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WREXHAM TECHNOLOGY PARK (PHASE 3) - WESTERN GATEWAY ACCESS ROAD BIOSECURITY RISK ASSESSMENT

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1. INTRODUCTION

Wrexham County Borough Council (WCBC) (the Client) are proposing to construct a new road in order to access the new Western Gateway development plateaus, here after referred to as 'The Project'.

The Project comprises a single lane carriageway, 7.3m wide and 250m in length, junction and roundabout. The Project also includes a combined walking and cycling route, associated landscaping and drainage. The general arrangement is show in Figure 1.

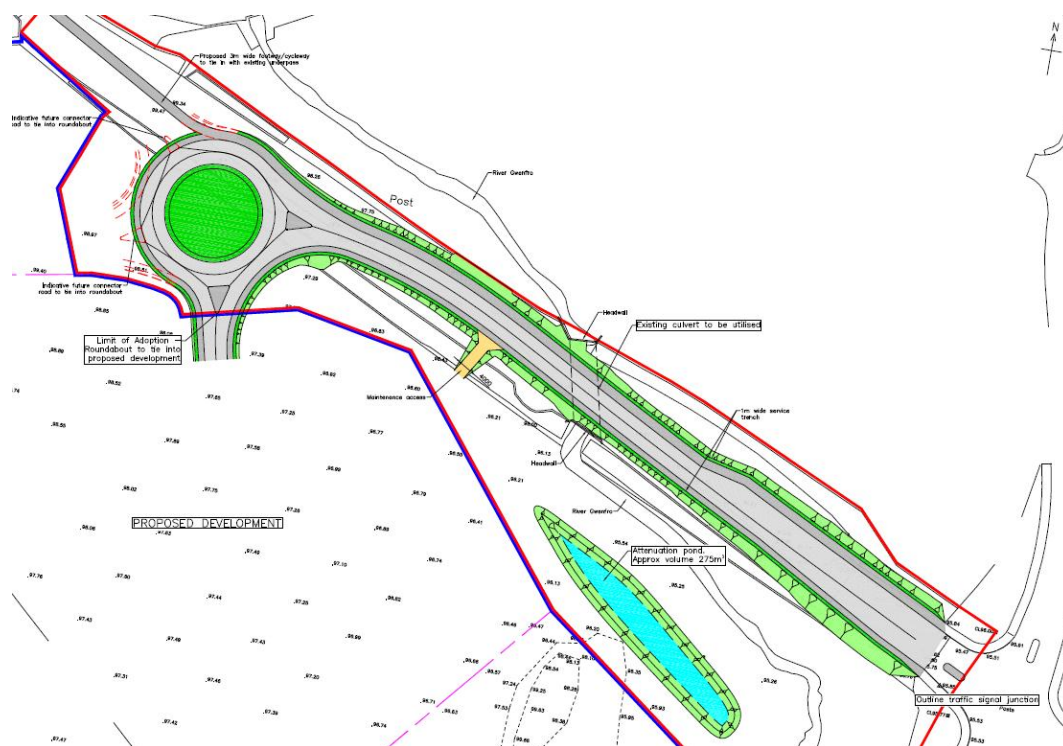


Figure 1: Wrexham Technology Park (Phase 3) Western Gateway access road general arrangement

This document comprises the Biosecurity Risk Assessment prepared by Ramboll on behalf of WCBC.

Planning permission was granted by WCBC in November 2014. A series of conditions are associated with the planning permission. This Biosecurity Risk Assessment satisfies the requirements of planning condition No. 6¹, commitment made in the various documents submitted to support the planning application and requirement from Natural Resources Wales² (NRW).

This Biosecurity Risk Assessment includes appropriate measures to prevent the introduction of Invasive Non Native Species (INNS) during the construction and operational phase of The Project, and measures to control INNS currently present on site.

¹ Planning condition No. 6: No part of the development shall commence until a Biosecurity Risk Assessment has been submitted to and approved in writing by the Local Planning Authority. The Assessment shall include appropriate measures to prevent the introduction of Invasive Non Native Species (INNS) during the construction phase, and measures to control INNS as are currently present on site. The measures and proposals shall be fully implemented in strict accordance with the details as are approved.

