work site
- Provide warning signage for vehicle traffic and public safety
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ESS Group: Archeological

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Hert-113</td>
<td>Garland River</td>
<td>410300</td>
<td>541226</td>
<td>14N</td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Hert-114</td>
<td>Garland River</td>
<td>410320</td>
<td>541193</td>
<td>14N</td>
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<tr>
<td>C1-S02</td>
<td>C1-Hert-115</td>
<td>Garland River</td>
<td>410387</td>
<td>541081</td>
<td>14N</td>
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</tbody>
</table>

Potential Effects:

Potential disturbance to heritage resources

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
<th>Potential Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-112</td>
<td>Garland River</td>
<td>410006</td>
<td>574117</td>
<td>14N</td>
<td>10m</td>
<td>10m</td>
<td>Moderate</td>
<td>Important</td>
<td>Habitat loss and contamination from structural foundations &amp; installations; increased erosion &amp; sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplains.</td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-113</td>
<td>Backwater of Garland River</td>
<td>410334</td>
<td>574170</td>
<td>14N</td>
<td>10m</td>
<td>10m</td>
<td>Moderate</td>
<td>Important</td>
<td></td>
</tr>
<tr>
<td>C1-S02</td>
<td>C1-Aqua-114</td>
<td>Backwater of Garland River</td>
<td>410392</td>
<td>574176</td>
<td>14N</td>
<td>6.6m</td>
<td>7.6m</td>
<td>Moderate</td>
<td>Important</td>
<td></td>
</tr>
</tbody>
</table>

ESS Group: Intersection

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Reduse-105</td>
<td>C6</td>
<td>Wagon Road</td>
<td>E-410310 N-5741207</td>
<td>14N</td>
</tr>
</tbody>
</table>

Potential Effects:

Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- If any heritage resources are discovered, Archaeologist to conduct site investigation and recommend any additional mitigation measures

ESS Group: Historic

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S02</td>
<td>C1-Hert-300</td>
<td>Site: 39 to 40</td>
<td>Coal Mine</td>
<td>E-409509 N-5742505</td>
<td>E-410445 N-5740979</td>
<td>14N</td>
<td>1841m</td>
</tr>
</tbody>
</table>

Potential Effects:

Potential loss of heritage resources. Pine Creek Group A - Lines - 2562 - 2795

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector

MAP NUMBER: 220

Version: Final 4.0
ESS Group: Agriculture

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S03</td>
<td>C1-RUSe-100</td>
<td>Gardening</td>
<td>Site: 43 to 41</td>
<td>E-410929</td>
<td>E-411117</td>
<td>N-5740133</td>
<td>N-5739999</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential impact on agricultural practice, health & wellness and economic activity

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Allow gardening activities to continue within the ROW
- Use appropriate signage to address any safety concerns arising from this usage
- Educate gardeners on BMP issues to mitigate concerns proactively

ESS Group: Forestry

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1-S03</td>
<td>C1-RUSe-304</td>
<td>Shelterbelt</td>
<td>Site: 41 to 42</td>
<td>E-410872</td>
<td>E-410877</td>
<td>N-5740244</td>
<td>N-5740236</td>
</tr>
</tbody>
</table>

Potential Effects:
Removal in area of ROW intersect

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, wherever possible
- No damage to vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber