



APPENDIX 6-5

INVASIVE SPECIES MANAGEMENT PLAN

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1. INTRODUCTION

1.1 General Introduction

MKO were commissioned by SSE Renewables (Ireland) Ltd. to prepare an Invasive Species Management Plan (ISMP) to accompany an Environmental Impact Assessment Report (EIAR) and planning application for the Proposed Crumhach Wind Farm in Co. Sligo, hereafter referred to as the 'Proposed Project'.

As detailed in Section 1.1.1 in Chapter 1, for the purposes of this EIAR, the various project components are described and assessed using the following references: 'Proposed Project', 'the Site', 'Proposed Wind Farm', 'Proposed Turbines', 'Proposed Grid Connection Route', 'Existing Wind Farm' and the 'Existing Grid Connection'. As identified in Section 1.1.1, the construction phase includes for the removal of the existing 23 no. turbines and the construction of the proposed 17 no. turbines and associated infrastructure on site. The operational phase includes for the operation of the proposed 17 no. turbines on site, and the decommissioning phase includes for the decommissioning of the proposed 17 no. turbines on site. The full description of the Proposed Project is detailed in Chapter 4.

The Proposed Wind Farm is located on the northwest slopes of the Ox Mountains, located approx. 4.5km south of the village of Dromore West, and approx. 3km southwest of the village of Templeboy in Co. Sligo, at their nearest points.

The Proposed Wind Farm is accessed via the L6309 and L2702 Local Roads off the N59 National Road, travelling in an east-west direction north of the site and the N17 National Road, which runs in a north-south direction to the southeast of the site. The current entrance to the Existing Wind Farm is proposed as the main site entrance, utilising the existing access roads and infrastructure. Upgrades to additional existing site entrances along the L6309 and L2702 Local Roads and the provision of a new site entrance on the L2702 are proposed to access the adjoining lands.

The Proposed Grid Connection Route will be approximately 41.6km in length and will be primarily located within the public road corridor. The Proposed Grid Connection Route will originate at the proposed onsite 110kV substation and run northeast for approx. 130m through a proposed access track before turning continuing east and then north along the L6309 Local Road network for approx. 6.6km. The Proposed Grid Connection Route then follows the N59 National Road east for 26.2km before continuing southeast for 6.9km on the R290 Regional Road. The Proposed Grid Connection Route then joins the R284 Regional Road heading southeast for 2.8km on the L6234 Local Road before heading east onto the L5204 Local Road for 1.8km. From the L5204 the Proposed Grid Connection Route turns left and travels a final 400m into the existing Srananagh 220kV substation

The Proposed Project includes the removal of 23 no. existing turbines and permitted under Sligo County Council and An Coimisiún Pleanála Planning References; 03/619, PL21.204790, 22/291, 97/469 and 02/846. Along with the erection of 17 no. wind turbines with an overall turbine tip height range of 176.6 metres to 180 metres; a rotor diameter range of 133.2 metres to 150 metres; and a hub height range of 105 metres to 110 metres.

The Existing Wind Farm is connected to the national grid via the Existing Grid Connection, which comprises an approx. 19 km underground cabling connection to the Cunghill 110kV substation in the townland of Cunghill, Co. Sligo. The Existing Grid Connection transmits approx. 36.1MW from the Existing Wind Farm. It is proposed to utilise this existing connection to its maximum capacity for the Proposed Wind Farm via the Existing Grid Connection through connection of the onsite control buildings. No upgrade works are required or proposed along the Existing Grid Connection underground cable connection.

It is intended to connect the onsite 110kV substation to the existing Srananagh 220kV substation in the townland of Ballysumaghan, Co. Sligo via 110kV underground electrical cabling. The exact connection node is to be confirmed by EirGrid and subject to change at their request. The underground electrical cabling route is approx. 41.6 km in length and located primarily within the public road corridor, with approx. 130 m located within the Proposed Wind Farm.

