

Dragon Parc – Japanese Knotweed Management Plan

BMQ-JBAU-XX-XX-RP-EN-0002-S3-P01-KMP

October 2019

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Revision History

Revision Ref/Date	Amendments	Issued to
17/10/2019	Draft Report	Tim Carter
17/10/2019	Draft Report	Huntley Wood Investments Ltd

Contract

This report describes work commissioned by Huntley Wood Investments Ltd.

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Purpose

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Contents

1	Introduction	1
1.1	Purpose	1
1.2	Project Description	1
1.3	Site Description	1
1.3.1	Japanese Knotweed extent	2
2	Overview	3
2.1	Brief description of management plan	3
2.2	Setting objectives	3
2.3	Objective 1: Immediately contain existing Japanese knotweed in the construction areas to contain further spread	3
2.4	Objective 2: Eradicate Japanese knotweed colonies within the works area	3
2.5	Objective 3 (aspirational): Successfully treat all Japanese Knotweed onsite	4
3	Specific control plans for Japanese Knotweed	5
3.1	Management Objectives	5
3.2	Management options	5
3.3	Limitations and threats to management objectives	5
3.4	Actions planned	5
3.4.1	Construction works in potentially affected areas	5
3.4.2	Removal offsite	6
3.4.3	Transportation	6
3.4.4	Treatment	7
3.5	Working near water	7
3.5.1	Using herbicide near water	7
3.6	How actions will be evaluated	7
3.7	Changes to this plan	7

Abbreviations

COSHH	Control of Substances Hazardous to Health
KMP	Knotweed Management Plan
MTCBC	Merthyr Tydfil County Borough Council
NRW	Natural Resources Wales
PPE	Personal Protective Equipment

1 Introduction

1.1 Purpose

This Japanese Knotweed Management Plan (KMP) contains a set of detailed recommendations to manage and eradicate the resident population of Japanese Knotweed at the Dragon Parc site in Pentrebach, Merthyr Tydfil, Wales. It outlines measures that will be taken to prevent the spread of Japanese Knotweed during construction of the proposed drainage improvements and outlines the objectives and methods behind the approach to eradication of the species from the site.

1.2 Project Description

The site was purchased by Huntley Wood Investments Ltd with the intention to build houses, in order to contribute to Merthyr Tydfil County Borough Council's (MTCBC) objective of building 2,000 homes by 2032. However, the site predominantly falls under Flood Zone C2. In Wales, only less vulnerable forms of development are permitted in Flood Zone C2. This excludes housing, which is considered a more vulnerable form of development. As a result, in order to make the site suitable for housing and obtain planning for the proposed development, a scheme to reduce the flood risk on the site must be brought forward and developed.

The flood risk arises from the west of the site, where water from small rivers in the hills flows down and floods the site.

In order to address the current flood risk, the developer is proposing to construct a swale along the western boundary of the site, which will collect surface water as it flows in the direction of the site, thereby preventing it from flooding. This will allow the flood risk of the site to be reassessed and subsequently developed for housing. Water from the swale will flow into the River Taff via a new outfall, which will be constructed in the south-eastern corner of the site.

1.3 Site Description

Dragon Parc is a 7.5ha area of ex-industrial land, which once formed part of the large Hoover site in Pentrebach, on the southern side of Merthyr Tydfil, South Wales. The site has been abandoned since Hoover closed a large proportion of their operations in the town in 2009. Buildings that were present on the site have now been removed, leaving a large empty area of hardstanding.

Table 1-1: Site Description

Site Name	Dragons Park
Site Area	78 ha
Existing Land-use	Brownfield
Purpose of development	Flood mitigation
OS-NGR	SO05400420
Country	Wales
County	Merthyr Tydfil, Glamorgan
Local Planning Authority	Merthyr Tydfil County Borough Council
Lead Local Flood Authority	Merthyr Tydfil County Borough Council

