



Ymddiriedolaeth GIG  
Prifysgol Felindre  
Velindre University  
NHS Trust



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<https://velindre.nhs.wales>

Date: 28<sup>th</sup> October 2024  
Ref: CORP 2024 - 138

Dear xxx

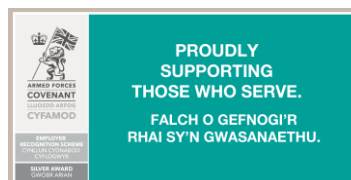
**Freedom of Information request: Japanese Knotweed at the New Velindre Cancer Centre (nVCC) (CORP 2024 – 138)**

Thank you for your request for information which the Trust received on 14<sup>th</sup> July 2024. Please accept our apologies for the delay in responding.

Your Request:

- 1) *Provide date when the construction team cut through the vegetation from Whitchurch Hospital Grounds to the Northern Meadow site (as part of the emergency access route)*
- 2) *A copy of the procedures in place to avoid the spread of Japanese Knotweed? A copy of the method statement used.*
- 3) *Provide the name of the contractors who removed any contaminated soil and vegetation off site. A copy of the appropriate contractor's licence to carry out the work.*
- 4) *The destination of the contaminated soils and permits allowing acceptance of the soil.*
- 5) *From work ledgers, provide dates, registration number plate of vehicles and number of contaminated loads taken off site. This should be available from consignment notes.*
- 6) *During the site visit, it was stated by project team leaders that Cardiff and Vale Health Board would not allow the total removal all of Japanese Knotweed from the location, only the land that covered the width of the road and pavement.  
Provide any written correspondence on the removal of Japanese Knotweed received by the project team from Cardiff and Vale Health Board.*
- 7) *Any permission provided by Cardiff and Vale Health Board for the developer to chemically treat Japanese Knotweed next to or near the emergency road.*
- 8) *Provide details (written and photographic) of the geotextile used to line the access road, including depth it was placed.*
- 9) *Provide the date and location of any wheel wash used in this area from July 2022. Please state if this included a designated barrier membrane lined washing area?*

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10) During site visit, project developers for Velindre stated that 2 areas of broken tarmac/waste on boundary of the old tennis courts were present before Walters began working in the area, and that they have photographic evidence of this. Both areas now have Himalayan Balsam growing. Provide written and photographic evidence that broken tarmac and general waste existed before Walters began work on the old tennis courts.

Please find the Trust's response below:

**1) Provide date when the construction team cut through the vegetation from Whitchurch Hospital Grounds to the Northern Meadow site (as part of the emergency access route)**

The cut through to the new Velindre Cancer Centre (nVCC) Development Field was first undertaken on 17<sup>th</sup> and 18<sup>th</sup> of August 2022, this was the width of the initial access referred to as TCAR1, the remaining width referred to as TCAR2 was excavated on 14<sup>th</sup> and 15<sup>th</sup> November 2022.

**2) A copy of the procedures in place to avoid the spread of Japanese Knotweed? A copy of the method statement used.**

We do not hold a copy of the Risk Assessment Method Statement (RAMS) as this is held by Walters UK Limited and is withheld under the exception in Section 12(5)e Environmental Information Regulations 2004 - the confidentiality of commercial or industrial information where such confidentiality is provided by law to protect a legitimate economic interest.

However, the Invasive Species Report & Management Plan and the "Old Access Route' – Japanese Knotweed Disposal Records and Associated Information" document in **Appendix 1** should answer this question.

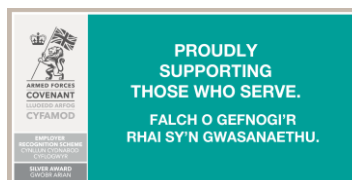
Please note, the 7m excavation area was not possible as this would have removed further Dormouse habitat and been outside the Planning and License boundary – this is a constraint substantiated by the License Conditions.

**3) Provide the name of the contractors who removed any contaminated soil and vegetation off site. A copy of the appropriate contractor's licence to carry out the work.**

The main contractor for the Enabling Works is Walters UK Limited.

The contractor who provided the haulage to the licensed tip was Neal Suppliers Limited – the Trust does not hold a copy of their licence as this was handled by Walters UK Limited.

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**4) The destination of the contaminated soils and permits allowing acceptance of the soil.**

Enovert South Ltd  
Tir John Landfill Site  
Wern Fawr Road  
SA1 8LN

Registrations and permissions of the Tir John Tip facility can be found on Enovert's website.

**5) From work ledgers, provide dates, registration number plate of vehicles and number of contaminated loads taken off site. This should be available from consignment notes.**

DATE	LOADS	REG
17 & 18 August 2022	27	CE69AXD, CN20ZXH, CN20ZXB, CE68AZL, CN71PXC, CE69AZD, CN71PXB
14 & 15 November 2022	29	CE69AZJ, CE69AZD, CE70AUT, CN71PXB, CN20ZXH, CE69AZC, CE70AUR, CE69AZF, CN71PXB, CN20ZXC, CN18XKU, CN71PXD,
11 May 2023	4	CE68AZL, CE70AUU, CE69AZB, CN20ZXA

**6) During the site visit, it was stated by project team leaders that Cardiff and Vale Health Board would not allow the total removal all of Japanese Knotweed from the location, only the land that covered the width of the road and pavement. Provide any written correspondence on the removal of Japanese Knotweed received by the project team from Cardiff and Vale Health Board.**

This is incorrect, it was stated that the stand of Japanese Knotweed being treated outside was not permitted to be excavated therefore a sprayed treatment was used and is ongoing. A further site clearance operation, thereby allowing excavation was not permitted as the site clearance permitted by the EPSDL did not cover this 'enlarged' area.

**7) Any permission provided by Cardiff and Vale Health Board for the developer to chemically treat Japanese Knotweed next to or near the emergency road.**

An agreement to treat the Japanese Knotweed was in place between the Trust and Cardiff and Vale University Health Board – this was verbal. Retrospective confirmation of this can be found in **Appendix 4**.

**8) Provide details (written and photographic) of the geotextile used to line the access road, including depth it was placed.**

Please see **Appendix 2** – Root barrier.

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**9) Provide the date and location of any wheel wash used in this area from July 2022. Please state if this included a designated barrier membrane lined washing area?**

During the removal, there was a jetwash on membrane where the wheels and plant were cleaned and the membrane was then disposed of with the Japanese Knotweed arisings upon completion, the dates align with the Japanese Knotweed removal.

**10) During site visit, project developers for Velindre stated that 2 areas of broken tarmac/waste on boundary of the old tennis courts were present before Walters began working in the area, and that they have photographic evidence of this. Both areas now have Himalayan Balsam growing. Provide written and photographic evidence that broken tarmac and general waste existed before Walters began work on the old tennis courts.**

We are not aware of such statement, however there was evidence of Himalayan Balsam growing outside the boundary of the tennis courts to the back of the Cricket Pavilion. These are shown in Drawing **70066877-WSP-XX-XX-ASC-P0-103 - Appendix 3.**

I trust this answers your request for information, however, should you not be satisfied with the information supplied or the process of supplying it, you have a right to complain and request a review. Please note that you must submit a request for a review within 40 days of the date of this letter.

