

Wentworth Polytunnel Proposals

Ecology Survey and Mitigation, October 2021

1 Introduction

This ecology statement is in relation to the polytunnel installation at the National Trust's Wentworth Castle Gardens property. It outlines the habitats and species known from the project site, makes a judgement on expected impacts on habitats and species, and proposes mitigation to minimise any adverse impacts. The site was surveyed by Stephen Morley, Ecologist, working for the National Trust, on the 15th April and 29th September 2021, and National Trust records of the property's habitats and species were reviewed.

2 Application Site

The proposed polytunnel location plan is shown in Appendix 1. Please refer to the planning application for full details of polytunnel design.

3 Habitats present

The southern part of the walled garden site, the "Boulers Yard", was surveyed on 30 April 2021. A Phase 1 habitat map and report for the site is shown in Appendix 2, in summary the southern half is disturbed, rough grassland with encroaching scrub. The southern approximately half of the walled garden is separated from the northern half by a very tall conifer hedge.

The proposed polytunnel location is situated in the northern half of the walled garden, which is the "working half", and filled with greenhouses, polytunnels, cold frames, storage units, bee hives, equipment and piles of building materials such as bricks being stored for future use. The northern half has no mappable habitats *per se*, and is classed as built-up in Phase 1 terms, although there are some narrow strips of rough grassland between some of the polytunnels, and areas of ruderal vegetation. The proposed polytunnel site is within the footprint of old greenhouse bases, with short brick walls 4-5 bricks high, modified substrate, and dominated by ruderal vegetation including bramble, nettle, rosebay willowherb and some tree seedlings. See photos Appendix 3. Adjacent to the eastern wall are a few mature pear trees.

There are no natural or semi-natural habitats likely to be impacted by the new polytunnels. Impact will be limited to areas previously used for greenhouses and are highly modified ruderal vegetation. The walled garden walls nearby (50m away) are some of the most significant man-made features to be considered, as are the buildings, some of which show signs of occupation by bats. Piles of bricks will also be considered. Impacts are judged to be limited to those on species.

4 Protected species assessment of presence

Badger: *Meles meles* setts have been well recorded from the Estate as a whole, with 15 setts recorded in 2009, of which 3 were active. No setts have been recorded within the walled garden, and there are no current signs of badger activity within the garden. It is assumed that badgers are not present within, or using, the walled garden.

Great crested newts: *Triturus cristatus* have been recorded from the Estate as a whole, particularly the Serpentine located c.380m to the east, and Keepers pond located c.600m to the south west. No newts have been recorded from the walled garden and there are no waterbodies present. It is assumed that great crested newts are not present within the walled garden.

Bats: Several species of bats are known to be present on the Estate. Within the Walled Garden, Garden House at the NE corner of the garden had evidence of bats (droppings) 2019, with an old record for brown long eared from c. 2005. Recent bat surveys of Garden House were conducted in 2019 prior to reroofing works. Eight bat roosts used by four bat species (common pipistrelle, soprano pipistrelle, brown long-eared bat and whiskered bat) have been recorded from Garden House during either visual inspections or nocturnal surveys. No maternity roosts have been recorded, however, the presence of hibernating bats cannot be ruled out. The building is considered to be of local importance to roosting bats. Garden House is c.23m from the closest point of the proposed polytunnel.

The garden walls were identified as high bat roost suitability, especially the “heated walls” (eastern), in 2003. The walls are c.50m away in either direction east and west from the proposed polytunnel site. Survey by bat consultants in 2019 of the western wall was undertaken prior to repointing and repair. No bat roosts were found in the western wall, but moderate bat activity was recorded of the following bats flying around: common pipistrelle, (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus* sp) and *Myotis* species.

A survey by bat consultants of the eastern and western walls was conducted in 2021. No bats were recorded using any of the walls for roosting, although bat activity in the area recorded presence of common pipistrelle, soprano pipistrelle, noctule and brown long-eared bats. The walls are well vegetated with many openings and are likely to be used by crevice nesting birds.

Birds

No birds were recorded during walkover surveys. The estate is well recorded ornithologically, with 84 species listed as of 2003. Many of the species are recorded from the woodlands and the wider estate, including the Serpentine environs. Records for birds using the walled garden are not differentiated from general “garden” or woodland records. The presence of many common garden birds can be assumed for the walled garden, including species such as blackbird, wren, swallow, great tit, blue tit and robin.