Invasive species surveys were carried out by MKO in 2023, 2024 and 2025. The surveys comprised a focussed search for Invasive Species (ISs) listed on the 'Third Schedule' of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011), and species listed on the 'First Schedule' of the European Union (Invasive Alien Species) Regulations 2024 (S.I. 374 of 2024).

Rhododendron (*Rhododendron ponticum*) was recorded within the Proposed Project Site.

This ISMP has been prepared with reference to current legislation and best practice guidelines in the identification, treatment and management of invasive alien species listed on the 'Third Schedule' and the 'First Schedule' of the above-mentioned European Union/Communities Regulations.

The objective of this report is to provide site-specific best practice guideline measures for the control and management of invasive species that could be impacted by the Proposed Project.

1.2

Legislative Framework

Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) and Regulation 17(a)/(b) of the European Union (Invasive Alien Species) Regulations 2024 (S.I. 374 of 2024), include legislative measures to deal with the dispersal and introduction of invasive alien species listed in the Third Schedule and First Schedule of the respective regulations. These regulations are highlighted below.

Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011)

“any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to such plant in the third column of Part 1 of the Third Schedule, any plant which is included in Part 1 of the Third Schedule, shall be guilty of an offence.”

Regulation 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011)

“a person shall be guilty of an offence if he or she has in his or her possession for sale, or for the purposes of breeding, reproduction or propagation, or offers or exposes for sale, transportation, distribution, introduction or release;

- (a) an animal or plant listed in Part 1 or Part 2 of the Third Schedule, (b) anything from which an animal or plant referred to in subparagraph
- (b), can be reproduced or propagated, or
- (c), a vector material listed in Part 3 of the Third Schedule,”

Regulation 17 of the European Union (Invasive Alien Species) Regulations 2024 (S.I. 374 of 2024)

- “(1) A person shall not
- (a) introduce into the State,
 - (b) keep, including in contained holding,
 - (c) breed, including in contained holding,
 - (d) import into, export from or transport within the State, except for the transportation of species to facilities in the context of eradication,
 - (e) place on the market,
 - (f) use, exchange or offer for exchange,
 - (g) permit to reproduce, grow or cultivate, including in contained holding, or
 - (h) release into the environment, an invasive alien species of national concern.

- (2) A person shall not
- (a) import or otherwise introduce into the State,
 - (b) place on the market,
 - (c) use, exchange or offer for exchange, or
 - (d) release into the environment, a vector material.”

1.3

Guidance Documents

The following guidance documents and literature sources were consulted during the preparation of this report:

- TII (2020). *The management of Invasive Alien Plant Species on National Roads*. TII Publications, Transport Infrastructure Ireland.
- Stokes et al. (2004). Stokes, K., O'Neill, K. & McDonald, R.A. (2004) *Invasive species in Ireland*. Unpublished report.
- Actions for Nature 2023-2030, Ireland's 4th National Biodiversity Action Plan.

1.4

Statement of Authority

This report has been prepared by Niamh Leahy (B.Sc.) Ecologist with MKO and reviewed by Rachel Walsh (BSc. Env., MCIEEM). Rachel is a Senior Ecologist with 6 years' experience in professional ecological consultancy and is a full member of CIEEM with a First-Class Honours BSc in Environmental Science and has extensive experience in writing and review of Appropriate Assessment reporting, Ecological Impact Assessment and ELA inputs.

2.

CHARACTERISTICS OF THE PROPOSED PROJECT

The Proposed Project comprises the construction of 17 no. wind turbines and all associated works.

The Proposed Turbines installed within the Proposed Wind Farm will have the following dimensions:

- Overall blade tip height of 176.6 to 180 m,
- Rotor diameter of 133.2 to 150 m,
- Hub height of 105 to 110 m.

The overall layout of the Proposed Project is shown on Figure 4-1 of the EIAR.

Full details of the Proposed Project are provided in Chapter 4: Description of the Proposed Project.

3.