You should forward your complaint to:

Mr Ian Bevan via [FOI.VUNHST@wales.nhs.uk](mailto:FOI.VUNHST@wales.nhs.uk)  
Head of Information Governance  
Velindre University NHS Trust  
2, Charnwood Court  
Heol Billingsley  
Parc Nantgarw  
Cardiff / Caerdydd  
CF15 7QZ

Should you wish to take your complaint further, if you are still unhappy with the decision after review, you can contact the:

Information Commissioner's Office - Wales  
2nd Floor, Churchill House  
Churchill Way  
Cardiff  
CF10 2HH  
Telephone: 0330 414 6421  
email: [wales@ico.org.uk](mailto:wales@ico.org.uk)

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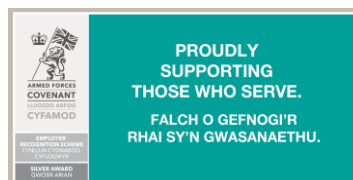
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Yours sincerely

**Non Gwilym  
Interim Director of Corporate Governance**

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**WALTERS UK**

**VELINDRE**

**INVASIVE SPECIES REPORT & MANAGEMENT  
PLAN**

**APRIL  
2022**

	<b>Name</b>	<b>Date</b>
<b>Written By</b>		<b>24 April 2022</b>
<b>Checked By</b>		<b>24 April 2022</b>
<b>Authorised By</b>		<b>2 March 2022</b>

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Management Methodology

## 1 INTRODUCTION

- 1.0 CSM Ecology was commissioned by Walters to undertake an invasive species survey at their site in Velindre, Whitchurch, Cardiff. The purpose of the survey was to identify and quantify invasive species within and adjacent to the intended haul routes to be installed by Walters to facilitate site enabling works. The report was commissioned to put forward eradication and management strategies, namely for Japanese Knotweed, Cotoneaster and Himalayan Balsam. It is further understood that the intended Enabling Works and the land directly adjacent, are subject to two separate dormice licences: one for the Enabling Works, and the second for the Main Cancer Centre Construction as a whole. The licence for the Enabling Works considers the removal and management of invasive species found within the license boundary. The invasive species within the wider site can only be removed under precautionary working methods where they are not located in habitat assessed as suitable for supporting dormice. This limits the amount of site clearance works which can be undertaken outside of the site boundary to control the invasive species.

### Site Description

- 1.1 The site is called the Northern Meadows and is located on the north west outskirts of Cardiff, south of junction 32 of the M4 and to east of Radyr. The site is situated in an area of mixed commercial, industrial and residential use with Longwood Nature Reserve bounding the site to the west. It comprises predominately grassland, scrub and scattered trees with wooded areas at the site boundary.

### Proposed development

- 1.2 The proposed development consists of the new Velindre Cancer Centre and associated infrastructure. The supporting infrastructure includes two permanent vehicular access routes, internal site road, a new pedestrian access from Park Road/Pendwyallt Road and Coryton Railway Station, vehicle parking areas, internal pedestrian routes, drainage infrastructure, an energy centre, utilities and services, public realm and landscape treatments. Although it is understood that Walters current scope of works are the enabling works only to construct the northern permanent access including a bridge over a disused railway cutting, and a southern temporary construction access for the main project.
- 1.3 The report has referenced and should be read in conjunction with the following documents listed below
- New Velindre Cancer Centre Green Infrastructure Management Strategy, MOTT MCDONALD (October 2020).
  - NEW VELINDRE CANCER CENTRE HIGHWAY ACCESS/ENABLING WORKS Green Infrastructure Management Strategy Adherence Statement WSP (Rev C Oct 2020).

FIGURE 1: ERADICATION AREAS



The purpose of the survey was to:

- Review previous survey data and reports by Mott McDonald and RPS, cross reference invasive species locations found at the site,
- Identify areas of Japanese knotweed, Himalayan balsam and Wall cotoneaster within Walters scope of works,
- provide background information on Japanese knotweed, Himalayan balsam and Wall cotoneaster;
- recommend eradication strategies,
- supervise and coordinate eradication methods.

1.4 Guidance on how to manage knotweed on construction sites has been consulted.

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<sup>1</sup> The Environment Agency: Managing Japanese knotweed on development sites. The knotweed code of practice. 2006. 2013 addendum.

<sup>2</sup> GB non-native species secretariat 2014 (NNSS).

## 2 BACKGROUND INFORMATION

### Japanese Knotweed

- 2.0 Japanese knotweed (*Fallopia japonica*) is a tall, vigorous, hardy perennial plant with heart-shaped leaves, attractive, purple-spotted bamboo-like stems and small, creamy-white flowers. It is not native to the British Isles and as such it is not exposed to any of the controlling organisms that maintain it to its natural extent in its countries of origin (Japan, Korea and North Western China). Consequently, the absence of these controls (such as bacteria, fungi and invertebrates) has allowed the invasive spread of knotweed throughout Britain. Often, this has been at the expense of native species in biologically diverse and sensitive habitats.
- 2.1 The plant grows vigorously through the soil from a woody rhizome, which can also cause damage to underground structures and penetrate tarmac and concrete through small cracks. New shoots can emerge from spreading rhizomes anywhere within a 7m (or wider) radius of the main group of stems. The rate of growth is very rapid. Consequently, knotweed can quickly colonise large areas of land if it is not controlled.
- 2.2 Japanese knotweed is a dioecious plant, i.e. there are separate male and female plants. Only the female plant has been recorded to date in the UK. Although seeds are produced, they are not true Japanese knotweed seeds but hybrids, and rarely survive. Two species closely related to Japanese knotweed are also found in the UK. These are, giant knotweed (*Fallopia sachalinensis*), a much taller plant which reaches a height of 5m; and a smaller compact variety (*Fallopia japonica* var. *compacta*), which grows to a height of only 1m. The hybrid (*Fallopia x bohemica*) is a cross between Japanese knotweed and giant knotweed, and is found throughout the UK, but is not as common as Japanese knotweed.

## **Himalayan Balsam**

- 2.3 Himalayan balsam is a non-native species that grow abundantly along the banks of rivers and stream, as well as waste ground. As with Japanese knotweed (*Fallopia japonica*), and now around thirty other terrestrial plants, Himalayan balsam is listed in UK legislation under the Wildlife and Countryside Act 1982, making it an offense to plant or cause it to grow in the wild. Himalayan balsam is an attractive, non-native invasive terrestrial plant species. Since it was introduced, it has spread to most parts of Northern Ireland and the Republic of Ireland. The species is particularly frequent along the banks of watercourses, where it often forms continuous stands. It can also establish in damp woodland, flushes and mires. It is the tallest annual (species of plant that completes its life cycle in one year) in Ireland and due to its rapid growth, it shades out most of our native species. Individual plants reach 2m in height, have translucent fleshy stems, pink-purple slipper-shaped flowers and large oval pointed leaves with obvious teeth around their edges. Each tooth carries a small globular 'gland' and produces large numbers of flowers which are followed by 'seed pods' about 25mm long. When mature and dry, the fruits split open explosively if touched, flinging the seeds a considerable distance from the parent plant. Each plant produces about 2,500 seeds which fall to the ground, and with several parent plants close together, seeds can occur at a density of between 5000-6000 seeds per square metre. The seeds float, making watercourses a prime route for dispersal of the species. Seeds can also begin to germinate in water on their way to new sites.
- 2.4 Similarly to Japanese knotweed, the excavation of Himalayan balsam is classed as controlled waste. As such it is covered by specific legislation covering the handling and disposal of the waste material, such as: The Environmental Protection Act (EPA) 1990, and the Waste (England and Wales) Regulations 2011 (in Scotland the EPA and the Environment Protection (Duty of Care) Regulations 1991), where cut Himalayan balsam material and soil containing seeds must be disposed of as controlled waste if they are to be removed from their site of origin.

