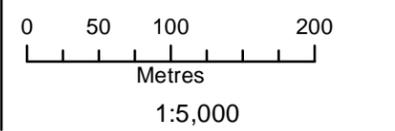




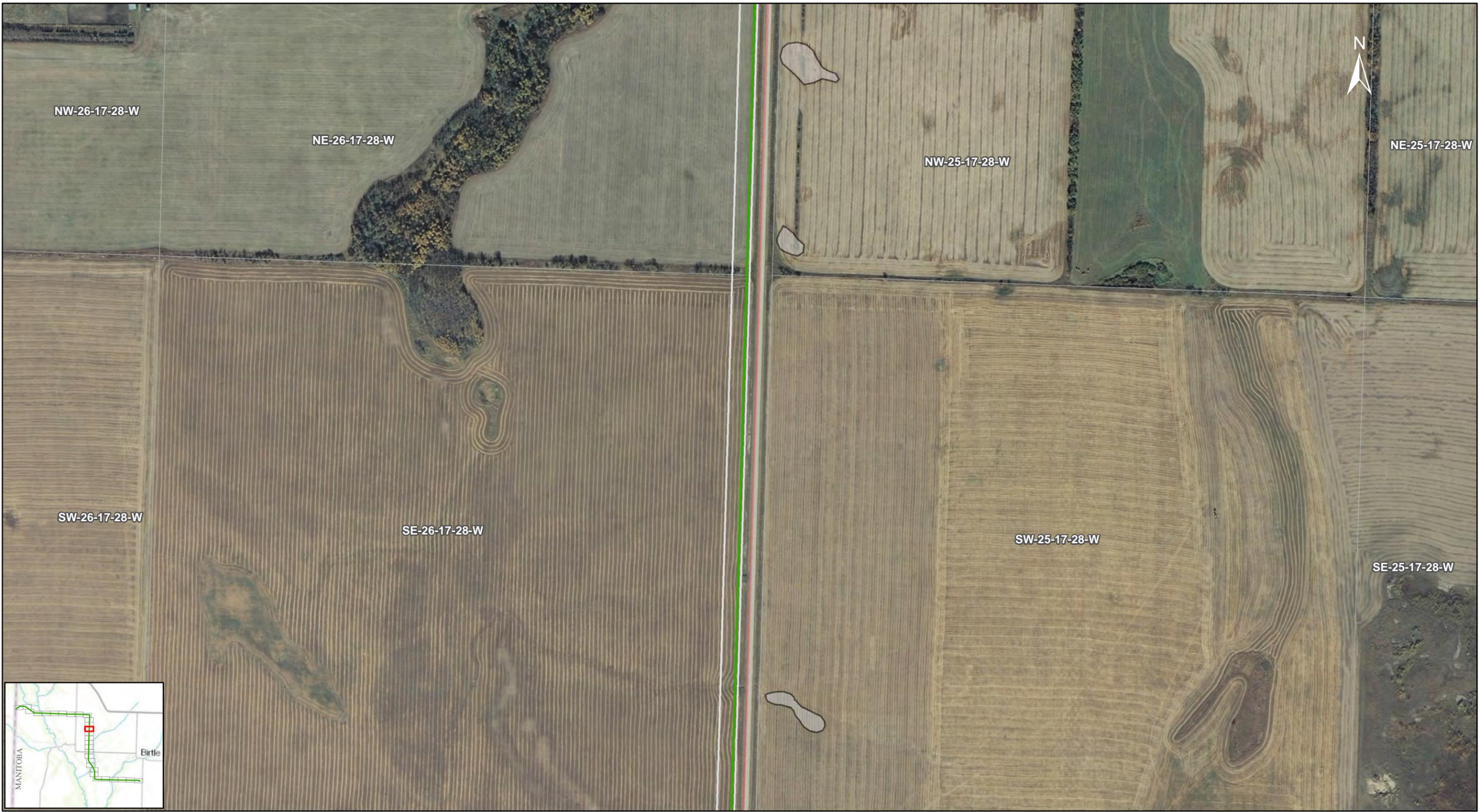
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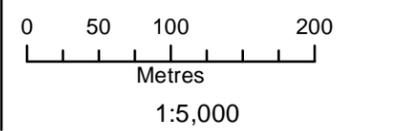
- | Land Base | | Project Infrastructure | |
|-----------|--------------------|------------------------|--------------------------|
| | Land Parcel | | Final Preferred Route |
| | Major Road | | Project Right Of Way |
| | Local Road / Trail | | Sensitive Site (Polygon) |

