## Cardiff Parkway Developments Ltd Cardiff Hendre Lakes 2017 Schedule 9 Plant Survey Report

Environmental Statement Appendix 7.3

Issue | 18 March 2020

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 252199

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# ARUP

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## 1 Introduction

## **1.1 Background to the Project**

Ove Arup & Partners Ltd. (Arup) has been commissioned by Cardiff Parkway Developments Ltd (CPDL) to undertake baseline ecological surveys to inform the design and environmental assessment of a proposed new train station and expansion of the business park at St. Mellons, Cardiff. The site is centred on National Grid Reference (NGR) ST251808 and the planning boundary is shown on Figure 1. CPDL is proposing to develop a scheme that is an employment led development including a new railway station and park & ride facility.

The site currently consists of predominantly arable and pastoral farming on the western edge of St. Mellons. The site's field boundaries are formed by hedge and tree lines with reens<sup>1</sup> throughout. There is a lake, recreational grassland and woodland to the west of the site. The wider landscape comprises residential and commercial properties, and broad-leaved woodland to the north and west. To the south the land is bisected by the railway line with further neighbouring agricultural land. To the east there is agricultural land.

This report details the findings of a survey undertaken in 2017 to identify Schedule 9 Invasive Non-Native Species within the site boundary at the time.

## **1.2** Survey Objectives

The aims and objectives of the surveys were to:

• Determine the presence of invasive plant species, specifically those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (WCA).

### 1.3 Study Area

For the purposes of this study, the survey area was based within the site boundary of the scheme and is shown on Figure 1.

The site forms part of the Gwent Levels - Rumney and Peterstone Site of Special Scientific Interest (SSSI). This SSSI is designated in part for its reens, which are rich in plant species and communities. This is due to the variety of reen types and their management regimes and the timing of the management which results in a staggered programme across the Levels. The regular maintenance of some reens provides conditions for submerged plant species such as hairlike pondweed *Potamogeton trichoides* and openwater emergents such as arrowhead *Sagittaria sagittifolia* an opportunity to flourish. Many nationally rare or notable aquatic invertebrate species are present such as *Haliplus mucronatus* and *Hydrophilus piceus*. The area is important in the Welsh context for its snails and dragonflies and includes the species *Physa heterostropha* and *Brachytron pratense* respectively.

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<sup>&</sup>lt;sup>1</sup> Major man-made drainage channel or canalised stream which stays wet for the majority of the year and is managed by the internal drainage board (IDB) or Natural Resources Wales (NRW)

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## 1.4 Legislation

### 1.4.1 Schedule 9 Species

Any plant listed on Schedule 9 of the WCA is illegal to plant or otherwise cause to grow in the wild. The list of plant species on Schedule 9 was amended by the WCA 1981 (Variation of Schedule 9) (England and Wales) Order 2010.

### **1.4.2** Other Legislation Related to Species

The Environment (Wales) Act 2016 includes a duty on all public authorities to have regard to the conservation of biodiversity in the exercise of their functions. This duty applies to government bodies, local authorities and statutory undertakers.

## 2 Methodology

### 2.1 Survey Methods

The site was surveyed for invasive plant species on the 14th August 2017, 23rd August 2017 and the 1st September 2017.

The site was walked over by ecologist's familiar with Schedule 9 plants. All data was recorded on tablet devices to improve data collection efficiency and mapping precision. The species present and the extent of each plant was recorded.

## **2.2** Limitations and Assumptions

Some areas of the survey area were inaccessible due to dense vegetation and health and safety concerns, e.g. cattle, railway line and waterbodies. In these areas surveying was not possible, and the detectability of some species may decrease. Due to the seasonality of some species of Schedule 9 plants the detectability of some individuals may have been low. For example, Spanish bluebells *Hyacinthoides hispanica* flower in Spring at the same time as their UK native counterpart, common bluebells *Hyacinthoides non-scripta*. It is assumed however that a representative assessment of the land was able to be undertaken in order to fulfil this report's objectives.

#### 3 **Results**

Three species of plant listed on Schedule 9 of the WCA were found on site.

Table 1 lists the Schedule 9 species found and their location are shown on Figure 1. Photographs of the Waterweed Elodea sp. (nuttallii) and Hybrid Japanese knotweed Fallopia x bohemica from the surveys are shown below (Photographs 1 and 2).

Table 1. Schedule 9 plant species found at Cardiff Parkway.					
Common name	Scientific name	Notes			
Waterweed	Elodea sp. (nuttallii)	Present throughout most of the wet reens on site. Identification posited as Nuttall's waterweed given recurved leaves and folded along mid-rib. Not all individuals examined to species level, however all species of <i>Elodea</i> are listed as Schedule 9 plants. See Photograph 1 below.			
Japanese knotweed	Fallopia japonica	Three stands across the site.			
Hybrid Japanese	F. x bohemica	A single stand towards the west of the site adjacent to Cypress Drive. See Photograph 2 below.			



knotweed

Photograph 1. Elodea spp., showing whorled appearance with recurved leaves.



Photograph 2. Hybrid Japanese knotweed amongst brambles.

#### **Conclusions and Recommendations** 4

The presence of Schedule 9 plants on site requires consideration during enabling and construction works. Under the Wildlife and Countryside Act it is illegal to plant or otherwise cause to grow in the wild Schedule 9 plants. If works involve the disturbance of ground or alteration of waterways containing invasive species it is advised that where possible measures are implemented to control the spread of these species.

#### 4.1 **Species-Specific Control**

#### 4.1.1 Elodea

Control of *Elodea* spp. is problematic and difficult<sup>2</sup>. Guidance from CEH<sup>3</sup> advises that *Elodea* is controlled by mechanical means. However, this may lead to fragmentation of *Elodea* strands by harvesting, and the rapid regrowth of individual fragments causing spread<sup>1</sup>. Consideration should also be given to aquatic plants and invertebrates growing within the reens on site, which form part of the SSSI features on site.

Advice from NRW is recommended for the control of Elodea.

#### 4.1.2 **Japanese Knotweed**

A variety of control methods for Japanese knotweed (both F. japonica and x bohemica) are available. Consideration regarding the choice of control should consider project costs, time to control, e.g. repeated control measures may take more than one growing season, and also the environmental impact. Specialist advice on control should be obtained.

<sup>&</sup>lt;sup>2</sup> Vernon, E. and Hamilton, H. (2011). Literature review on methods of control and eradication of Canadian pondweed and Nuttall's pondweed in standing waters. Scottish Natural Heritage Commissioned Report No. 433.

<sup>&</sup>lt;sup>3</sup> Newman, J.R. and Duenas, M.A., 2010. Information Sheet 25: Elodea nuttallii, Nuttall's pondweed. Centre of Ecology and Hydrology.

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Figures

Figure 1 Schedule 9 Plant Survey Results