## **Wall Cotoneaster**

- 2.5 There are over 100 species of cotoneaster cultivated in the UK; when cotoneaster is referred to please assume that it is the invasive species of cotoneaster that are referenced.
- 2.6 Cotoneaster species are native to Eastern Asia and were first introduced to the UK in 1824 as ornamental plants. The seeds are spread by birds; therefore, the plants can easily spread to a wide area.

### **3 Legislation**

- 3.0 There are several pieces of legislation that control the spread, handling and disposal of Japanese knotweed.
- 3.1 Japanese Knotweed, Wall Cotoneaster and Himalayan Balsam is listed under Part II of Schedule 9 of the Wildlife and Countryside Act (WCA) 1981. In Section 14 of the WCA it states that it is an offence to plant or otherwise cause any plant listed in Part II of Schedule 9 of the WCA to grow in the wild. As a result, under the WCA a landlord can be sued for costs and damages if they allow certain invasive species to spread from their property onto that of another site – either by translocation of infested soils or by allowing growth to occur across a site boundary.
- 3.2 The latest amendments of Section 14 and Part II of Schedule 9 now include more species and cover the sale of invasive non-native species. This new list still includes Japanese knotweed and giant hogweed, but also includes giant knotweed, knotweed hybrids, Himalayan balsam and rhododendron.
- 3.3 According to the Environmental Protection Act (EPA) 1990, The Waste (England & Wales) Regulations 2011 and the Duty of Care Regulations 1991 in Scotland, cut knotweed material and soil containing rhizomes must be disposed of as controlled waste if it is to be removed from its site of origin (in some instances, these may be classified as hazardous waste, or special waste in Scotland). If knotweed material waste is treated on site then it could also fall under the Environmental Permitting (England & Wales) Regulations 2010, or the Waste Management Licensing (Scotland) Regulations 2011 in Scotland.
- 3.4 The National Planning Policy Framework on biodiversity is set out in Condition 11 – Conserving and Enhancing the Natural Environment. In this condition the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, although does not specifically address the issue of invasive plant species. National Planning Policy Framework.

## 4 ERADICATION METHODS

### Japanese knotweed

- 4.0 There are several different options which can be used when providing a Japanese knotweed eradication scheme for a development site.
- 4.1 Essentially there are 5 main options for Japanese knotweed treatment. These are as follows:
1. excavate all material and then dispose of it at an appropriately licensed landfill site;
  2. excavate all material and bury on site, then either:
    - the material is encapsulated totally by root barrier membranes; or
    - the buried material is covered with a root barrier membrane over the top of the burial pit;
  3. excavate material and treat on site by use of a picking station, soil screens, or a series of soil turns and/or herbicide applications, either:
    - the material is passed through a picking station or series of soil screens;
    - material is laid in thin layers, 0.5m to 1m in depth, and periodically turned and sprayed; or
    - the material is laid in a treatment mound/landscaped area which can be grassed and then treated with herbicides as required;
  4. carry out a reduced excavation and install a root barrier membrane above the remaining material;
  5. treatment with herbicide over a number of years,
  6. an alternative approach is to use a combination of the above options. Often on a site, different knotweed stands will be treated differently depending on the end use in each area.

## **Himalayan Balsam**

4.2 Both chemical and non-chemical means can be used for eradication Himalayan Balsam:

- the use of Glyphosate-based weedkillers are the most effective as they kill both the roots and top layers of growth. Young foliage is sprayed in May and re-treated in August or September;
- to eradicate Himalayan Balsam without chemicals, a soil scrape is undertaken to remove the seed bank and plants removed by hand. The best time to do this is in May/June, at a time when the soil is moist. Any material removed from site must be treated as controlled waste and disposed of at an appropriate landfill site or buried in a capsule.

## **Wall Cotoneaster**

4.3 Control of cotoneaster species includes mechanical and chemical measures.

4.4 Mechanical methods of control comprise pulling young seedlings and excavating the root mass. Any material from the cotoneaster/containing cotoneaster waste must be chipped/burnt on site or removed to licensed landfill as controlled waste.

Chemical methods of control include spraying plants with herbicide and treating stumps of larger plants to prevent regrowth.

## **5 SURVEY RESULTS**

5.1 CSM Ecology with a Walters engineer carried out an invasive weed survey of the site in April 2022. The survey was carried out by a suitably qualified invasive species specialist. The weather conditions during the survey were overcast with heavy showers.

5.2 The site is called the Northern Meadows and is located on the north west outskirts of Cardiff, south of junction 32 of the M4 and to east of Radyr. The site is situated in an area of mixed commercial, industrial and residential use with Longwood Nature Reserve bounding the site to the west. It comprises predominately grassland, scrub and scattered trees with wooded areas at the site boundary.

5.3 Photographs are presented in Appendix

### **Japanese Knotweed**

5.4 During the survey areas containing infestations of Japanese Knotweed were identified both on the intended haul routes and adjacent and are therefore classed as continuous due to the rhizome spread. As the adjacent JK cannot be treated due to the dormouse licence a geotextile membrane will need to be installed. The plants and contaminated soil will be excavated and removed to an appropriately licensed waste-management facility, via licensed carrier.

### **Himalayan Balsam**

5.5 The majority of balsam could not be fully detected as it was just starting to sprout at the time of the survey and small balsam shoots were visible. Balsam was also considered to be continuous as it was identified on the haul route and directly adjacent as well.

5.6 Excavation works will be undertaken where required in the previously identified areas contaminated with invasive species. The plants and contaminated soil will be excavated and buried in a cell in an agreed area of the site prior to covering with a geotextile membrane.

### **Wall Cotoneaster**

5.7 This was only identified in an area of the east of the site by the dis used railway cutting. Mechanical methods of control comprise pulling young seedlings and excavating the root mass. Any material from the cotoneaster/containing cotoneaster waste must be chipped/burnt on site, removed to licensed landfill as controlled waste or buried within the cell with the Himalayan balsam.

## **Caveat**

5.8 Invasive plant species surveys are limited by factors that affect the presence of plants, such as time of year. The survey was undertaken in April which limited the detectability of Himalayan Balsam. However, it is not considered that this significantly affected the interpretation of information collected during the survey.