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

No specific mitigation measures for this map, page intentionally left blank



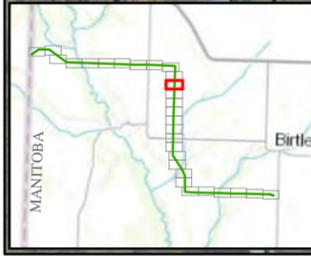
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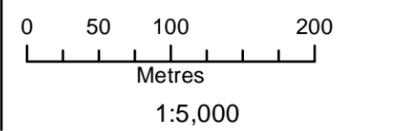
Land Base	Project Infrastructure
Land Parcel	Final Preferred Route
Major Road	Project Right Of Way
Local Road / Trail	Sensitive Site (Polygon)

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

No specific mitigation measures for this map, page intentionally left blank



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Land Base	Project Infrastructure	ESS Start Stop
Land Parcel	Final Preferred Route	Start/Stop Point
Major Road	Project Right Of Way	
Local Road / Trail	Wildlife ESS	
	Birds and Habitat	

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

ESS Group: Birds and Habitat

**Features represented as lines*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
Wild-105	Bird diverter installation area	L11 to L12	E-342297 N-5595877	E-342326 N-5596870	993

Potential Effects:

Higher risk of wire collision, Risk of wire collision is localized to the right-of-way

Specific Mitigation (ID #827):

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans



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0 50 100 200
 Metres
 1:5,000

Land Base	Project Infrastructure	ESS Start Stop
Land Parcel	Final Preferred Route	Start/Stop Point
Major Road	Project Right Of Way	
Local Road / Trail	Wildlife ESS	
	Birds and Habitat	

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

ESS Group: Birds and Habitat

**Features represented as lines*

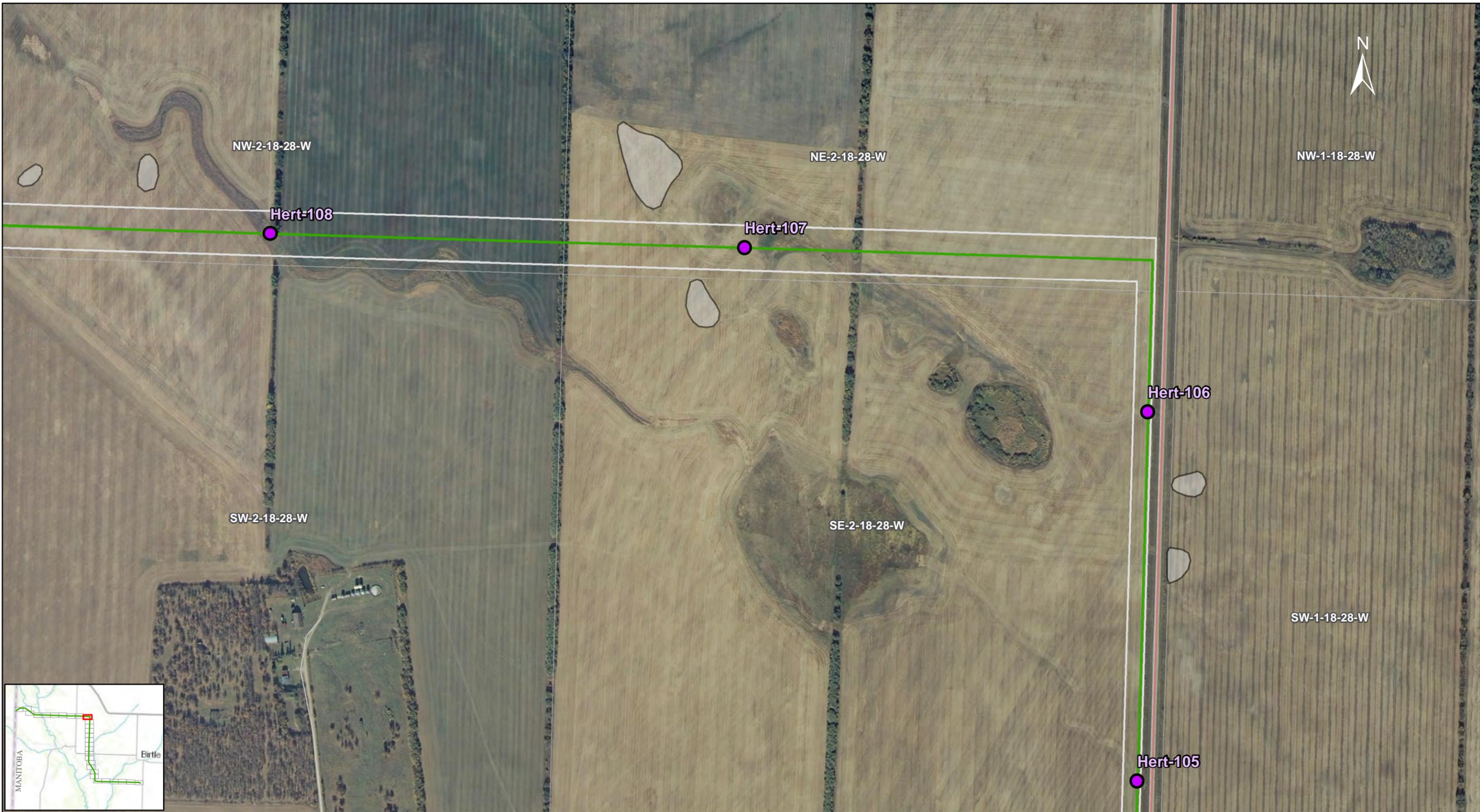
ESS ID	ESS Name	Site	Start	Stop	Distance (m)
Wild-105	Bird diverter installation area	L11 to L12	E-342297 N-5595877	E-342326 N-5596870	993