² Letter Ref: NT/2014/116153/04-L01 (30th October 2014) Construction of New Highway (250m long and 7.3m wide single lane carriageway) and combined walking and cycling route (3m wide) vacant site on land west of Croesnewydd Road, Wrexham, LL11 3BQ

The scope of this risk assessment is to:

- Identify hazards posed by INNS, the severity of the hazards and likelihood that they will occur; and
- To define mitigation measures to reduce the risk of activities which may cause spread of INNS.

On this basis, the objective is to guide an appropriate management response and control measures to reduce the risk of INNS spread during the construction and operational phase of the development on and off the site.

2. PROJECT BACKGROUND

This Project is located approximately 1.5 km west of Wrexham town centre. The Project will tie into an existing junction (traffic signalled cross road facility completed in 2013) to the east. This recently constructed facility was provided as part of the new and realigned Croesnewydd Road scheme (Wrexham Technology Park Phase 2). The Project is approximately aligned east-west along an existing dismantled mineral railway, the former Croesnewydd Triangle to Gatewen railway line.

Surveys undertaken on 22nd April 2014 and 10th July 2014³ to inform the planning application recorded the presence of Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*) within the planning application boundary.

Japanese Knotweed

Japanese knotweed is the UK's most invasive plant. It forms dense clumps and can reach 3m in height and is extremely fast growing. Although it cannot produce viable seeds in the UK as all plants are female it spreads very quickly via root rhizomes which can extend underground for up to 7m from the above ground visible part of the plant. It causes problems in a range of habitats by displacing native flora and provides a poor habitat for fauna. It is mostly found growing along roadsides, railways, watercourses and on derelict sites. It can pose a major risk to structures as the roots can damage buildings, roads and surfaces. It is the most difficult invasive plant to eliminate as a fragment of rhizome as small as 0.7g can regenerate either in-situ or if moved in soils⁴. Japanese knotweed was recorded in a localised area to the south of the River Gwenfro and in the woodland to the north of the river - Drawing No. 34454-INNS-01 refers.

Himalayan Balsam

Himalayan balsam is a tall annual plant (up to 3m in height). It forms dense stands usually along river banks which suppress native vegetation and when the plant dies back in winter the soil is exposed, increasing erosion. Seeds, which are produced in explosive seed pods and can be scattered up to 7m away, are easily transported by water or in moved soil and remain viable for up to 2 years⁵. Himalayan balsam was present in extensive dense stands along the River Gwenfro corridor and within the woodland understory predominantly to the east of the site - Drawing No. 34454-INNS-01 refers.

³ Western Gateway, Wrexham - Ecological Report. Ref: 61033427/ENV/02 (Ramboll, August 2014)

⁴ Managing Invasive Non- Native Plants in or Near Freshwater (Environment Agency, 2010)

⁵ Managing Invasive Non- Native Plants in or Near Freshwater (Environment Agency, 2010)

3. RELEVANT LEGISLATION

Below is a brief summary of some of the most pertinent legislation pertaining to Japanese knotweed and Himalayan balsam. It is intended to provide an overview of the key issues and not a comprehensive guide and users should seek legal advice.

Both Himalayan balsam and Japanese knotweed are listed on Schedule 9 of the Wildlife and Countryside Act (WCA) 1981 as non-native invasive species. Under the Wildlife and Countryside Act 1981 it is an offence to 'plant or otherwise cause [Japanese knotweed/ Himalayan balsam] to grow in the wild'. This includes spreading the species or transferring infested ground material from one area to another. Anyone convicted of an offence under Section 14 of the WCA 1981 may face a fine of £5,000 and/or 6 months imprisonment, or 2 years and/or an unlimited fine on indictment.

Infested plant material is considered a 'controlled waste' under the Environmental Protection Act 1990. It is an offence to keep, treat or dispose of controlled waste in a manner likely to cause pollution to the environment or harm to human health. Waste must be transferred to an authorised person and waste transfer note must be completed and signed giving a written description of the waste⁶ as per the Waste (England and Wales) Regulations 2011.

The Hazardous Waste Regulations 2005 contain provisions about the handling and movement of hazardous waste. Untreated Japanese knotweed and Himalayan balsam is not classed as hazardous waste, but material containing Japanese knotweed which has been treated with certain herbicides, may be classified as hazardous waste.