There are three species for which the estate is regarded as the main breeding stronghold in the Barnsley district, and which are recorded from the “gardens”, namely hawfinch, nuthatch and lesser-spotted woodpecker. Additionally, the following Biodiversity Action Plan (BAP) species are recorded from the estate and quite likely use the walled garden: common bullfinch, song thrush, house martin, house sparrow, starling

The garden wall was identified as suitable for crevice nesting birds in 2019.

Reptiles

There are historic records of three species of reptile from the estate, including adder, grass snake and common lizard. Most confirmed records are from the Serpentine River and adjacent woodlands area. The presence of three species of reptile would make the estate a key reptile site within wider national criteria.

However, there are also anecdotal records of both grass snake and adder from the walled garden. Historic and recent observations suggest the presence of at least one of the snake species (grass snake) in the southern section of the walled garden as late as summer 2020 (NT Ranger, *pers comm*). A suspected slow worm was found by visitors in summer 2021 on the road to the east of the walled garden (NT General Manager *pers comm*), but the ID was unconfirmed.

Key areas suitable for reptiles include the rubble and building footings in the south east corner of the Walled Garden which may be used for shelter and hibernation, and areas of bramble with open glades may be used for shelter, feeding and basking. In order to try and confirm reptile presence, several pieces of suitable reptile sheeting were laid in the southern part of the walled garden in summer 2021, with no recorded use by reptiles.

All reptiles are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill or injure a reptile.

4 Impact of works and mitigation required

Impact on Habitats

There are no natural or semi-natural habitats likely to be impacted by the new polytunnels. Impact will be limited to areas previously used for greenhouses and are highly modified ruderal vegetation in a built-up setting. No significant impacts.

Impact on protected and significant species

Badgers

It is assumed that badgers are not present within, or using, the walled garden. No impact is anticipated, and no mitigation is proposed.

Great Crested newts

Great crested newts (GCN) have not been recorded from the walled garden, and there are no suitable waterbodies present. There are piles of bricks and spoil in the walled garden which could offer suitable hibernation sites, but not on the proposed polytunnel site itself. Confirmed ponds with GCN presence are 380 and 600m away, and so it is very unlikely (but not impossible) that they will travel as far as the walled garden for hibernation purposes. The risk of impacting GCN is therefore **low**.

Great Crested newt mitigation

- Staff erecting the polytunnel should be made aware of the potential for GCN to be present

- Any vegetation or rubble to be cleared should be done carefully, by hand, and if any GCN are encountered work should stop and a suitably qualified ecologist should be contacted to advise on how to proceed

Birds

There are few suitable habitats for nesting birds on the proposed polytunnel site, restricted to a small patch of bramble and some tree saplings. The chance of nesting birds being present on the application site is **low**.

Bird mitigation

- Any scrub or tree removal should be undertaken outside of the main bird nesting season, March-August inclusive
- For any clearance done outside of these times, the scrub or trees must first be inspected by a suitably qualified person to ensure they are free of active bird nests

Bats:

Bats are not present on the development site itself, but Gardeners Cottage c23m to the north east has confirmed brown long-eared bats in the roof space. All development works are to be carried out at a relatively low noise level with hand tools, with no expected excessive noise beyond those of normal day-to-day activities in the surrounding busy walled garden. No impact on bats is therefore predicted, and no mitigation is proposed.

Reptiles

There are recent unconfirmed records for grass snakes and slow worm recorded from near the application site. The application site itself has few suitable habitats for reptiles, however reptiles could be sheltering under dense vegetation, amongst rubble or in cracks in brickwork. The chance of reptiles being present on the application site is **low**.

Reptile mitigation

- Staff erecting the polytunnel should be made aware of the potential for reptiles to be present
- Any removal of dense vegetation should be undertaken by hand, and carefully inspected for the presence of reptiles first
- Any reptiles encountered should be allowed to make their escape to the nearest refuge. Any reptiles unable to escape should be carefully moved by a suitably qualified person.

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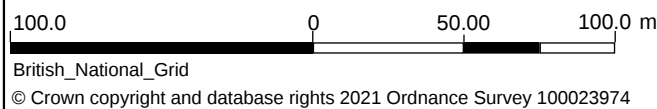
Proposed new Polytunnels at Wentworth Castle Gardens



Scale 1: 2,500

Legend

-  NT Ownership (GB)
-  NT Leasehold (GB)



Date: 13-Oct-2021
This map was created using
the National Trust GIS
Browser

Appendix 2

Wentworth Castle Gardens Boulers yard

Botanical Survey 30 April 2021

Stephen Morley, Nature Conservation Adviser

Boulers Yard is an area of rough grassland and scrub, with historic use as a walled garden. Part of the area (approximately half) is currently used for greenhouses and storage and this area was not surveyed as it is mostly built-up. The two areas are divided by a tall hedge.