Potential Effects:

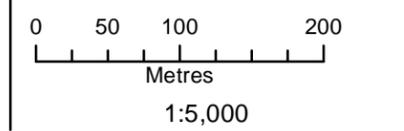
Higher risk of wire collision, Risk of wire collision is localized to the right-of-way

Specific Mitigation (ID #827):

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans



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Land Base	Project Infrastructure	Heritage ESS
Land Parcel	Final Preferred Route	Archaeological
Major Road	Project Right Of Way	
Local Road / Trail	Sensitive Site (Polygon)	

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

ESS Group: Archaeological

**Features represented as points*

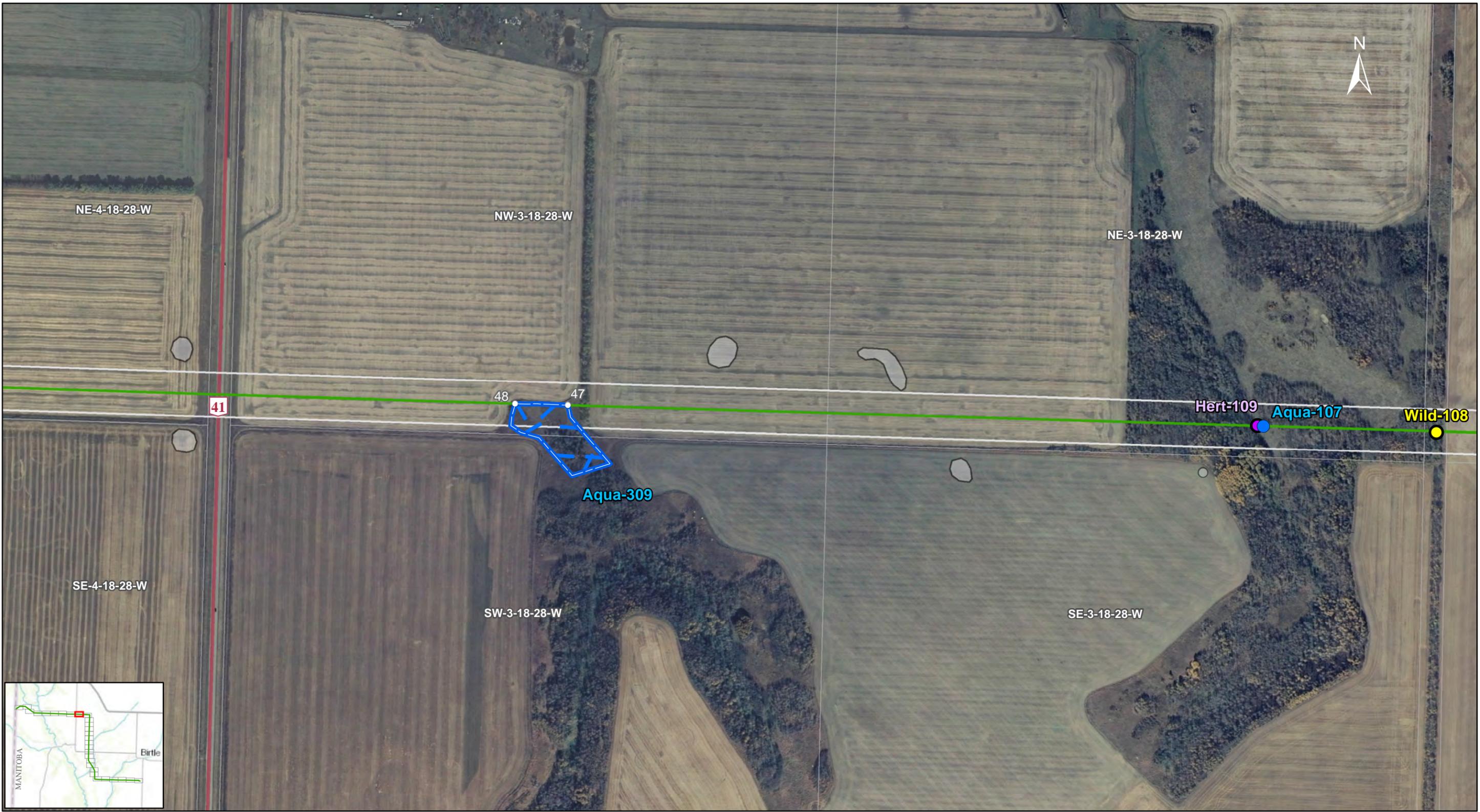
ESS ID	ESS Name	Location
Hert-105	Area of Heritage Potential	E-342341 - N-5597396
Hert-106	Area of Heritage Potential	E-342355 - N-5597895
Hert-107	Area of Heritage Potential	E-341810 - N-5598117
Hert-108	Area of Heritage Potential	E-341167 - N-5598136