## **6 Recommendations**

- 6.1 Following the site meeting and survey we have proposed an eradication programme in line with the client's requirements.
- 6.2 For the Himalayan Balsam, this will involve the soil scrape or excavation and stockpiling of the invasive species identified within the haul route prior to its burial in the agreed location on site under the supervision of an invasive species specialist. It is generally recommended to bury HB at a minimum depth of 2m in soft landscape areas or 1m in hard landscape areas. Due to site constraints at the cell location the invasive material will be buried with 1m cover in soft landscape areas and a geotextile barrier will be installed over the contaminated soil to form a barrier. The works will be supervised by an invasive species specialist. As an additional measure we recommend that debris netting is installed within areas where it comes within 10m of the haul route to minimise seed dispersal back onto site and that the haul route be monitored for any re growth in the event that seeds find their way back onto site
- 6.3 In regards to JK, the proposal is for excavation and stockpiling of the invasive species identified within the haul route prior to its removal to a suitably licenced landfill site to be undertaken under the supervision of an invasive species specialist.
- 6.4 We also recommend a geotextile membrane to be installed under the supervision of an invasive species specialist on the site boundary wherever JK is found within 7m of the haul route to prevent JK migrating back onto the site.
- 6.5 Any material containing cotoneaster waste must be chipped/burnt on site, removed to licensed landfill as controlled waste or buried within the invasive cell with the Himalayan balsam.
- 6.6 For detailed methodology please see Appendix C Invasive Species Management Methodology.

## **Limitation**

6.7 The recommendations when removing invasive species are to excavate 7m from the site boundary for JK. Due to the environmental restrictions of the dormouse licenses preventing any clearance outside of the site boundary, the recommended 7m clearance is not possible. Consequently, it will be difficult to fully eradicate the invasive species as the seeds from Himalayan Balsam from outside of the site boundary could potentially disperse back onto the site and the JK could potentially rhizomes spread back into the site from the peripheries. The recommendation is to mitigate this by installing debris netting on the site boundary adjacent to any HB and installing geotextile membrane at the site boundary within 7m of any JK. This will minimise the risk of invasive species entering the site from the site boundary.

## 7 REFERENCES

### References

HM Government. 1981 Wildlife and Countryside Act , 1981. HMSO, London.

HM Government. 1990. Environmental Protection Act, 1990. HMSO, London.

HM Government. 2010. Wildlife and Countryside Act, 1981. Variation Order 2010. HMSO, London.

Child, L & Wade, M. 2000. The Japanese Knotweed Manual.

Environment Agency: 2006. Managing Japanese knotweed on development sites. The knotweed Code of Practice

Environment Agency: 2013 addendum to the 2006 knotweed code of practise.

Royal institute of Chartered Surveyors (RICS) 2012. Japanese knotweed and residential property.

Property Care Association (PCA) Invasive Weed Control. 2013. Code of Practice for the Management of Japanese knotweed.

**Appendix A**  
**Invasive Species Map**



**Appendix B**  
**Site Photographs**

	Description	Photograph of Feature
1	Add text (location and plant)	
2		
3		
4		

	Description	Photograph of Feature
5		 A photograph showing a fenced-in area. The fence is made of metal posts and wire. Inside the fence, there are several tall, thin, brownish plants, possibly reeds or grasses, growing in a dry, sandy area. In the background, there is a dense line of green trees and bushes under a blue sky.

## **Appendix C**

### **Invasive Species Management Methodology**

## **Management of Invasive Non-Native Species**

The Vision for the management of invasive species is to ensure the complete eradication of non-native invasive plant species within the site boundary.

Under Schedule 9 of The Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Invasive Alien Species (Enforcement and Permitting) Order 2019, it is illegal to plant or otherwise encourage the growth of invasive plant species. This could include transporting seed of the plant off site as part of an eradication process if these plants are located within the works area.

### **Japanese knotweed *Reynoutria japonica*, and wall cotoneaster *Cotoneaster horizontalis*.**

The treatment for the eradication of any invasive non-native species found at the site will be undertaken in accordance with Chapter 6 of the Environmental Statement (October 2017) and Appendix 6.7 Invasive Species Report (February 2017). Management of non-invasive species before and during construction is also covered via the CEMP.

In summary, the key measures of relevance are summarised below:

- All site personnel must be given a toolbox talk on invasive plant species to cover the below requirements to ensure no spreading of seeds or plant matter occurs. A copy of the toolbox talk is contained in Appendix F;
- An update check survey should be undertaken to map the presence of invasive plant species (which can spread rapidly between seasons). This could be undertaken by a specialist contractor as part of their quotation (and guarantee, if applicable) to do the eradication exercise;
- Within the works area, where invasive species have been identified, it may be possible to exercise avoidance measures to avoid their spread if the number of individual plants is low and if they are located away from high activity areas. If avoidance is not feasible, then suitable treatment methods are recommended;
- An 'Exclusion Zone' is to be applied around all invasive plant species within the vicinity of construction activities. No works, including storage or setting down of material or access routes, shall be permitted within these exclusion zones. These exclusion zones shall be demarked with barrier fencing, with additional timber fencing for stands of Japanese knotweed; and
- The enforcement of these exclusion zones will prevent possible spread of plant species. If the barrier is broken or broken plants are found outside of the execution areas, the rhizomes and plant matter shall be collected for disposal at a permitted facility. If new areas of invasive species develop, all works should stop immediately in that area, and the on-site Ecologist be contacted.

Specific measures required for each invasive species is described below, along with general best practice measures for all site work and long-term management.

### **Japanese Knotweed**

The below best practice should be undertaken for the construction works. The Defra guidance document 'Prevent Japanese knotweed from spreading' (March 2016) referenced in the ES has since been withdrawn. It is therefore recommended that 'Code of Practice: Management of Japanese Knotweed' (PCA, April 2018) is referred to prior to undertaking management works.

The main cause for the spread of Japanese knotweed is either via fragmentation of the plant above ground, or through disturbance to its underground root system. Where Japanese knotweed is identified, fencing should be erected to provide an exclusion zone around the plants. As the area of Japanese knotweed infestation can be 7.0m horizontally from the nearest stem growth that can be

seen, the exclusion zone should take this into account. Signage should be put up in this area to alert all site operatives to the location of Japanese knotweed.

Where access routes and working areas cannot be altered to avoid the plants, the focus should be on avoiding breaking the surface of the soil in these areas and containment of the plant parts within the areas which are already contaminated.

Where this is not possible, digging out the plants and the soil around it within a 7.0m diameter, may be undertaken. This method should be employed with caution because it is likely that this soil may contain rhizomes which can establish themselves and spread the infestation further.

Potentially contaminated soil should be regarded as 'controlled waste' under the Environmental Protection Act 1990 and requires disposal at permitted waste facilities. It is advised that a clerk of works supervise the loading of this 'controlled waste' onto carrier vehicles and ensure that these loads are sealed before leaving the site.

Material excavated from Japanese knotweed infested areas may only be reused within the source area, and under no circumstances will this material be used in other areas of the site. It may be possible to bury infected soil at depth within the site following the requirements of the code of practice and Environmental Permitting Regulations.

Specialist Japanese knotweed contractors should be engaged to safely remove this weed from site.

### **Himalayan Balsam**

The main cause for the spread of Himalayan balsam is via seed dispersal, therefore the movement of soil must be avoided within both the infected and adjacent areas, where the seeds may have fallen.

