

**A66 Northern Trans-Pennine Project
TR010062**

**2.7 Environment Management Plan
Annex B15 Invasive Non-Native
Species (INNS)**

APFP Regulations 5(2)(a)

Planning Act 2008

**Infrastructure Planning (Applications: Prescribed Forms and
Procedure) Regulations 2009**

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(Applications: Prescribed
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A66 Northern Trans-Pennine Project
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**2.7 ENVIRONMENTAL MANAGEMENT PLAN
ANNEX B15 INVASIVE NON-NATIVE SPECIES**

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CONTENTS

B14	Invasive Non Native Species	1
B14.1	Objectives	1
B14.2	Legislation.....	1
B14.3	Location and Description of Invasive Species	1
B14.4	General Recommendations for Invasive Species Management on Construction Sites.....	2
B14.5	Proposed Invasive Species Management	6
B14.6	Ongoing Monitoring and Management	6

B14 Invasive Non Native Species

B14.1 Objectives

- B14.1.1 The objective of the Invasive Non-Native Species management plan (INNSMP) is to set out the key controls and working methods in order to prevent the spread of invasive weeds and other invasive non-native species through the construction phase of the A66 Northern Trans Pennine Upgrade ('the Project').
- B14.1.2 This expanded essay plan sets out the information that will be included in the management plan in future iterations and highlights key issues for the Project that must be the subject of controls in accordance with the commitments set out in the Environmental Management Plan (EMP) (Application Document 2.7).
- B14.1.3 The INNSMP will be updated and completed in accordance with this essay plan and the EMP by a suitably qualified invasive species specialist and will be subject to consultation (in accordance with the provisions set out in EMP (Application Document 2.7) with the Environment Agency and Natural England.

B14.2 Legislation

- B14.2.1 Legislation covering the handling and disposal of invasive species include the following:
- The Invasive Alien Species (Enforcement and Permitting) Order 2019
 - The Wildlife and Countryside Act (WCA) 1981
 - The Natural Environment and Rural Communities Act (NERC) 2006
 - The Environmental Protection Act 1990
 - The Environmental Protection (Duty of Care) Regulations 1991
 - The Water Resources Act 1991
 - The Landfill (England and Wales) Regulations 2007
 - The Hazardous Waste Regulations 2005
 - The Waste Management Licensing Regulations 1994
 - The Control of Substances Hazardous to Health (COSHH).
- B14.2.2 In addition, because part of the Order Limits interact with a Special Area of Conservation and Site of Special Scientific Interest then the control of invasive species must also consider the relevant legislation associated with these designations. Further information can be found within the Habitats Regulations Assessment Stage 2: Statement to Inform Appropriate Assessment (Application Document 3.6) and Environmental Statement (ES) Chapter 6: Biodiversity (Application Document 3.2).

B14.3 Location and Description of Invasive Species

- B14.3.1 Where records of invasive species were noted during surveys undertaken they are set out in ES Volume 3 Appendix 6.3: Phase 1 Habitat Survey to Appendix 6.22: White-clawed crayfish. The need for further surveys will be established by the Principal Contractor (PC)(s), however it as a minimum an invasive weed species survey (i.e. for

invasive or injurious plants) will be carried out prior to construction, to inform the development of the management plan.

- B14.3.2 In particular, the white-clawed crayfish surveys obtained records of the invasive American Signal Crayfish at the eastern end of the Project, which poses a significant risk to the white-clawed crayfish confirmed as present in watercourses associated with the River Eden catchment at the western end. This will require specific measures as set out below to prevent spread.
- B14.3.3 Where invasive weeds were noted during Phase 1 Habitat surveys, they are documented and recorded on ES Figure 6.3: Phase 1 Habitat and Terrestrial Invertebrate Survey of the Environmental Statement (Application Document 3.3). The invasive non-native plant species noted during surveys included the WCA Schedule 9 species giant hogweed, Japanese knotweed and Himalayan balsam (*Impatiens glandulifera*) which were both associated with the banks of the river Eamont.
- B14.3.4 This section will be updated to set out records of the confirmed locations of invasive weeds within each of the schemes, and those recorded in pre-construction surveys.
- B14.3.5 A detailed location plan will be created, identifying all locations of Invasive Non-Native Species recorded through the surveys. This plan will be made available through team box talks and on-site information, to ensure all workers are aware of the locations where specific biosecurity measures apply.