The Environmental Permitting (England and Wales) Regulations 2010 sets out the powers, functions and duties of the regulators and includes reference to the 'exercise of relevant functions'⁷ derived from the European Waste Framework Directive. These Objectives state that necessary measures shall be taken to ensure that *"...waste management is carried out without Endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals; without causing a nuisance through noise or odours; and without adversely affecting the countryside or places of special interest."*

The correct management and disposal of plant material from INNS is vital and there are regulations covering the composting, burning and burial of plant materials onsite and the transfer and disposal of material to licensed sites.

Use of herbicides is likely to be part of any control strategy for INNS. The Control of Pesticides Regulations 1986 require any person who uses a pesticide to take all reasonable precautions to protect the health of human beings, creatures and plants, safeguard the environment and in particular avoid the pollution of water. Approval from NRW will be sought before application of pesticides in or near water.

⁶ As per regulation 35 of the Waste (England and Wales) Regulations 2011

⁷ Schedule 9, Paragraph 4 of the Environmental Permitting (England and Wales) Regulations 2010

4. POTENTIAL IMPACT

There is potential for Japanese knotweed and Himalayan balsam to spread both naturally and as a direct result from construction and operation/maintenance of The Project.

The River Gwenfro has the potential to act as a pathway which would facilitate natural spread of INNS.

Construction Phase

INNS could be spread as a direct result of The Project through:

- Disturbance of soil in areas of INNS during vegetation clearance and construction works (including accidental disturbance through trespass and vandalism);
- Inappropriate movement of infested soils or vegetation during earthwork movements;
- Inappropriate use of infested soils during earthworks;
- Inappropriate disposal or storage of infested soils; or
- Small fragments of roots (Japanese knotweed) and/or seeds (Himalayan balsam) being transported accidentally by plant and machinery (for example embedded in vehicle tracks) or water (for example from vehicle washings).

Operational Phase

During the operational phase inappropriate management of the site could result in INNS being spread across site and potentially offsite. A lack of management of these invasive species could also allow their natural spread across the site and into adjacent land.

There is also a potential for future works (i.e. maintenance) or erosion by water to expose soils containing viable buried INNS and thus allow it to regenerate on the site. If Japanese knotweed is allowed to grow in the soft estate on the site it could ultimately cause permanent damage to structures and reduce biodiversity. Himalayan balsam could reduce bank stability on watercourses adjacent to The Project and therefore increase erosion rates and turbidity in rivers. INNS would likely also reduce the value of The Project area to wildlife.

5. GUIDANCE

Measures to control INNS on site by the Contractor shall be undertaken in accordance with established guidance as follows:

- Managing Invasive Non- Native Plants in or Near Freshwater (Environment Agency, 2010)
- Environmental Management guidance. Managing Japanese knotweed on development sites (Version 3, amended in 2013). *The Knotweed Code of Practice* (Environment Agency, 2013)
- Environmental management guidance. *Japanese knotweed, giant hogweed and other invasive plants*. Accessed [07/01/15] from: <https://www.gov.uk/japanese-knotweed-giant-hogweed-and-other-invasive-plants#page-navigation>;
- Invasive species management for infrastructure managers and the construction Industry C679 (CIRIA, 2008)
- Non-native invasive weed species information on the Non-native Species Secretariat website. Accessed [26/01/15] from: <http://www.nonnativespecies.org//home/index.cfm?>
- Pesticide and fertiliser registration, standards and certification information on the BASIS website. Accessed [26/01/15] from: <http://www.basis-reg.co.uk/>
- Plant protection products code of practice on the HSE Chemicals Regulation Directorate website Accessed [26/01/15] from:
<http://www.pesticides.gov.uk/guidance/industries/pesticides/topics/using-pesticides/codes-of-practice/code-of-practice-for-using-plant-protection-products>
- Control of Substances Hazardous to Health (COSHH) regulations guidance on the Health and Safety Executive website. Accessed [26/01/15] from:
<http://www.hse.gov.uk/coshh/index.htm>

6. METHODOLOGY

The following approach was adopted:

- Activities and associated hazards posed by INNS were identified;
- For each activity/hazard, an assessment of the severity of the impact and likelihood of activity to cause spreading INNS prior to control measures was undertaken;
- The overall risk factor was calculated by multiplying severity and likelihood; and
- Control measures to reduce the likelihood of INNS spread were considered and the residual risk was recalculated (until the risk was reduced to an acceptable level).