As with Japanese knotweed, where possible, fencing should be erected to provide an exclusion zone around the plants. Where avoidance is not possible, it's recommended that "bashing down" or brush cutting to ground level is carried out before the plants set seed in late July.

Small infestations can be controlled by hand-pulling as the species is shallow rooted. Padded gloves should be worn to avoid risk of injury to hands.

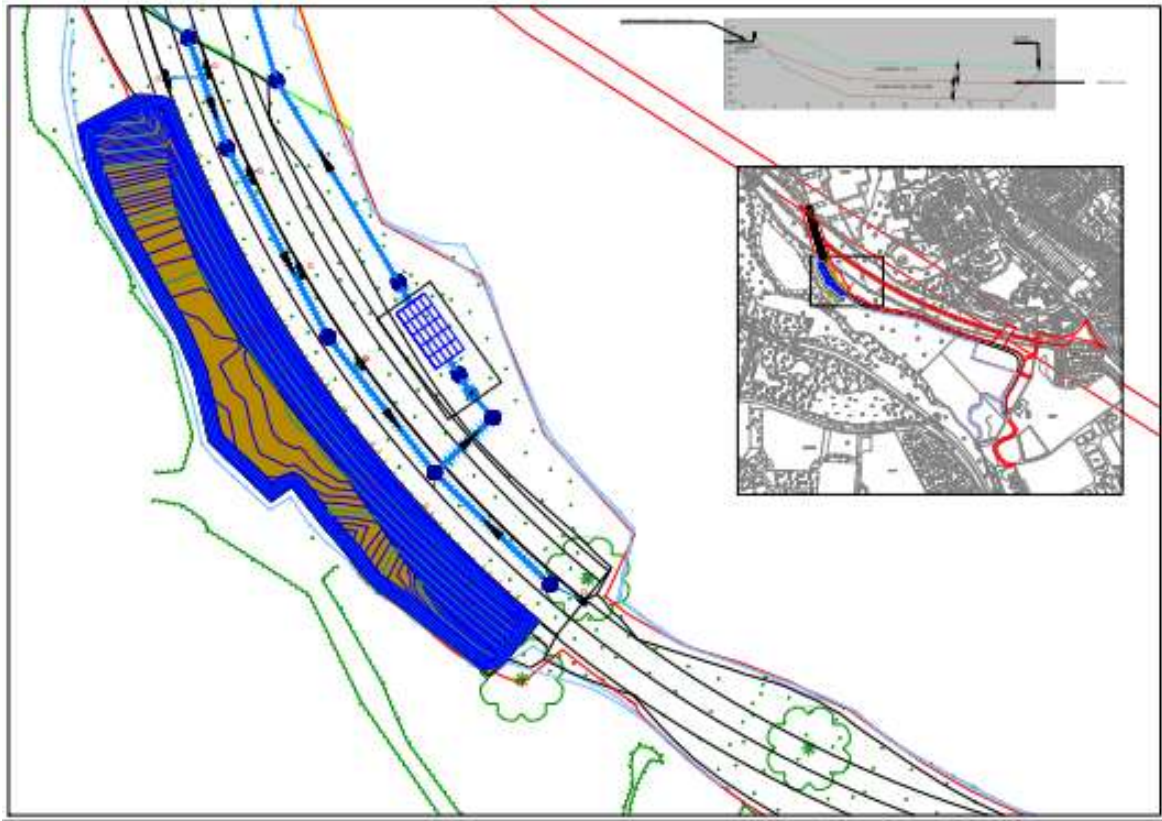
If cutting or hand pulling is to be carried out after this time, a bag must be placed over the plant tops to prevent seeds spreading. All invasive non-native plant waste must be appropriately disposed of using a registered waste carrier and be sent to a suitable disposal site.

### **General - Cleaning**

If any machinery or works are required to be used or carried out within the exclusion zones, the amount of soil excavated (potentially containing invasive species contaminated material) should be kept to a minimum. All machinery used within the exclusion zones on site should be thoroughly washed in a designated root barrier membrane lined washing area, until invasive species have been eradicated from the site. All personnel working in the exclusion areas should clean their boots to ensure that no regenerative plant materials are transported across the site or from the site. Signs notifying personnel of the purpose of the washing facility should be erected to make it clear that invasive species are on site. Personnel should also wear protective clothing when working in the exclusion zones if appropriate. Any vehicles required to be used within the exclusion zones should be wheeled rather than tracked, as the tyres are less likely to transport the plant fragments elsewhere; and vehicles leaving the contaminated area should be cleaned and pressure washed if plant material is attached to the wheels or underside of the vehicle.

## Appendix D

## Burial Cell Location





'Old Access Route' - Japanese Knotweed Disposal Records and Associated Information



#### Notes:

1. The image shown on the opening slide and here is from the site clearance and excavation stage of TCAR2. It serves to provide an overall appreciation of works carried out at this location and is relevant to the management of Japanese Knotweed and the responses to queries presented by South Wales Police in correspondence relating to these matters. The slide is repeated throughout.
2. The original TCAR1 route is indicated by the red dotted line, and this ran from the City Hospice boundary wall along the route of a previously cleared path to the old WHG Tennis Courts at the rear of the Cricket pavilion as shown.
3. The first clearance of TCAR1 for the Enabling Works project was undertaken in **October 2021** to provide access for ground investigation works and at this stage the cleared area ran directly to the Tennis Courts as there was no permission to cut down trees and there was Japanese Knotweed evident at the boundary of the Adopted Path.
4. No INNS was encountered during these works, although INNS had been recorded previously in the wider areas on issued drawings and in survey reports.
5. The track access to the tennis courts compound area was used during the period **January 2022 to August 2022** and the tennis courts area was used as both a car park and mini compound at various times from September 2022 to late 2023
6. Drawing **70066877-WSP-XX-XX-ASC-P0-103** showing the 2022 site clearance works and the presence of pre-surveyed INNS is included in this overall submission.



#### Notes

1. The image shown is from the site clearance and excavation stage of TCAR2 but it serves to provide the overall appreciation of works carried out at this location, so is repeated throughout.
2. When permission to commence the Enabling Works contract proper was received, the route indicated with a black dotted line was utilised, but before this could be trafficked, Japanese Knotweed was cleared from the yellow highlighted zone, inside the red border indicated - this was undertaken on **17<sup>th</sup> and 18<sup>th</sup> August 2022** (records have been provided previously for this work scope).
3. The JK barrier specification is included within this overall submission. The product name is Hy-Tex Root Barrier C3 (CE)
4. The following slide shows this area, where the JK was present at TCAR1 being excavated and the completed, filled area with the JK membrane visible at the edges following the filling operations at the perimeter.



### Notes

1. Image 1 shows the TCAR1 entrance to the nVCC development site (at the adopted path crossing zone) being excavated to remove the JK on **17/08/22**, image looking east towards the excavator.
2. Image 2 shows the completed filling with the JK barrier visible which followed, image looking north.
3. Image 3 shows the completed filling with the JK barrier visible, image looking east again.
4. The JK removal operation is as recorded on Batch 1 of the Neals Soils records, i.e. on **17<sup>th</sup> and 18<sup>th</sup> August 2022**.
5. Batch 1 of Neal Soils records are as provided previously, refer to email of **01/07/24** (MRY to RD).
6. These excavation works were carried out in the presence of Walters INNS Management Consultant CSM Ecology.
7. The INNS Report and Management Plan of **April 2022** has been provided previously.



