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Invasive Non-Native Species survey for proposed new prison on land adjacent to HMP Gartree, Gallow Field Road, Market Harborough, Leicestershire

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1	11/05/2021	n/a
2	12/05/2021	Figure 3 correction
3	16/08/2021	Title change, document control, updated drawings. Second survey visit added.

Non-technical summary

Introduction

CGO Ecology Ltd was instructed by Mace Ltd, on behalf of the Ministry of Justice, to conduct an Invasive Non-Native Species (INNS) survey to the south of HMP Gartree, Market Harborough, Leicestershire. The Ministry of Justice proposes a development as part of its New Prisons Programme on a 25ha site (SP 7052 8873). The Local Planning Authority (LPA) is Harborough District Council. A Preliminary Ecological Appraisal by Ramboll recommended an INNS survey.

Methodology

A thorough walkover was conducted by Dr Chris Gleed-Owen MCIEEM on 4th May and 5th July 2021, to identify any stands of invasive plants and animals, especially along watercourses, ditches, hedgerows, field boundaries, and disturbed areas. The locations, species, and stand sizes of all INNS plants were recorded. The locations and species of any INNS animals were recorded.

Results

Few INNS were recorded. The only Wildlife and Countryside Act 1981 (as amended) Schedule 9 species (illegal to release/plant or allow to spread) are several isolated wall cotoneaster shrubs on the northern fringes of the site. Pheasant was recorded, which is likely to be added to Schedule 9 by Defra soon. The only other notable INNS plant was ground-elder, which is present on the Welland Avenue verge. There are rows of non-native black poplar, Lombardy black poplar and Leyland cypress on site, but no other non-native trees were observed. Aside from agricultural crop species and 'weeds', the site has a low occurrence of INNS and other non-native species.

Conclusions and mitigation recommendations

A Biosecurity Plan must be in place throughout the development process, to prevent accidental or deliberate import or spread of INNS. Existing INNS stands must be dealt with appropriately, and eradicated where possible.

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1. Introduction

CGO Ecology Ltd was instructed by Mace Ltd, on behalf of the Ministry of Justice, to conduct an Invasive Non-Native Species (INNS) survey to the south of HMP Gartree, Market Harborough, Leicestershire. The Ministry of Justice proposes a development as part of its New Prisons Programme on a 25ha site (SP 7052 8873). The Local Planning Authority (LPA) is Harborough District Council.