Potential Effects:

Impact to a potential heritage resource

Specific Mitigation (ID #322):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during nonfrozen ground conditions
- Confine traffic to established trail
- Hand-clearing or other low disturbance clearing approved by the Project Archaeologist within the area
- Identify and flag a 30m buffer around site, if not within designated riparian buffer
- In the event of a discovery stop work in area and contact the Project Archaeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance
- Should heritage resources be discovered during a pre-construction survey the project Archaeologist may prescribe additional mitigation measures



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0 50 100 200
 Metres
 1:5,000

Land Base	Project Right Of Way	Heritage ESS	Wildlife ESS	ESS Start Stop
Land Parcel	Sensitive Sites	Archaeological	Birds and Habitat	Start/Stop Point
Highway	Sensitive Site (Point)	Water ESS	Water ESS	
Project Infrastructure	Sensitive Site (Polygon)	Water Crossing	Wetland	
Final Preferred Route				

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

ESS Group: Archaeological**Features represented as points*

ESS ID	ESS Name	Location
Hert-109	Area of Heritage Potential	E-340508 - N-5598155

Potential Effects:*Impact to a potential heritage resource***Specific Mitigation (ID #322):**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during nonfrozen ground conditions
- Confine traffic to established trail
- Hand-clearing or other low disturbance clearing approved by the Project Archaeologist within the area
- Identify and flag a 30m buffer around site, if not within designated riparian buffer
- In the event of a discovery stop work in area and contact the Project Archaeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance
- Should heritage resources be discovered during a pre-construction survey the project Archaeologist may prescribe additional mitigation measures

ESS Group: Birds and Habitat**Features represented as points*

ESS ID	ESS Name	Location
Wild-108	Stick nest	E-340751 - N-5598147

Potential Effects:*Habitat loss if nest removed or disturbed***Specific Mitigation (ID #824):**

- Nest tree will be located by Environmental Inspector, georeferenced and marked with flagging tape
- A 200 m setback will be applied during the breeding season (April 30 to July 31) to minimize sensory disturbance during the breeding season
- If nest removal is required, Manitoba Hydro will consult with Sustainable Development Manitoba to develop mitigation measures for the relocation of the nest

ESS Group: Water Crossing**Features represented as points*

ESS ID	ESS Name	Location	Channel Width (m)	Wet Width (m)	Habitat Sensitivity
Aqua-107	Armstrong Creek (Ephemeral)	E-340515 N-5598155	N/A	N/A	L