INVASIVE SPECIES WITHIN THE PROPOSED PROJECT SITE

3.1

Rhododendron (*Rhododendron ponticum*)

Rhododendron (*Rhododendron ponticum*) is an evergreen, acid loving shrub introduced to Ireland in the 18th Century. Since its introduction it has established itself as a major weed of acid woodlands in Wicklow, Kerry and Cork. It can withstand considerable shade and thrives as an understorey species in woodland, though it also tolerates open conditions in suitable acid soils. In addition to shading, the foliage of rhododendron contains various compounds that have an allelopathic action on other species (inhibiting their growth) which may further inhibit plants from growing within close proximity.

During field surveys undertaken, Rhododendron was recorded within the Proposed Wind Farm, with records found north of the access track between T11 and T12 and southeast of T6. The locations of this plant within the Proposed Wind Farm are shown on Figure 3-1. Examples of records of Rhododendron plant identified within the Proposed Wind Farm are shown in Plate 3-1.

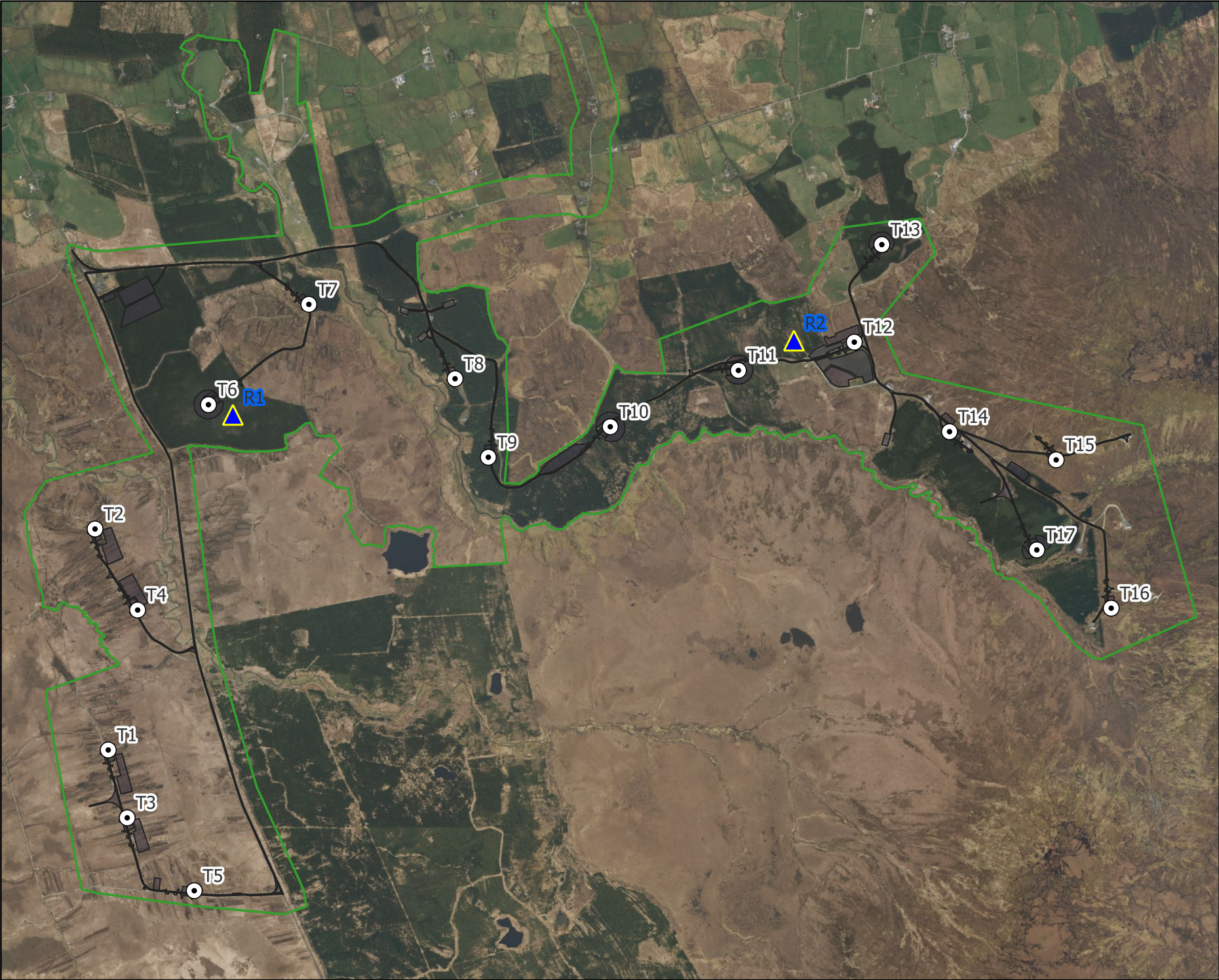
The coordinates of all Rhododendron recorded, as well as size of infestation, are provided in Table 3-1.