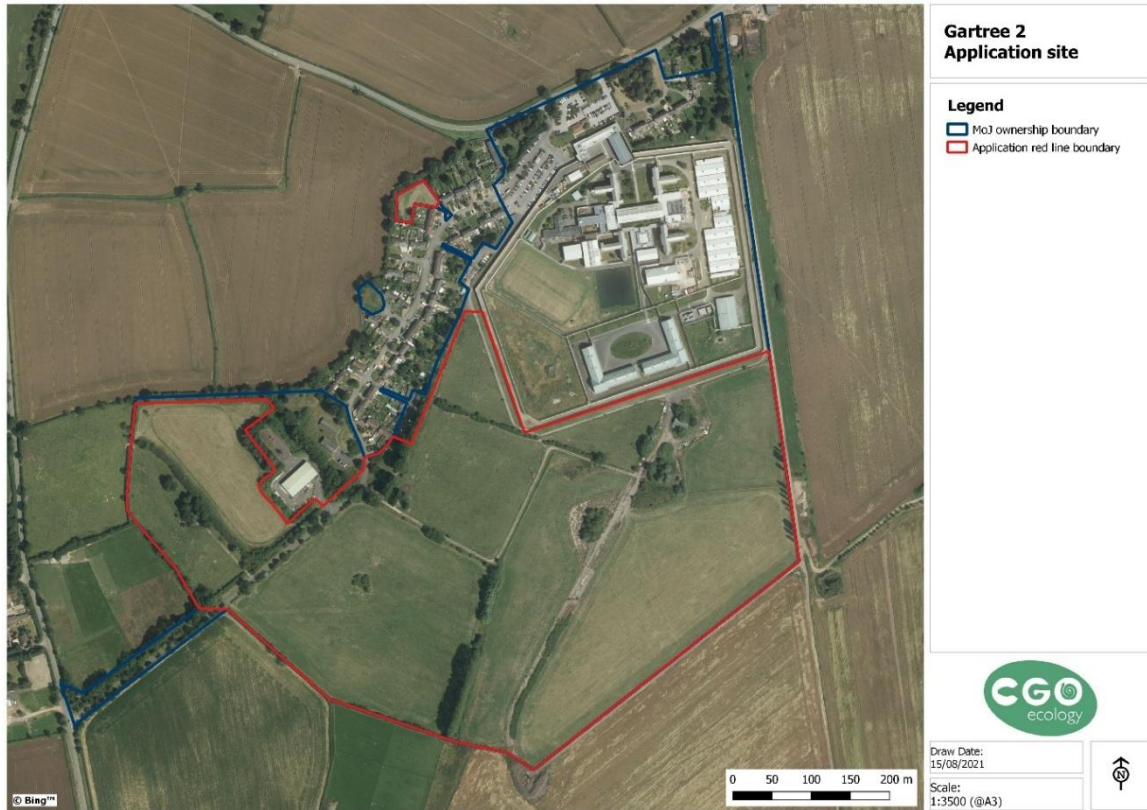


Figure 1 – Development site boundary (red line) and MoJ ownership boundary (blue line).



Figure 2 – Proposed development and landscaping plan, with habitat areas for BNG purposes, produced by Pick Everard.

The Wildlife and Countryside Act 1981 (as amended) makes it illegal to plant, release, or allow to escape and spread, any plant or animal species listed on Schedule 9. Part I lists animals that are established in the wild, such as grey squirrel (*Sciurus carolinensis*). Part II lists plants that are established in the wild, such as the highly-damaging Japanese knotweed (*Fallopia japonica*), the fast-spreading riparian herb Himalayan balsam (*Impatiens glandulifera*), and uncontrolled ornamental shrubs such as rhododendron (*Rhododendron ponticum*). Many introduced species of trees and shrubs that are common in the British landscape are not considered invasive. The Schedule 9 list is regularly updated by Defra.

A Preliminary Ecological Appraisal (PEA) conducted by Ramboll (Molesworth, 2020) recommended a survey to map all stands of INNS plants on site.

2. Methodology

A thorough walkover was conducted by Dr Chris Gleed-Owen MCIEEM on 4th May 2021, to identify any stands of INNS plants, especially along watercourses, ditches, hedgerows, field boundaries, and disturbed areas. The locations, species, and stand sizes of all INNS plants were recorded. The locations and species of any INNS animals were also recorded. A second visit was made on 5th July 2021, in case any annuals such as Himalayan balsam had appeared.

The surveyor was Dr Chris Gleed-Owen BSc (hons) PhD MCIEEM, Director & Principal Ecologist of CGO Ecology Ltd, an ecological consultant since 2008 (13 years. Survey licences: CL09 great crested newt (GCN, *Triturus cristatus*), sand lizard (*Lacerta agilis*), smooth snake (*Coronella austriaca*), natterjack toad (*Epidalea calamita*), Roman snail (*Helix pomatia*). Previous mitigation licence-holder for smooth snake and/or sand lizard (6), and badger (*Meles meles*) sett closure (3). Experienced surveyor of Phase 1 habitats, National Vegetation Classification (NVC), flora (FISC level 4 botanist), vertebrates, and invertebrates.

The maps in figures 1 and 3 were drawn by GIS technician Jack Parker.