The aim was to reduce the risk factor as low as reasonably practicable. A Risk factor of 1-4 is considered acceptable and a risk factor of 12+ is unacceptable.

Table 1 outlines the process used to calculate the risk factor. The risk assessment is detailed in Section 7 overleaf.

Table 1: Risk factor calculation

Severity of impact		Likelihood of impact		Severity x Likelihood = Risk factor	The following actions are required to ensure that risks have been reduced to an acceptable level
1	Minimal	1	Very unlikely	Low risk = 1 - 4 Medium risk = 5 - 12 High risk = 12+	Risk Factor after control measures 1-4 OK TO PROCEED
2	Minor	2	Unlikely		
3	Moderate	3	Possible		Risk Factor after control measures 5-11 FURTHER CONTROLS SHOULD BE APPLIED
4	Major	4	Likely		
5	Massive	5	Very likely		Risk Factor after control measures 12+ UNACCEPTABLE – DO NOT PROCEED

7. RISK ASSESSMENT

Activity / Hazard	Severity	Likelihood	Risk Factor before controls	Potential Control Measures to be implemented by the Contractor	Severity	Likelihood	Residual Risk Factor after controls
Tree / vegetation removal in areas where Japanese knotweed is present (woodland to the north of the site) Potential for spread of Japanese knotweed due to disturbance of soils	4	5	20	Japanese knotweed marked and identified prior to any advanced works clearance. Identified stands including a 7m buffer fenced to prevent access. It is currently understood that this area of Japanese knotweed is within The Project footprint, this shall be confirmed prior to any advanced works clearance. All stems shall be cut using a simple scythe method to prevent stem fragmentation (flail mowing, or similar methods, shall not be undertaken) Cut stems shall not come into contact with the soil – for example - by placing stems on a barrier membrane before being disposed of appropriately. Japanese knotweed rhizomes disturbed during tree felling shall be removed and disposed of appropriately. Japanese knotweed regrowth shall be treated using herbicide in this location. Herbicide treatment shall be undertaken by a suitably qualified person⁸, certain herbicides are not to be used/suitable near watercourses and only products approved for use near watercourses under the Control of Pesticides Regulations 1986 are to be used (for example, Glyphosate). Approval must be	4	1	4

⁸ As per The Knotweed Code of Practice

Activity / Hazard	Severity	Likelihood	Risk Factor before controls	Potential Control Measures to be implemented by the Contractor	Severity	Likelihood	Residual Risk Factor after controls
				sought from NRW. Japanese knotweed shall be monitored and treated in the long term (usually 3-5 years). Japanese knotweed treatment shall be agreed in advance with the Local Planning Authority by the Contractor in consultation with the suitably qualified ecologist. Soil shall not be removed from the site (or moved to another location on the site).			
Tree / vegetation removal in areas where Himalayan balsam is present (predominately in woodland to the south of the access road and along the River Gwenfro) Potential for spread of Himalayan balsam within the site due to disturbance of soils and spread from the site.	3	4	12	Himalayan Balsam in areas where tree/vegetation removal is required shall be cut at ground level using a scythe, machete, flail or strimmer before the flowering stage in June (note that cutting earlier than June will promote greater seed production from plants that regrow, hence Himalayan balsam should be cut as close to, <i>but before</i>, the flowering stage as possible). Strimming or hand pulling should be adopted for control of this plant	2	1	2
Soil excavation	4	5	20	Should earthworks be required in the woodland area to the north of the site the amount of soil containing Japanese knotweed material to be excavated shall be minimised where practicable. It is important to carefully identify rhizomes during the excavation process, 'A	4	1	4