B14.4 General recommendations for invasive species management on construction sites

- B14.4.1 Works will follow good practice measures detailed in the following regulatory guidance documents:
- Department for Environment, Food and Rural Affairs (DEFRA) Environmental Management – *Guidance, 'Japanese Knotweed, Giant Hogweed and Other Invasive Plants'* (Department for Environment, Food and Rural Affairs, 2013)¹
 - Environment Agency, *Managing Japanese Knotweed on Development Sites - The Japanese Knotweed Code of Practice* (Environment Agency, 2012)²
 - Environment Agency, *Invasive Weeds – Guidance for the control of invasive weeds in or near water* (Environment Agency, 2003)³.

¹ Department for Environment, Food and Rural Affairs (2013) Environmental Management – Guidance, 'Japanese Knotweed, Giant Hogweed and Other Invasive Plants', available at: <https://www.gov.uk/japanese-knotweedgiant-hogweed-and-other-invasive-plants>

² Environment Agency (2013) *Managing Japanese Knotweed on Development Sites - The Japanese Knotweed Code of Practice* (version 3)

³ Environment Agency (2013) *Invasive Weeds – Guidance for the control of invasive weeds in or near water*

Japanese knotweed

- B14.4.2 This species has been noted close to the Order Limits. If confirmed as present within any construction working area, the following general recommendations will apply.
- B14.4.3 A 7m horizontal construction exclusion zone should be implemented around a stand of Japanese knotweed, unless otherwise advised by a specialist and suitably-qualified contractor. This is considered to be the maximum horizontal distance that Japanese knotweed rhizomes are likely to cause infestation of the soil. The Japanese knotweed stand and construction exclusion zone should be isolated with fencing and a restricted access sign attached. There is no specified vertical limit of potential rhizome infestation however, the rhizome rarely penetrates deeper than 3m.
- B14.4.4 Long-term herbicide treatment is advised as the first line of treatment in advance of construction works, if programme allows. However, if it needs to be removed during construction that may not be feasible, in which case a specialist contractor will be appointed to advise on the most appropriate techniques for treatment and/or removal within the timescales required. Any excavations from within the 7m buffer area would therefore still be considered as controlled waste and the advice of a suitably qualified contractor should be sought.
- B14.4.5 Supervision of excavations by suitably qualified contractors to advise whether the material is contaminated with Japanese knotweed. If Japanese knotweed material is present, the suitably qualified contractor should advise of appropriate treatments, which may include those described below:
- On-site burial of Japanese knotweed contaminated material. Burial would be required to a depth of at least 5m and covered with a root barrier membrane, or as otherwise advised by a suitably qualified contractor.
 - Creation of a bund for the storage and long-term treatment of Japanese knotweed contaminated material.
 - Stockpiling contaminated soil and replacement in situ following the works (i.e. to ensure contaminated soil is not relocated elsewhere allowing the Japanese knotweed to spread). Stockpiles of contaminated soil should be placed on a geotextile layer, clearly indicated, isolated and contained, and treated with a suitable herbicide during the temporary storage period. The replaced material should be treated with a suitable herbicide for a specified period of time through a Landscape Maintenance Contract.
 - Off-site disposal of contaminated soil to a licensed landfill operator and with adequate capacity to receive the controlled waste. This is the least preferred and least sustainable option.

Giant hogweed

- B14.4.6 As well as being an invasive species, the stems, edges and undersides of the leaves of giant hogweed bear small hairs containing poisonous

sap, and the slightest touch causes painful blistering and severe skin irritation. The demarcation and control of giant hogweed is therefore both a health and safety issue as well as an invasive species management process.

- B14.4.7 The aim should be to kill the plant or prevent flowering, repeated treatment may be necessary during the growing season. Digging out the crown just below ground prevents regrowth and will provide good control.