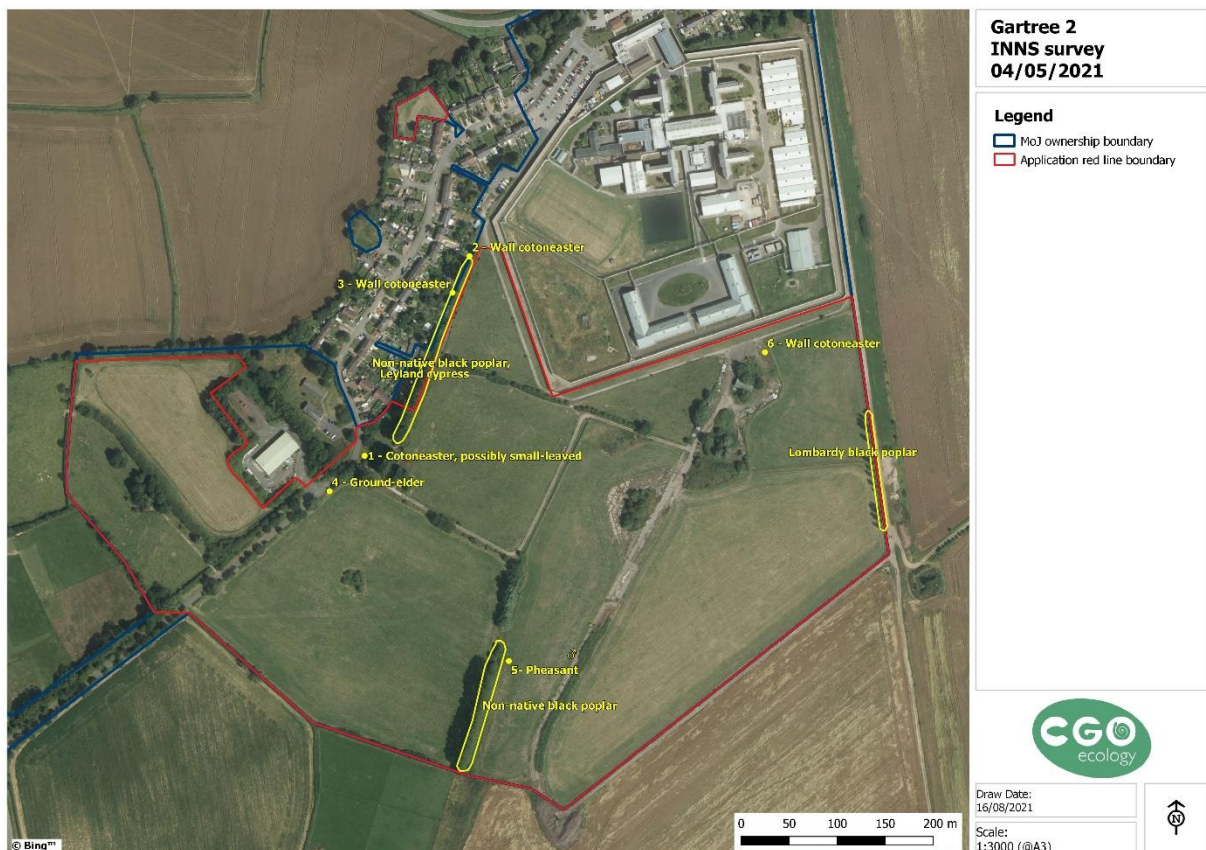


Figure 3 – INNS survey results in relation to proposed development boundary (red line) and wider MoJ ownership (blue boundary).

3. Results

Few INNS were recorded on the first visit, and no additional species or stands on the second. The only Schedule 9 INNS (illegal to release/plant or allow to spread) are several isolated wall cotoneaster shrubs on the northern fringes of the site.