Table 3-1 Locations of Rhododendron recorded during the surveys undertaken

Map ID	Description	Coordinates (ITM)
R1	Rhododendron recorded in isolation, within the Site in the northwestern section of the Proposed Wind Farm	544136, 828438
R2	One small bush recorded in isolation, within the Site, in the northeastern section of the Proposed Wind Farm	546968, 828812



Plate 3-1 Third Schedule species Rhododendron (R2) within the Proposed Wind Farm



Map Legend

- EIAR Site Boundary
- Proposed Wind Farm Layout
- Proposed Turbine Locations
- Third Schedule Invasive Species**
 - Rhododendron ponticum



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Drawing Title
Third Schedule Invasive Species Recorded within the Proposed Wind Farm

Project Title
Crumhach Wind Farm, Co. Sligo

Drawn By JK	Checked By RW
Project No. 230841	Drawing No. Figure 3-1
Scale 1:25,000	Date 29/06/2026



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3.1.1 Proposed Management Strategy

Rhododendron plants were recorded in close proximity to the construction footprint of the Proposed Wind Farm and therefore, the following steps will be taken to ensure that this species does not spread into the wider environment, as a result of the Proposed Project. There is no potential for disturbing or spreading this species along the Turbine Delivery Route (TDR) or along the Proposed Grid Connection Route. Therefore, the below applies to plants within the Proposed Wind Farm only.

3.1.1.1 Site Set Up

Prior to the commencement of any works, the following site setup procedures will be carried out:

- A pre-commencement survey for Rhododendron will be undertaken by a fully qualified ecologist to determine the locations and extent of the species within the Proposed Wind Farm and to determine whether there have been any changes in the extent of the infestation since the undertaking of surveys in 2023, 2024 and 2025.
- The locations and extent of Rhododendron within the Proposed Wind Farm will be clearly marked out using hazard tape to ensure they are not disturbed.
- For Rhododendron stands that occur outside of the construction footprint and will not be directly impacted, a 10m buffer zone (Higgins, G.T. 2008) surrounding each stand will also be applied using temporary fencing, to avoid disturbance of potentially contaminated soils.

Due to the young age and small size of the infestations recorded within the Proposed Wind Farm, it is proposed to treat the plant *in-situ*. The recommended option for *in-situ* treatment is to manually remove the upper parts of the plant and apply the Ecoplug method (Willoughby *et al.* 2017) as to avoid spray drift and to minimise the potential for spraying of non-target species. An Ecoplug is a sealed plastic capsule containing a measured dose of granular glyphosate herbicide. The capsule is inserted into a drilled hole in a freshly cut tree stump and hammered into place. Once activated, the glyphosate is released into the stump's vascular system and transported throughout the stump and root system, killing the tree and preventing regrowth. The Ecoplug method is outlined below.

- Cut the tree/plant as close to the ground as possible. This should be carried out from October to early March, outside the bird nesting season.
- The cut material can be stacked and stored onsite, used as firewood or mulched.
- A 30 mm hole will be drilled into the remaining stump and the Ecoplug will be inserted into the hole until it is flush with the top of the stump.
- Where immature plants occur, hand pulling can be undertaken at any time of the year and left to dry out on an impermeable surface.