Notes:

1. The route indicated in black dotted line was used in the ongoing period by Walters for their main access to the nVCC development field for the Enabling Works Projects from **August 2022 until TCAR2 was available in May 2023.**
2. The area highlighted yellow with red border was cleared under a new EPSDL for TCAR2 in **October 2022. The area shown in red with yellow outline was excavated on 14<sup>th</sup> and 15<sup>th</sup> November 2022.**
3. **Note - TCAR1 is widened to provide TCAR2.**
4. Tree stumps from this location were stored at 2 locations as follows, at the TCAR 1 entrance and at the main nVCC development field, both were for reuse as hibernacula/ diversity in the reinstatement programme to follow in **2023** when TCAR 1 was reinstated (see inset image of stumps being handled during the TCAR2 excavation works).
5. The white/ blue hatched zone indicates where a windrow of the salvaged subsoil/ topsoil was stored between excavation and reuse at TCAR1/2 in **April/ May 2023.**
6. No INNS were encountered in the yellow zone of TCAR2 excavation/ construction.
7. INNS, JK, was excavated from the red shaded area with yellow border on **11/05/23** as recorded on the Batch 2 of the Neals Soils records, i.e. on **11<sup>th</sup> May 2023.** Batch 2 Neal Soils records as provided previously - refer to email of 01/07/24 (MRY to RD). **Batch 3 of the Neals Soils records were forwarded to SWP on 15/07/24.**
8. A JK barrier could not be introduced at the red zone due to the construction detailing requiring a permeable substrate for the approved SUDS drainage design
9. Site clearance/ excavation works were carried out in the presence of Walters INNS Consultant CSM Ecology
10. The INNS Report and Management Plan of **April 2022** has been provided previously.
11. Non-INNS contaminated surplus soil was disposed of offsite by Walters.

**'Old Access Route' - Japanese Knotweed Disposal Records and Associated Information**



### Notes

1. Image provided opposite shows the excavation of the INNS at the widened access road into the nVCC Development field, which is the creation of the additional width required to form the TCAR2.
2. The arisings are being loaded to the Neals Sils wagon and these loads going off site are recorded in the Batch 3 tickets dated 14<sup>th</sup> and 15<sup>th</sup> of November 2022.
3. The Walters RAMS detail how the cleanliness of the machinery was managed.

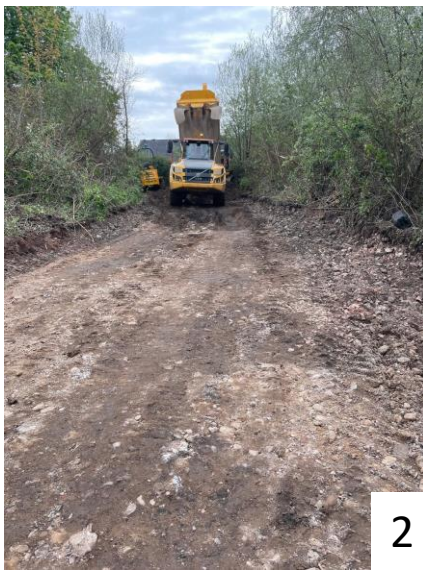


## Notes

1. Image 1 shows the re-emergence of JK at the TCAR2 verge areas on **22/04/23** which led to the proposals for the installation of further vertical barriers to protect the permanent TCAR2 works.
2. TCAR2 was constructed between **October 2022 and May 2023**.
3. As the works were nearing completion and the route was available for servicing traffic to and from the main site, the tennis court spur was closed to use and was topsoiled prior to receiving planting. There was no evidence of JK at the entrance point at this time and excavation with a 7M buffer was in no way possible due to the site extent limitations as explained at site on **22<sup>nd</sup> May 2024** with members of the public present following recent accusations.
4. Excavated material from the tennis courts contained no INNS and the topsoil used for the planting at the tennis courts was brought from the main nVCC Enabling Works site from the non-contaminated topsoil materials salvaged following the disposal of Himalayan Balsam contaminated soils in 2022 (see images)
5. Topsoil for the remainder of TCAR1 from the verge outside City Hospice to the TCAR2 junction was supplied from the windrow of soils salvaged from the original TCAR2 excavation as shown stored on slide 5 and from the nVCC development site.
6. A further precautionary operation as shown opposite was undertaken on **11 May 2023** where a vertical JK barrier was introduced to protect the TCAR2 footprint from JK spread from the north verge. The JK at the location to the north of this protective barrier could not be excavated and disposed of because the areas were outside of the Enabling Works Project footprint. A spray treatment programme is in place



1



2



3



4



5

### Notes:

These 5 images included show the topsoiling operation underway at TCAR1

1. Image 1 shows the works commencing at the verge in Whitchurch Hospital Grounds adjacent to City Hospice. The dumper is delivering soil from the main compound of the Enabling Works Project
2. Image 2 shows the works progressing along TCAR 1 where both dumpers and dump trucks can be used on the internal site roads network, again bringing soil from the main Enabling Works compound
3. Image 3 shows the topsoil stockpiles and stumps at the main Enabling Works compound being excavated for transport to TCAR 1
4. Image 4 shows the dumper entering TCAR1 towards the City Hospice side with a stone filled crossing of the drainage ditch/swale.
5. Image 5 shows the completed topsoiling of the TCAR1 towards City Hospice prior to the planting being undertaken



Agrotextiles



Biodegradables



Geotextiles



Specialist



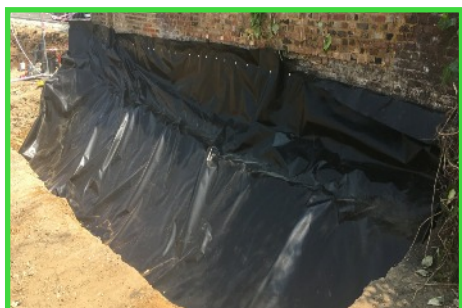
Wildlife



Living Walls & Roofs



Accessories



### Root Barrier C3

**A triple coated linear barrier designed to protect structures and services from root damage and control the spread of invasive plants.**

Root Barrier C3 is a special triple coated, twin reinforced, polyethylene membrane - offering the strength and durability of a ground engineering fabric with the impenetrability of a geomembrane. The fabric is also highly resistant to natural acids, alkalis, bacteria and fungi

Root Barrier C3 is a tough, flexible and puncture resistant barrier which is highly resistant to root penetration and designed to protect structures and services from tree root damage, as well as controlling the spread of invasive plants (Such as Japanese Knotweed, Giant Hogweed, Mares Tail and Bamboo).

The membrane can also be used for tree pits, foundations and service channels.

Root Barrier C3 has a life expectancy of over 50 years which is an important recommended requirement by the Environment Agency - as Japanese Knotweed rhizome can remain dormant for at least 20 years.