Point 1 on figure 3 is a cotoneaster which appears to be small-leaved cotoneaster (*Cotoneaster microphyllus*). It is only a single, small plant near to houses and the road, therefore probably a garden escape. Points 2, 3, and 6 are wall cotoneaster (*Cotoneaster horizontalis*). Points 2 and 3 are to the rear of residential gardens, and therefore garden escapes. Point 2 is a single bush of 1.5m x 2m in area; point 3 is a stand of 5m x 8m to the south of a derelict Bensons Beds trailer. Point 6 is a cluster of at least four small plants in a disturbed area of rubble and rough grass (former RAF Market Harborough hardstanding) to the south of HMP Gartree. Both cotoneaster species are on Schedule 9 part II.

Point 4, ground-elder (*Aegopodium podagraria*), is the only other notable INNS plant recorded. It is present on the south verge of Welland Avenue, in a stand extending around 30m long, opposite the prison supply yard entrance. Ground-elder is fast-spreading, and could infest whole blocks of woodland and hedgerow in time. Whilst not on Schedule 9, it is a problematic INNS.

There are rows of non-native black poplar (*Populus nigra nigra*), Lombardy black poplar (*Populus nigra nigra* 'Italica' cultivar) and Leyland cypress (*Cupressus leylandii*) on site. These widely-planted introduced tree species are not considered INNS, as they are easy to remove if so desired. No other non-native trees were observed.

There are also a few introduced shrubs on the northern fringes of the site. Along the rear garden fence-lines to the northwest of the site, between points 1 and 2, are a range of garden escapes and introduced shrub hedges. South of HMP Gartree, adjacent to point 6, is a single bush of dogwood (*Cornus* sp). It may be native dogwood (*Cornus sanguinea*) or the North American red osier dogwood (*Cornus sericea*), but was not fully in leaf at the time of survey.

Aside from arable crop species such as maize (*Zea mays*) and agricultural 'weeds', the site has a low occurrence of INNS and other non-native species overall. Most notably, there are no occurrences of the most damaging plants such as Japanese knotweed and Himalayan balsam, and those INNS which were recorded are small isolated stands that would be easy to eradicate.

No current Schedule 9 animals were seen, but ring-necked pheasant (*Phasianus colchicus*) was recorded (point 5 on figure 3). Pheasants are a common sight in the British countryside, but the most common species is not currently listed on Schedule 9, because of its putative economic importance. Ring-necked pheasant is likely to be added to Schedule 9 by Defra soon, however. Grey squirrel was not seen, but could also be present.



Plate 1 – Wall cotoneaster, point 1 on figure 3.



Plate 2 – Wall cotoneaster, point 2 on figure 3.



Plate 3 – Wall cotoneaster, point 3 on figure 3.



Plate 4 – Ground-elder, point 4 on figure 3.



Plate 5 – Ring-necked pheasant, point 5 on figure 3.



Plate 6 – Wall cotoneaster, point 6 on figure 3.

4. Conclusions and mitigation recommendations

The MoJ has confirmed that it will undertake an Eradication Plan in autumn 2021 to remove the existing cotoneasters. A Biosecurity Plan must be in place throughout the development process, to prevent accidental or deliberate import or spread of INNS. This needs to ensure that all contractors, site visitors, and suppliers are aware of the concept of biosecurity and invasive species. Toolbox talks should include an introduction to INNS.

As many INNS plants and animals inhabit waterbodies and wet areas, any work on ditches, streams, and ponds must involve a check-clean-dry policy. This means that all boots, clothes, equipment and vehicles must be checked, cleaned and dried when coming from another site with wet habitats, and before going to another site with wet habitats. Even small fragments of plant material or mud can transport INNS between sites, and begin new infestations.

Tree workers must clean chainsaws and other tools with suitable disinfectants before and after work on site, to prevent the spread of fungal and bacterial tree pathogens.

The stands of cotoneaster (points 1, 2, 4, and 6 on figure 3) should be removed whilst still small and manageable. The stand of ground-elder on Welland Avenue will also be targeted for control and eradication.

The site must be monitored regularly throughout the development process, to check for INNS.

5. References

Molesworth, J. (2020) *Raven. Preliminary Ecological Appraisal*. Ramboll, Exeter.