General description

The vegetation at the time of survey was quite droughted due to a dry spring but there was quite a lot of plant growth available to identify. Brambles are one of the dominant species and form large patches throughout the area. Within this bramble patchwork are areas of more open ground and short grassland, with a mixture of grasses and ruderal species, especially plants such as teasel, thistles, burdock and red campion. The dominant vegetation cover amongst the bramble is various grass species, including Yorkshire fog, cocksfoot and false oat-grass, and vegetation would be classed overall as close to MG1 rough neutral grassland with scattered scrub. There are some piles of rubble, well vegetated, and some old buildings, with obvious patches of thin soil dominated by stunted ruderal species including coltsfoot, buttercup and medick. There are some self-seeded native tree species, particularly around the perimeter, including birch and willow, and some remnants of what may have been an orchard with species including gooseberry, raspberry and several pear trees evident. There is evidence of some slightly damp areas, indicated by species such as angelica, figwort and pendulous sedge, but overall the area is dry and well drained.

Animal records: there was not much visible due to the early-season survey, however with the flower-rich ruderal flora one would expect a good population of some of the more common, bees, wasps and butterflies to be using this area during the summer. Areas of bare soil and short vegetation are likely to be of use to solitary bees and wasps for digging nesting burrows. There are historic records of grass snakes (recent) and adder using this area, and the large amount of bramble and shrub cover, coupled with well-vegetated rubble would offer a good habitat for reptiles and amphibians. To note there is a good population of great crested newts on the site as a whole but there are no current waterbodies in the Boulers yard area. The walls surrounding the area are in reasonable condition with some noticeable cracks and holes which may be used by bat species, of which there is a good population at the property. The scrub mosaic is likely to be used by common woodland and passerine bird species for nesting during summer, and feeding over the rest of the year.

Evaluation of habitat and management recommendations

Boulers yard is unusual for the property as a whole as there is very little habitat of this type at Wentworth Castle Gardens. The grassland is classed as rough grassland, but has a good mix of flowering herb species which actually makes it some of the most species-rich grassland and scrub on the property, despite its history as walled garden and general dumping ground. There are historic records of adder and grass snake

from this area, and the habitat is perfect for these species with lots of refuges in the form of dense scrub and well-vegetated rubble; both adder and grass snake are BAP Priority Species, as well as having some protection under Schedule 5 of the Wildlife & Countryside Act. The NT has objectives to maintain and enhance our populations of BAP species, and so if these two species are suspected of still being present then it is recommended that habitat management is adjusted to accommodate their presence. If these reptiles are present, then other species such as toads, slowworms and great crested newt may also be present, and it is recommended that regular observations are made to determine what species are using this area through the use of reptile refuges and early morning walk-throughs.

The ideal ecological management for the yard area is to maintain the complex of scrub and species-rich rough grassland area through occasional intervention, ideally cutting several small areas each year in autumn or winter, to maintain a mosaic of scrub, grassland areas, sunny glades and bare soil. Cut material can be piled up in a designated area to provide habitat piles. If investigations show that the reptiles and amphibians mentioned above are present, then special effort should be made to maintain these populations on site through maintenance of rubble piles, scrub areas and quiet, undisturbed sunny glades for basking with cover adjacent.

Boulers yard contains many plant species which have been lost from the surrounding park and countryside due to the intensive nature of modern farm management. The species present here would normally be found in arable field edges and species-rich hedgerows. Both of these habitats are Priority Habitats which we should be encouraging and should be planning to reinstate at Wentworth when normal Estate Management Planning commences, and it would be beneficial to gather and grow seed from some of the wild plant species listed for reinstating throughout the estate in the future. Note that the presence of some mature pear trees, as well as some soft fruit species, indicate the possibility of a historic orchard on the site which is also a Priority Habitat, with potential for reinstatement.