#### Features/Benefits:

- High puncture resistance (4,500N [EN ISO 12236])
- Suitable for vertical & horizontal installation
- Extremely flexible
- Multiple roll sizes to cater to all needs
- CE marked
- 50 year life expectancy
- Effective barrier against Japanese Knotweed, Hogweed and other invasive weeds
- Triple coated and twin reinforced layers thermally bonded
- Tough and durable
- UV stabilised
- Passed root test (DD CEN/TS 14416:2005)
- Highly resistant to natural acids, alkalis, bacteria and fungi
- Impermeable membrane

Root Barrier C3 (Solar Black)



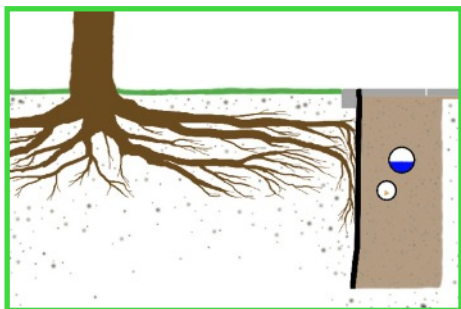
1137-CPR-0613/29

Application Categories: Landscaping and Weed Control, Tree Protection

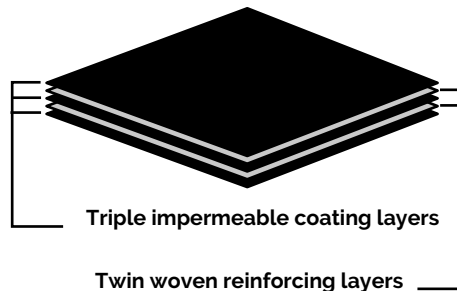
Hy-Tex (UK) Limited  
Aldington Mill, Mill Lane,  
Aldington, Ashford, Kent  
TN25 7AJ

01233 720097  
sales@hy-tex.co.uk  
www.hy-tex.co.uk  
01233 720098





Root Barrier C3 Lapping Tape



### Root Barrier C3 complies with...

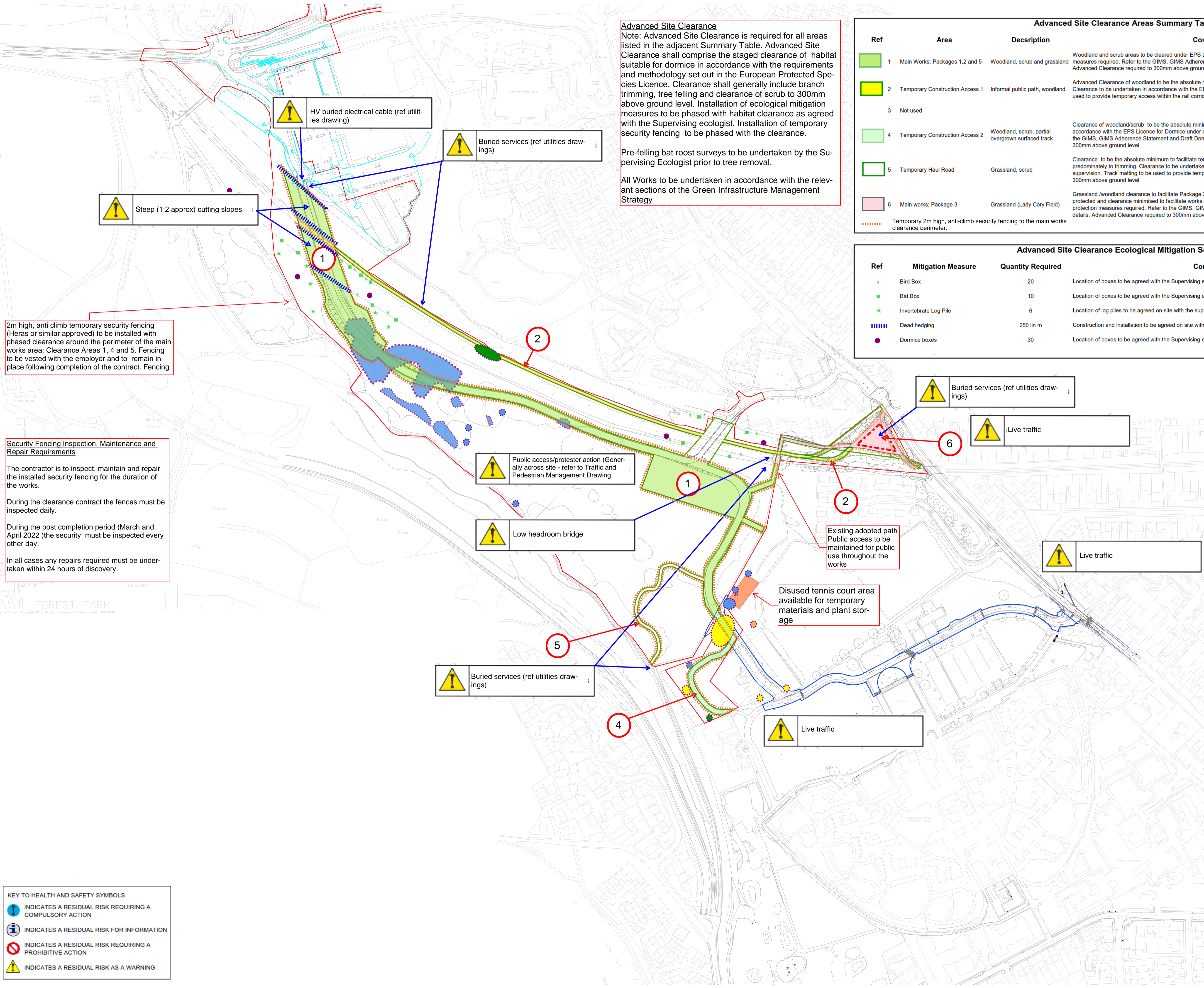
- Mandatory CE Mark certification
- BS5837, 2014 clause 13.1 Trees in relation to Construction recommendations
- National Joint Utilities Group Guidelines for Utility Apparatus in Proximity to Trees
- Environment Agency Knotweed Code of Practice recommendations

### Guidance

- Lapping tape also available
- We suggest 0.5m overlaps as standard practice

Feature	Hy-Tex Root Barrier C3 (Solar Black)
Material	Triple coated, twin reinforced, impermeable, polyethylene barrier membrane
Tensile Strength	md 34kN/m cd 31kN/m [EN ISO 10319]
Elongation	md 25% cd 20% [EN ISO 10319]
Puncture Resistance	4.500N [EN ISO 12236]
UV Stabilisation	400 kLy
Colour	Black
Weight	365g/m <sup>2</sup>
Roll Size	1.00, 1.50, 2.00, 3.00 & 4.00m x 25.00m 1.00 & 2.00m x 50.00m + specials
Life Expectancy	<b>Buried:</b> predicted to be durable for over 50 years in natural soils with pH between 4 and 9 and soil temperatures lower than 25°C. <b>Permanently Exposed:</b> expected half strength life of approx 7 years in UK conditions.
HDPE backed bitumen "Root Barrier Lap Tape" in 300mm x 20m reels is also available	