Where the Ecoplug method is unsatisfactory or where the plant requires removal due to being present within the construction footprint, physical extraction of the root/stump from the ground will be carried out.

- Cut the tree/plant as close to the ground as possible. This should be carried out from October to early March, outside the bird nesting season.
- The root/stump will be removed from the ground using hand tool or an excavator.
- The cut material can be stacked and stored within the Proposed Wind Farm, used as firewood or mulched.
- The root/stump will be placed on an impermeable surface such as palettes or a radon barrier membrane and left to dry out.

Following treatment or eradication of the plant, excavated soil from the site of infestations at the Proposed Wind Farm will still be considered to be contaminated on a precautionary basis. In order to avoid the potential spread of the species, the top layer of soil/peat from the 10m buffer zone will be

removed and if possible, used as back fill within the same infested area or stored outside of the construction footprint within the Proposed Project Boundary. This area will then be then fenced off and will be monitored and if necessary, re-treated following the initial treatment and should continue until no growth is recorded for a period of at least two consecutive years.

Alternatively, the excavated spoil from within the buffer zone can be transported to an offsite waste facility, under license from the NPWS.

3.1.2 **Post Treatment Monitoring**

Ongoing monitoring will be required, with suitable follow-up management in order to control new growth or re-establishment of this species within the infested areas.

Following the initial treatment and completion of the Proposed Wind Farm, the treated areas will be re-surveyed annually and if necessary, re-treated until no growth is recorded for two consecutive years. If invasive plants are found to be re-establishing, they shall be treated as per the measures outlined in this report.

4.

SITE HYGIENE AND BIOSECURITY MEASURES

The following site hygiene and biosecurity measures will be adhered to for the management of invasive species within the Site:

- All works in relation to the invasive species will be supervised by an ECoW.
- All staff will be given a Toolbox Talk, by a suitably qualified person or ecologist, on invasive species removal in relation to Rhododendron and its management on site.
- The contractor will assign a member of their team as Environmental Officer to ensure the management plan is adhered to throughout the proposed works.
- A designated bio-secure area/exclusion zone will be set up at recorded invasive species locations to prevent disturbance in these areas. Invasive species will be marked with hazard tape in order to identify the species prior to vegetation clearance works and to keep it separate from other brash material.
- All machinery should be thoroughly cleaned down prior to arriving on the Site to avoid the potential spread of invasive species from elsewhere.
- Machinery that is used for excavation and onsite removal of invasive material will not be used for any other works until they are fully cleaned down and then visually inspected by a specialist to ensure no fragments of invasive plant material are present.
- Prior to leaving the invasive species exclusion zones, all boots and clothing will be thoroughly brushed down to remove any contaminated material prior to leaving the area.
- As a precautionary measure, machinery will be thoroughly cleaned down before exiting the Site to prevent potential spread of invasive species elsewhere.
- Clean down will be carried out using brushes and shovels and power washing will be avoided insofar as possible. This is to prevent potentially contaminated run-off spreading outside the Site.
- Material used for tracking machinery out of the contaminated areas onsite e.g. plywood will be thoroughly cleaned down under supervision of the ECoW prior to removal off site.
- Any soil and topsoil required on the Site will be sourced from a stock that has been screened for the presence of any invasive species and where it is confirmed that none are present.

5.

CONCLUSIONS

This ISMP has been designed to facilitate the eradication and/or management of First and Third Schedule Invasive Species recorded within the Site. This ISMP has provided a record of the locations of invasive species recorded to date. Infestations of all invasive species identified within the Proposed Wind Farm during surveys undertaken in 2023, 2024 and 2025 will require additional surveys within the relevant growing season prior to commencement of any works to determine if the recorded species have spread further throughout the Proposed Wind Farm.

Provided that the management measures and biosecurity measures outlined within this ISMP are adhered to during construction of the Proposed Project, there is no potential for spread of Third Schedule/First Schedule invasive species.

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