Aquatic invertebrate invasive species

- B14.4.8 Strict biosecurity measures will be included to cover workers, plant and equipment working in/or near watercourses, that adhere to the check-clean-dry protocol. In addition to the control measures set out below, pre-construction surveys will be undertaken of all areas within the construction footprint to identify the location of any invasive species not already identified.
- B14.4.9 Crayfish plague is a disease caused by a fungal-type organism called *Aphanomyces astaci*, which attacks the soft tissue of crayfish. Signal crayfish are carriers of the plague, but are usually immune themselves. However, native white-clawed crayfish are susceptible and, once introduced, a population can be decimated in only a few weeks.
- B14.4.10 In optimal conditions the spores of the crayfish plague are able to survive up to 16 days on vectors such as boots or vehicles that have come into contact with contaminated water. Therefore, it is imperative that no cross-contamination occurs between the watercourses to the eastern end of the Project where the signal crayfish is present, and the those at the western end hosting populations of white clawed crayfish.
- B14.4.11 General control measures that will be included within the full Invasive Species Management Plan are as follows:
- Details of invasive species shall be included within the project induction and toolbox talks given to operatives (including the identification of sites where Himalayan balsam, signal crayfish and other invasive non-native species have been recorded in physical survey and eDNA monitoring). Any early regrowth shall be reported and dealt with as per the methodology detailed below and within the Invasive Species Management Plan. If the cells have been completed when new growth is discovered this shall be excavated and taken for offsite disposal at licenced facilities.
 - No water will be transferred between catchments, to prevent the accidental transfer of either signal crayfish or crayfish plague.
 - Assurance should be sought from external contractors that, where possible, machinery is not being brought onto site immediately from works on external waterbodies. Machinery should be dry and free of mud or debris from all previous sites.
 - Vehicles and plant used on the schemes at the eastern end of the Project (Bowes Bypass, Cross Lanes to Rokeby, Stephen Bank and Carkin Moor and A1(M) Junction 53 Scotch Corner) should not be

subsequently moved and used on any of the other schemes, without first being subject to full disinfection.

Good site practice

B14.4.12 Good site practice and hygiene should ensure the following:

- All areas of Japanese knotweed, Himalayan balsam and Giant hogweed not within the physical working areas to be demarcated to ensure no accidental spread or contact.
- All vehicles and footwear entering working area to be clean on arrival.
- Vehicles or staff required to enter a 7m Japanese knotweed construction exclusion zone, or areas previously infested with Himalayan balsam, should be thoroughly inspected and boots or vehicles cleaned before moving outside of the working area.
- Areas within 7m of Japanese knotweed locations, or areas previously infested with Himalayan balsam that are likely to be disturbed by vehicles should be protected by a root barrier membrane to reduce spread and likelihood of heavy contamination of vehicles and footwear.
- Vehicles used to transport infested soils must be thoroughly inspected and appropriately cleaned in a designated area before being used for other work.
- The designated cleaning area must be within an area of hard standing or covered by a root barrier membrane that can contain and collect the material washed off. The cleaning area must be located so as not to allow material to contaminate drains, ditches or watercourses.
- The most appropriate methods of cleaning should be determined by a suitably qualified contractor following a visual inspection. The suitably qualified contractor should supervise the cleaning, which should pay particular attention to tyre treads, wheel arches and any other areas that might retain rhizomes or seeds.
- The material left within the designated area after vehicles have been cleaned must be contained, collected and disposed of along with other contaminated material. For Himalayan balsam this needs to be done in accordance with the licencing requirements in The Invasive Alien Species (Enforcement and Permitting) Order 2019.
- All staff should be aware of what Japanese knotweed (including regrowth of Japanese knotweed following treatment with glyphosate) and Himalayan balsam look like and what their responsibilities are. Awareness training should be undertaken in the form of Tool Box Talks covering invasive species.
- All staff must be made aware of the health and safety risks, and specific procedures for dealing with, Giant hogweed.
- An Environmental Clerk of Works (ECoW) should undertake pre-construction invasive species survey and update the Invasive Species Management Plan accordingly. The ECoW should oversee the implementation of the Invasive Species Management Plan on site.

Everyone working on site should clearly understand the role and authority of the ECoW, which will be included within the site induction.

B14.5 Proposed invasive species management

B14.5.1 This section will describe, for each of the invasive species identified at each of the locations it is present, specific measures to be implemented to ensure that there is no spread of the species. This may include production of species specific method statements for any particularly sensitive locations or construction activities.

B14.5.2 This is likely to include, but not be limited to:

- Specific storage and management procedures for vegetation cleared and excavated materials
- Biosecurity measures to be implemented when moving people, plant or equipment between locations
- Specific controls on movement of vehicles between locations (e.g. prevention of sharing of plant from the eastern schemes to western schemes to prevent spread of signal crayfish)

B14.6 Ongoing monitoring and management

B14.6.1 This Invasive Non-Native Species Management Plan will be regularly monitored by the PC, as advised by a suitably qualified/experienced contractor (i.e. one with appropriate accreditation or trade body membership such as the Invasive Non-Native Specialists Association), and the ECoW throughout construction alongside species specific method statements to be developed by the PC. Detailed measures will be included within the regular audits as specified in the EMP.

B14.6.2 Site workers and the ECW will remain vigilant for the new growth of invasive species within and in close proximity to the works, and this Invasive Non-Native Species Management Plan will be updated accordingly.

B14.6.3 This section will include any specific monitoring that is required post-treatment, if any locations are identified where specific treatment or management methods are required.