Activity / Hazard	Severity	Likelihood	Risk Factor before controls	Potential Control Measures to be implemented by the Contractor	Severity	Likelihood	Residual Risk Factor after controls
				guide to Japanese knotweed rhizome identification and excavation' (included in <i>The Knotweed Code of Practice</i>) should be followed. All Contractors will be fully briefed by a suitably qualified ecologist on how to recognise Japanese knotweed and Himalayan balsam and what to do if they are found in an area where they have not previously been recorded. This will be facilitated using tool box talks, management plans, fact sheets, signage, site induction and other appropriate methods. Soil containing Japanese knotweed material shall be kept separate from clean soil for example, by placing it on top of a barrier membrane. Soil containing Japanese knotweed shall be treated and disposed of appropriately. Any waste produced should be treated on site where possible. Any waste taken off site must be taken by a licensed waste carrier and go to a suitably authorised landfill site. Soil containing Japanese knotweed material that has been treated can be reused for landscaping the site, but should not be taken off site, unless to landfill. Vehicles shall avoid trafficking over the area of Japanese knotweed to avoid spread to other parts of the site. Where it is necessary to traffic areas of Japanese Knotweed then all necessary measures shall be taken to prevent the spread of the plants. For example, as identified in the site housekeeping section, areas infested by Japanese knotweed that are not going to be excavated should be protected by root barrier membrane installed flat on the			

Activity / Hazard	Severity	Likelihood	Risk Factor before controls	Potential Control Measures to be implemented by the Contractor	Severity	Likelihood	Residual Risk Factor after controls
				ground surface (following cutting of the above ground part of the plant) if they are likely to be disturbed by vehicles. The root barrier membranes shall be protected from damage by vehicles with a layer of sand of suitable thickness above and below the root barrier membrane, topped with a layer of hardcore or other suitable material as specified by a suitably qualified engineer.			
Further spread of Japanese knotweed along River Gwenfro Corridor.	4	5	20	Area where Japanese Knotweed is present on the southern bank of the River Gwenfro shall be fenced appropriately, at least 7m way from the plants. The fenced area should be clearly signed with restricted access and to state that only appropriately briefed personnel may enter the enclosure. Japanese knotweed shall be monitored and treated in the long term to avoid further spread both on and off site.	4	1	4
Spread of INNS via vehicles on the site	4	5	20	Vehicles shall keep to established tracks. In areas where INNS are present the Contractor shall create a haul road using a strong geotextile overlain with hardcore as a base for vehicles to travel on. All vehicles shall be parked on hardstanding when not in use. Vehicles shall be kept free from accumulated mud, paying particular attention to tyres and wheel arches. Vehicles shall be cleaned when leaving invasive species contaminated areas of the site, wheel washes shall be put in place for this purpose.	4	1	4

Activity / Hazard	Severity	Likelihood	Risk Factor before controls	Potential Control Measures to be implemented by the Contractor	Severity	Likelihood	Residual Risk Factor after controls
				Wheel washes shall be within a designated area that is as close as possible to the contaminated area on which the machinery has been working. A visual inspection of wheel arches and tracks shall be undertaken before any vehicle leaves the site. Water used for cleaning vehicles shall be collected and not discharged into the watercourse. The use of tracked machinery shall be limited where possible. Regrowth of INNS in areas where vehicles have been parked/cleaned should be monitored and sprayed with herbicide if required.			
Delay to construction program	3	3	6	Control measures shall be implemented as soon as possible. Tool-box talk shall be given on INNS, Contractors shall be able to identify Japanese knotweed and Japanese knotweed rhizomes.	3	1	3
Lack of management of INNS in operational phase of The Project with the potential for future works (i.e. maintenance) or erosion by	4	5	20	Follow good site housekeeping measures (outlined below). Monitoring of INNS shall be included within the scheme of long term management.	4	1	4

Activity / Hazard	Severity	Likelihood	Risk Factor before controls	Potential Control Measures to be implemented by the Contractor	Severity	Likelihood	Residual Risk Factor after controls
water to expose soils containing viable buried INNS and thus allow it to regenerate on the site				Following construction the Contractor shall provide and submit Landscape and Ecological Works Inspection Reports on a quarterly basis ⁹ during the 60 month landscape and ecological works maintenance and aftercare period.			
Japanese knotweed is allowed to grow in the soft estate on the site with the risk it could ultimately cause permanent damage to structures and reduce biodiversity	4	5	20	Japanese knotweed shall be treated (during the construction and aftercare period) following the Knotweed Code of Practice: Managing Japanese knotweed on Development Sites (Version 3, amended in 2013) (Environment Agency).	4	1	4
Himalayan balsam could reduce bank stability on watercourses adjacent to The Project and therefore increase erosion rates and turbidity in rivers. INNS would likely also reduce the value of The Project area to wildlife.	3	3	6	Himalayan balsam shall be managed following Managing Invasive Non- Native Plants in or Near Freshwater (Environment Agency, 2010) and other relevant guidance included in Section 0.	4	1	4