Potential Effects:*Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat***Specific Mitigation (ID #710):**

- 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 buffers and no machine zones prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway with shrub and herbaceous understory maintained along with trees that do not violate Manitoba Hydro's vegetation clearance requirements
- 7m no machine zone will prohibit equipment in close proximity to the waterbody except at the trail crossing

ESS Group: Wetland**Features represented as polygons*

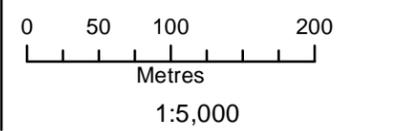
ESS ID	ESS Name	Site	Start	Stop	Distance (m)
Aqua-309	Wetland	47 to 48	E-339572 N-5598184	E-339501 N-5598186	71

Potential Effects:*Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation***Specific Mitigation (ID #218):**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during nonfrozen ground conditions
- Identify and flag buffer by following the edge of agricultural crop
- Remove trees by low ground disturbance methods within buffer
- The application of herbicides is prohibited within buffer



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Land Base	Project Infrastructure	Heritage ESS	Water ESS
Land Parcel	Final Preferred Route	Archaeological	Wetland
Major Road	Project Right Of Way	Wildlife ESS	ESS Start Stop
Local Road / Trail	Sensitive Site (Polygon)	Birds and Habitat	Start/Stop Point

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

ESS Group: Archaeological

**Features represented as points*

ESS ID	ESS Name	Location
Hert-110	Area of Heritage Potential	E-337311 - N-5598255

Potential Effects:

Impact to a potential heritage resource

Specific Mitigation (ID #322):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during nonfrozen ground conditions
- Confine traffic to established trail
- Hand-clearing or other low disturbance clearing approved by the Project Archaeologist within the area
- Identify and flag a 30m buffer around site, if not within designated riparian buffer
- In the event of a discovery stop work in area and contact the Project Archaeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance
- Should heritage resources be discovered during a pre-construction survey the project Archaeologist may prescribe additional mitigation measures

ESS Group: Birds and Habitat

**Features represented as lines*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
Wild-106	Bird diverter installation area	L13 to L14	E-337341 N-5598254	E-337229 N-5598257	111

Potential Effects:

Higher risk of wire collision, Risk of wire collision is localized to the right-of-way

Specific Mitigation (ID #827):

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Wetland

**Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
Aqua-310	Wetland	49 to 50	E-337768 N-5598241	E-337700 N-5598243	68
Aqua-311	Wetland	51 to 52	E-337314 N-5598255	E-337237 N-5598257	77

Potential Effects:

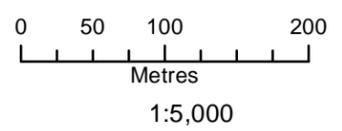
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation

Specific Mitigation (ID #218):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during nonfrozen ground conditions
- Identify and flag buffer by following the edge of agricultural crop
- Remove trees by low ground disturbance methods within buffer
- The application of herbicides is prohibited within buffer



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- | | | |
|-------------------------------|--------------------------|---------------------|
| Land Base | Project Right Of Way | Heritage ESS |
| Land Parcel | Sensitive Sites | Archaeological |
| Local Road / Trail | Sensitive Site (Point) | |
| Project Infrastructure | Sensitive Site (Polygon) | |
| Final Preferred Route | | |