Application Categories: Landscaping and Weed Control, Tree Protection



**Advanced Site Clearance**  
 Note: Advanced Site Clearance is required for all areas listed in the adjacent Summary Table. Advanced Site Clearance shall comprise the staged clearance of habitat suitable for dormice in accordance with the requirements and methodology set out in the European Protected Species Licence. Clearance shall generally include branch trimming, tree felling and clearance of scrub to 300mm above ground level. Installation of ecological mitigation measures to be phased with habitat clearance as agreed with the Supervising ecologist. Installation of temporary security fencing to be phased with the clearance.  
 Pre-felling bat roost surveys to be undertaken by the Supervising Ecologist prior to tree removal.  
 All Works to be undertaken in accordance with the relevant sections of the Green Infrastructure Management Strategy

Ref	Area	Description	Comments/Restrictions
1	Main Works: Packages 1,2 and 5	Woodland, scrub and grassland	Woodland and scrub areas to be cleared under EPS Licence for Dormice with ecological supervision. Other species protection measures required. Refer to the GIMS, GIMS Adherence Statement and Draft Dormouse Licence Application for details. Advanced Clearance required to 300mm above ground level
2	Temporary Construction Access 1	Informal public path, woodland	Advanced Clearance of woodland to be the absolute minimum to facilitate temporary access, confined y to trimming of branches. Clearance to be undertaken in accordance with the EPS Licence for Dormice under ecological supervision. Track matting to be used to provide temporary access within the rail corridor. (Note low headroom bridge.)
3	Not used		
4	Temporary Construction Access 2	Woodland, scrub, partial overgrown surfaced track	Clearance of woodland/scrub to be the absolute minimum to facilitate temporary one-way access. To be undertaken in accordance with the EPS Licence for Dormice under ecological supervision. Other species protection measures required. Refer to the GIMS, GIMS Adherence Statement and Draft Dormouse Licence Application for details. Advanced Clearance required to 300mm above ground level
5	Temporary Haul Road	Grassland, scrub	Clearance to be the absolute minimum to facilitate temporary access for the construction of the foul drain only, confined predominately to trimming. Clearance to be undertaken in accordance with the EPS Licence for Dormice under ecological supervision. Track matting to be used to provide temporary access without ground disturbance. Advanced Clearance required to 300mm above ground level
6	Main works: Package 3	Grassland (Lady Cory Field)	Grassland /woodland clearance to facilitate Package 3 works and construction vehicle turning area, perimeter woodland to be protected and clearance minimised to facilitate works. Woodland clearance under ESP Licence for Dormice. Other species protection measures required. Refer to the GIMS, GIMS Adherence Statement and Draft Dormouse Licence Application for details. Advanced Clearance required to 300mm above ground level
..... Temporary 2m high, anti-climb security fencing to the main works clearance perimeter.			

Ref	Mitigation Measure	Quantity Required	Comments/Restrictions
◆	Bird Box	20	Location of boxes to be agreed with the Supervising ecologist on site
■	Bat Box	10	Location of boxes to be agreed with the Supervising ecologist on site
★	Invertebrate Log Pile	6	Location of log piles to be agreed on site with the supervising ecologist.
	Dead hedging	250 lin m	Construction and installation to be agreed on site with the supervising ecologist.
●	Dormice boxes	30	Location of boxes to be agreed with the Supervising ecologist on site

2m high, anti climb temporary security fencing (Heras or similar approved) to be installed with phased clearance around the perimeter of the main works area: Clearance Areas 1, 4 and 5. Fencing to be vested with the employer and to remain in place following completion of the contract. Fencing

**Security Fencing Inspection, Maintenance and Repair Requirements**  
 The contractor is to inspect, maintain and repair the installed security fencing for the duration of the works.  
 During the clearance contract the fences must be inspected daily.  
 During the post completion period (March and April 2022) the security must be inspected every other day.  
 In all cases any repairs required must be undertaken within 24 hours of discovery.

**Invasive species approximate locations and extents**

- Himalayan Balsam
- Japanese Knotweed
- Cotoneaster
- Himalayan Honeysuckle

Refer to MM Green Infrastructure Management Strategy for further details and treatments required for all invasive species.

REV	DATE	BY	DESCRIPTION	CHK	APP
P05	13/01/22	GW	Jan 22 clearance		
P04	22/07/21	GW	Minor amendment		
P03	04/06/21	GW	Autumn 2021 clearance		
P02	20/12/20	GW	Minor amendment		

DRAWING STATUS: D2 - FOR TENDER

1 Capital Quarter, Tynhall St, Cardiff, CF10 4BZ, UK  
 T+ 44 (0) 292 076 9200  
 wsp.com

Ymddiriedolaeth GIG  
 Prifysgol Felindre  
 Velindre University  
 NHS Trust

**VELINDRE UNIVERSITY NHS TRUST**

SITE/PROJECT: nVCC ENABLING WORKS

TITLE: Advanced Site Clearance  
 Extent of Clearance and Ecological Mitigation Requirements

SCALE @ A1: NTS	CHECKED:	APPROVED:
PROJECT NO: 70066877	DESIGNED: GW	DRAWN: GW
		DATE: 10/12/20
DRAWING NO: 70066877-WSP-XX-XX-DR-ASC-P0-103		REV: P05

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**KEY TO HEALTH AND SAFETY SYMBOLS**

- ⓘ INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION
- ⓘ INDICATES A RESIDUAL RISK FOR INFORMATION
- ⊘ INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION
- ⚠ INDICATES A RESIDUAL RISK AS A WARNING

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** 09 August 2024 15:19  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: RE JK Spraying at the TCAR2 Verge

Hi [REDACTED]

CVUHB have given verbal consent to VUNHST, via their contractual arrangements, to spray invasive species on CVUHB land. This is on the basis that the work is underway under licence on adjacent land and that the transfer of ownership to VUNHST is imminent.

Kind regards  
[REDACTED]

[REDACTED]

Dylech drin cynnwys yr e-bost hwn yn gyfrinachol ac nid er mwyn ei rannu. Mae'r neges hon yn gwbl gyfrinachol ac wedi'i bwriadu ar gyfer y person neu'r sefydliad y'i cyfeiriwyd ato. Os nad chi yw derbynnydd bwriadedig y neges yna anwybyddwch a rhowch wybod i mi ar unwaith.

Please treat the contents of this email as confidential and not for sharing. This message is strictly confidential and intended for the person or organisation to whom it is addressed. If you are not the intended recipient of the message then please disregard and notify me immediately.

---

**From:** [REDACTED]  
**Sent:** Friday, August 9, 2024 2:25 PM  
**To:** [REDACTED]  
**Subject:** RE JK Spraying at the TCAR2 Verge

Hi [REDACTED]

Further to yesterday's conversation is you could provide an acknowledgement or similar re the spray treatment being accepted by C&VUUB since last year when Walters commenced at TCAR2. I realise we have the verbal agreement but the FOI was requesting some back up. If you can't provide, don't worry, I will insert some words.

Regards  
[REDACTED]

#hello my name is...  
[REDACTED]

[REDACTED]

Canolfan Ganser Felindre | Velindre Cancer Centre  
Heol Felindre | Velindre Road  
Yr Eglwys Newydd | Whitchurch  
Caerdydd | Cardiff  
CF14 2TL

  
[www.transformingcancerservices.wales](http://www.transformingcancerservices.wales)