⁹ As outlined in Wrexham Technology Park (Phase 3) Western Gateway Access Road, Tender Documents - Works Information Appendices Vol 3b

8. GENERAL SITE MANAGEMENT OF INVASIVE FLORA

All known locations of Japanese knotweed and Himalayan balsam are clearly identified on Drawing No. 34454-INNS-01 and the need to manage these areas appropriately is discussed in the Construction Environmental Management Plan (CEMP). These will be updated as necessary particularly prior to the commencement of the construction phase.

All Contractors will be briefed by a suitably qualified ecologist as to the known locations of invasive plants, specific working practices to be followed, how to recognise Japanese knotweed and Himalayan balsam and what to do if they are found in an area where they have not previously been recorded. This will be facilitated using tool box talks, management plans, fact sheets, signage, site induction and other appropriate methods.

High visibility fencing will be erected prior to construction to establish a 7m isolation area around patches of Japanese knotweed, within which no works (aside from treatment) are to take place (referred to as 'Restricted Areas' which will include appropriate 'Restricted Access' signage¹⁰ (Appendix 1)'). No soils in these areas are to be disturbed or spread across the site without treatment.

Himalayan balsam should be treated prior to flowering. Mitigation should be in accordance with legislation and methods of best practice.

¹⁰ Extracted from Managing Japanese knotweed on development sites (Version 3, amended in 2013). The Knotweed Code of Practice (Environment Agency)

9. SUMMARY OF PROPOSED MITIGATION MEASURES

All methods require the implementation of good site housekeeping. Attributes of good site housekeeping are as follows:

- i. No vehicles with caterpillar tracks will be used within the Restricted Areas (if treatment includes use of vehicles in this area);
- ii. A suitably qualified ecologist will oversee the implementation of this method statement, including the provisions for avoiding contamination with invasive species;
- iii. Everyone working on site must clearly understand the role and authority of the suitably qualified ecologist, this will be included in site inductions for all Contractors;
- iv. Areas infested by Japanese Knotweed that are not going to be excavated shall be protected by root barrier membrane installed flat on the ground surface (following cutting of the above ground part of the plant) if they are likely to be disturbed by vehicles. Root barrier membranes will be protected from damage by vehicles with a layer of sand above and below the root barrier membrane, topped with a layer of hardcore or other suitable material as specified by a suitable qualified engineer;
- v. Movements of soils infested with invasive flora shall be minimised both in terms of the number of vehicle movements and the distance infested soils are moved;
- vi. Prior to moving any soil infested with invasive flora, on site haulage areas shall be assessed for risks, avoiding watercourses, transport corridors and areas of high nature conservation and amenity value. Haulage routes shall be kept as short as possible. In order to minimise the risk of spreading invasive flora to uninfested areas, vehicles transporting infested material shall not be overfilled and shall be covered with sheeting prior to leaving the infested area. The Contractor shall inspect all haulage routes weekly to ensure early identification and removal of any new patches of invasive flora. Haulage routes shall be clearly marked out;
- vii. Vehicles shall be cleaned before being used in Japanese knotweed infested areas to reduce the volume of infested vehicle washings;
- viii. Vehicles shall be decontaminated whenever they leave an area infested with Japanese knotweed. Where possible working practices should avoid vehicles tracking/driving into infested areas. Where it cannot be avoided then a thorough visual inspection of the vehicle shall be undertaken including an inspection of wheel tracks/treads and arches, and all fragments of vegetation and soil removed using brushes or hoses as appropriate immediately prior to the vehicle leaving the infested area. Alternatively if the vehicle is within an area where it is possible to contain and collect the material washed off such as over a root barrier membrane or hard surface the vehicle can be cleaned using a pressure washer and stiff haired brushes. All materials dislodged shall be included in the material infested with that specific invasive plant and will not be allowed to contaminate drains, ditches or watercourses. See Section 7 of the knotweed Code for details;
- ix. Vehicles used to transport infested soils will be thoroughly pressure-washed in a designated wash-down area before being used for other work;