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

ESS Group: Archaeological

**Features represented as points*

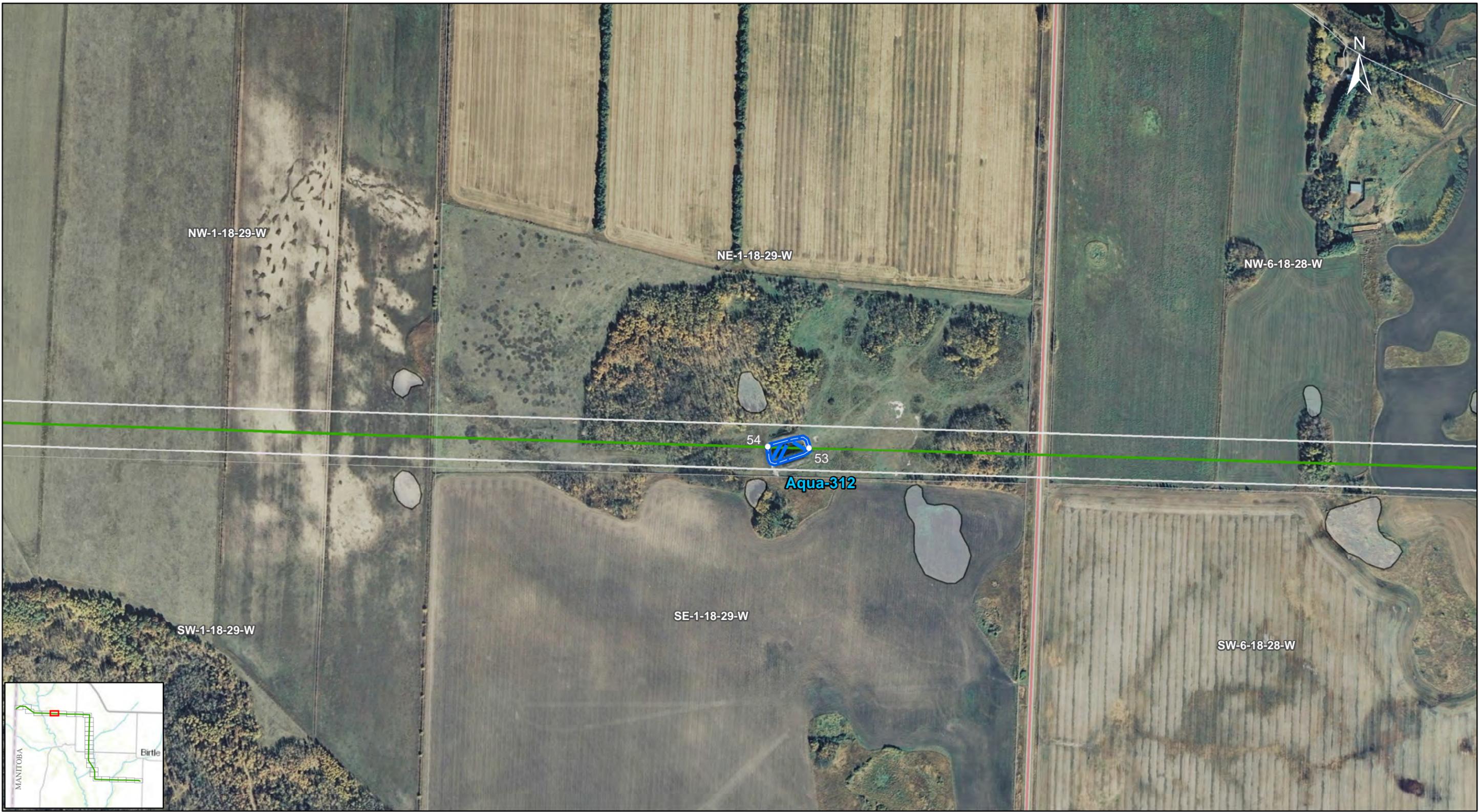
ESS ID	ESS Name	Location
Hert-111	Area of Heritage Potential	E-336165 - N-5598289
Hert-112	Area of Heritage Potential	E-335848 - N-5598299

Potential Effects:

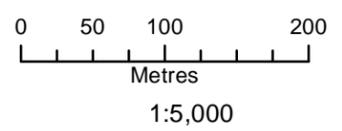
Impact to a potential heritage resource

Specific Mitigation (ID #322):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during nonfrozen ground conditions
- Confine traffic to established trail
- Hand-clearing or other low disturbance clearing approved by the Project Archaeologist within the area
- Identify and flag a 30m buffer around site, if not within designated riparian buffer
- In the event of a discovery stop work in area and contact the Project Archaeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance
- Should heritage resources be discovered during a pre-construction survey the project Archaeologist may prescribe additional mitigation measures



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Land Base	Project Infrastructure	Water ESS
Land Parcel	Final Preferred Route	Wetland
Major Road	Project Right Of Way	ESS Start Stop
Local Road / Trail	Sensitive Site (Polygon)	Start/Stop Point

**Birtle Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site (ESS) Locations**

ESS Group: Wetland

**Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
Aqua-312	Wetland	53 to 54	E-333899 N-5598357	E-333843 N-5598359	55

Potential Effects:

Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation (ID #205):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during nonfrozen ground conditions
- Identify and flag a 30 m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low ground disturbance methods within buffer
- The application of herbicides is prohibited
- Maintain shrub and herbaceous vegetation to the extent possible