Species lists with DAFOR abundance

trees and shrubs:

pear tree (R)
gooseberry (R)
raspberry (R)
bramble (D)
birch (O)
willow (O)

grasses:

Yorkshire fog (A)
creeping bent (A)
cocksfoot (F)
red fescue (F)
false oat-grass (F)

pendulous sedge (R)

herbs:

angelica (R)

coltsfoot (F)

ribwort plantain (F)

hogweed (F)

cranesbill (cultivated?) (R)

ragwort (O)

burdock (O)

teasel (F)

dock (F)

dandelion (F)

lady's mantle (cultivated?) (R)

St Johns-wort (cultivated) (R)

perforate St Johns-wort (O)

rosebay willow herb (F)

red campion (F)

creeping thistle (F)

common figwort (R)

wood forget-me-not (O)

medick (R)

creeping buttercup (F)

oxeye daisy (R)

violet (dog?)(R)



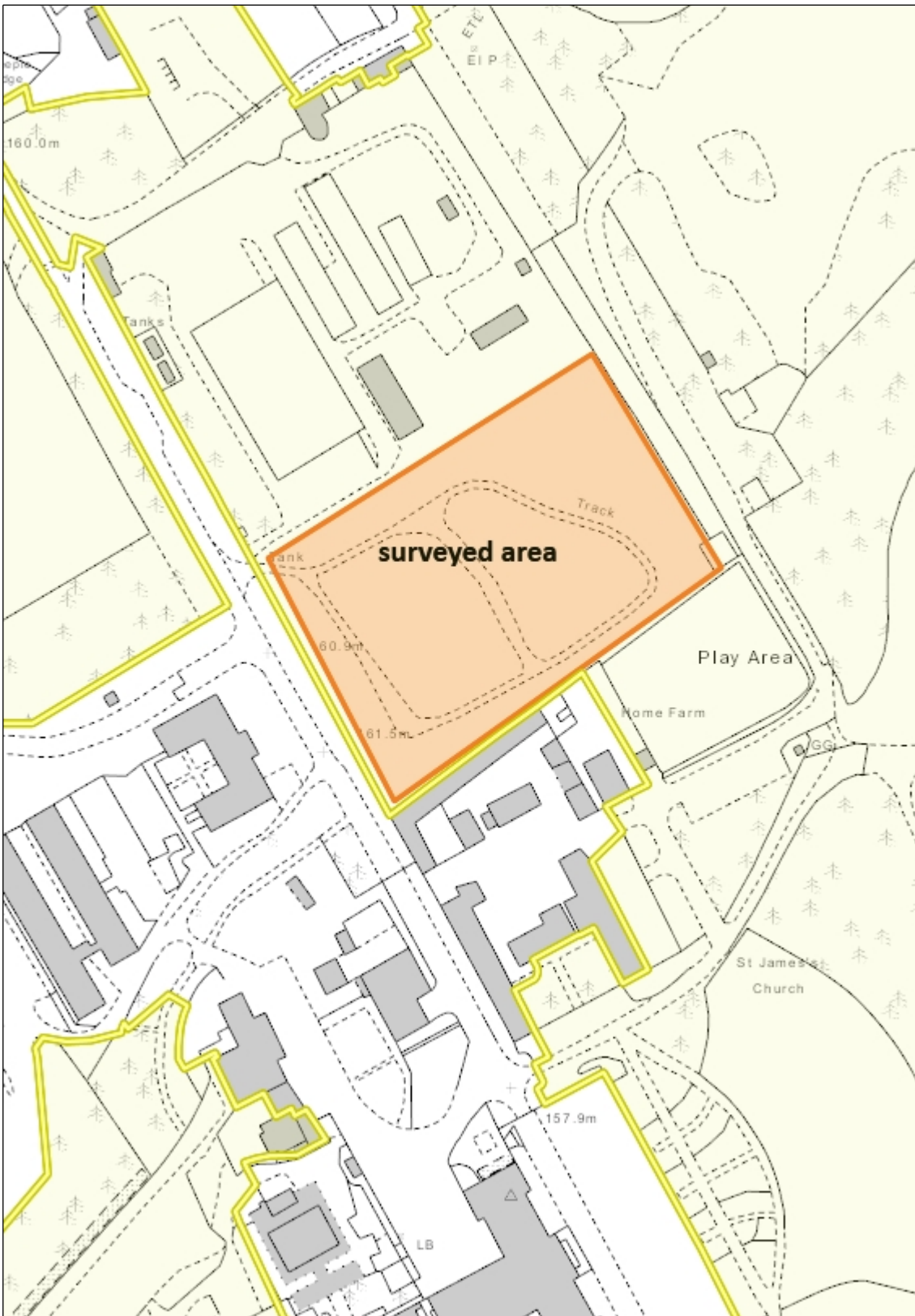
Wentworth: Boulers yard



Scale 1: 1,574

Legend

-  NT Ownership (GB)
-  NT Leasehold (GB)



63.0 0 31.49 63.0 m

British_National_Grid

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Date: 06-May-2021

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Browser

Appendix 3 Photographs of application site