- x. The material left after the vehicles have been decontaminated will be contained, collected and disposed of along with the other invasive plant material. If water has been used in the cleaning process settlement alone may not be adequate to separate invasive plant material (seeds of Himalayan balsam and plant material float). For further guidance on vehicle washing see pollution prevention guidelines Vehicle Washing and Cleaning: PPG13 (Environment Agency, 2007).

It should be noted that in instances where it is not necessary to disturb soil infested with invasive flora only points i, ii, iii and iv above shall apply.

Most control and treatment methods also require some treatment with herbicides. Herbicide treatment shall only be carried out by a competent and qualified person. Contractors shall have the appropriate National Proficiency Tests Council (NPTC) certification and must carefully follow the instructions on the herbicide label.

Only certain herbicides can be used in or near water, and approval will be obtained from NRW prior to herbicide use in these areas. 'In or near water' includes 'drainage channels, streams, rivers ponds, lakes, reservoirs, canals and dry ditches'. It also covers control of vegetation growing on banks or areas immediately adjacent to water bodies. If a herbicide is to be used within 5m of water, or treatment may impact water quality NRW shall be contacted beforehand and proposed treatment will be discussed with a BASIS1 qualified officer from the local Area NRW office (Tel: 0300 065 3000). The BASIS1 qualified officer will advise whether an AqHerb01 notification form is required. If so the form shall be completed and submitted to NRW at least two weeks in advance of the planned treatment. Treatment shall not start until consent has been received from NRW. Herbicides will only be applied by or under the supervision of a competent person, this is considered to be a person with the necessary skills, knowledge and qualifications. They must hold a relevant NPTC certificate of competence (see Form AqHerb01 for details).

Due to the persistence of invasive flora all control and removal methods require monitoring to confirm their effectiveness and allow any regrowth to be treated promptly. Re-growth of invasive flora from treated areas and locations in which infested material have been stored (either temporarily in a stockpile or bund or permanently buried) and establishment of any new areas shall be monitored during construction and as part of the 60 month landscape and ecological works maintenance and aftercare period. In this period any re-growth shall be treated using an appropriate method (likely to be herbicide though biological control may be used for Himalayan balsam along the River Gwenfro).

The landscape and ecological inspection reports¹¹ to be submitted shall include plans showing areas where invasive flora has been treated, the location of all root barrier membranes and buried materials infested with invasive flora (if applicable). This will help to ensure infested soils are not disturbed through future maintenance, landscaping or other operations.

¹¹ Wrexham Technology Park (Phase 3) Western Gateway Access Road TENDER DOCUMENTS – VOLUME 3B (Ref DP14106). The Contractor shall provide Landscape and Ecological Works Inspection Reports on a monthly basis; information provided shall include operations carried out/location of operations/names of operatives/contractors comments. The Landscape and ecological inspection reports to be submitted at the monthly Progress Meetings as a part of the Environmental Co-ordinator duties and submitted quarterly during the 60 month landscape and ecological works maintenance and aftercare period.

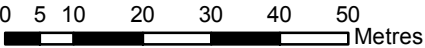
DRAWINGS



Key

-  Project planning application boundary
-  *Fallopia japonica* (Japanese Knotweed)
-  *Impatiens glandulifera* (Himalayan Balsam)
-  River Gwenfro

Approximate location of invasive non-native species



Contains Ordnance Survey data © Crown copyright and database right 2014



Client

Wrexham County Borough Council

Project Title

Western Gateway Wrexham

Project Number

61034454

Figure Title

Invasive non-native species



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Date	19/01/2015	Prepared By	HLN
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Drawing No.	34454-INNS-001	Revision	00
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Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

APPENDIX 1

RESTRICTED ACCESS' SIGNAGE



Restricted Access

**The soil in this area
contains Japanese knotweed
and is being treated.**

Do not enter unless authorised.

**Do not remove soil from this
area without authorisation.**