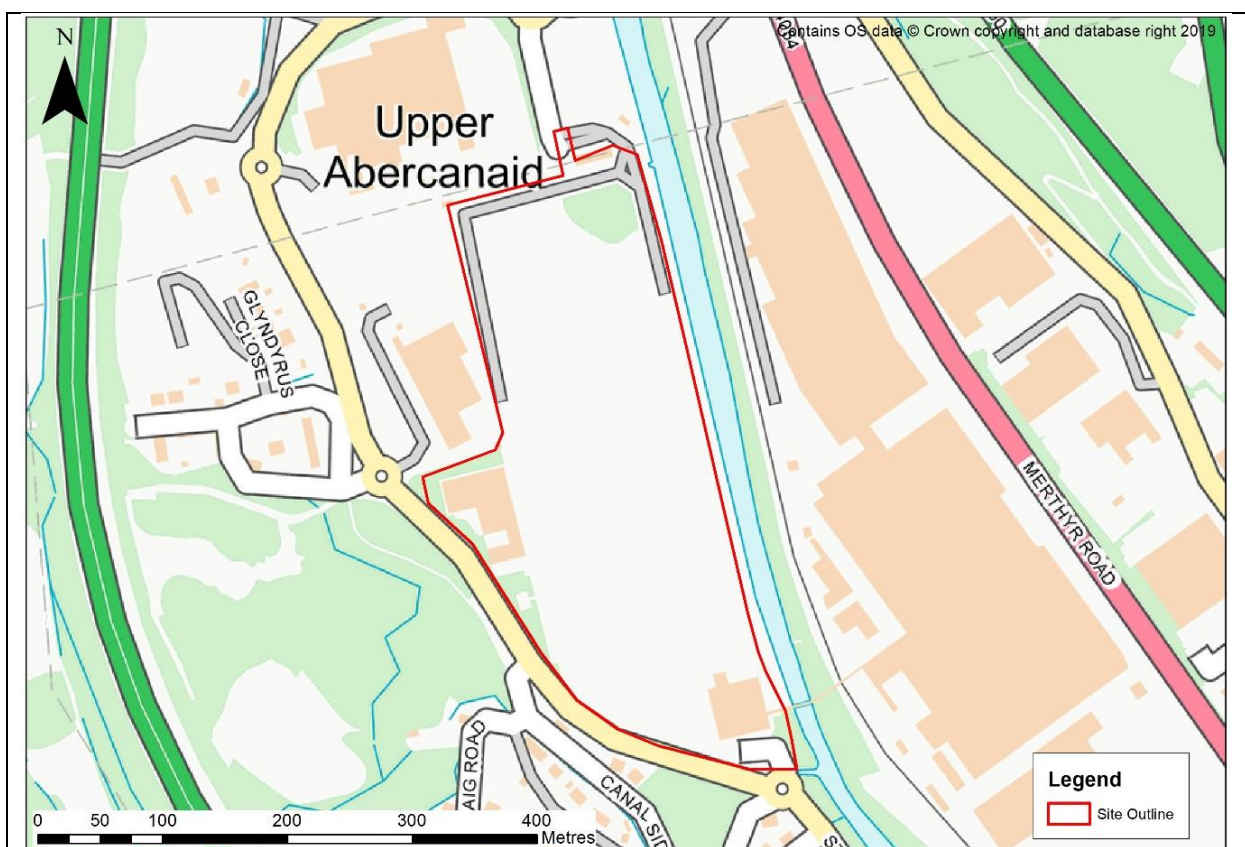


Figure 1-1: Site Location

The immediate area surrounding the site is predominantly industrial and residential, with Hoover still maintaining some operations on the neighbouring site. Mynydd Merthyr ascends steeply to the west of the site. To the east of the site is the River Taff, a main river that flows south, eventually reaching the Bristol Channel via Cardiff Bay.

1.3.1 Japanese Knotweed extent

A survey undertaken in August 2019 mapped the stands of Japanese Knotweed within the site. Toward the south-eastern corner of the site, close to the access point, there is a very large stand. There are further extensive stands along the bank of the River Taff, along the site's eastern boundary. Knotweed is abundant in the proposed locations for the new culvert and outfall. These areas will require knotweed treatment and/or removal works to ensure that the construction phase does not result in spread of knotweed.

2 Overview

2.1 Brief description of management plan

Management of the Japanese Knotweed risk during construction will be the responsibility of the Site Manager, and in their absence, the deputy. This KMP and revisions of this plan shall be kept for future site owners. This KMP should be read in conjunction with government guidance on the control of Japanese Knotweed (see <https://www.gov.uk/guidance/prevent-japanese-knotweed-from-spreading>).

2.2 Setting objectives

The following objectives for the management of Japanese knotweed on site, and the methods of achieving them, have been developed in accordance with the aforementioned gov.uk guidance.

2.3 Objective 1: Immediately contain existing Japanese knotweed in the construction areas to contain further spread

The site has been surveyed for Japanese knotweed. All Japanese knotweed identified by the survey will be fenced/marked on site before the start of construction, in order to prevent accidental spread. A radius of 7m around each Japanese Knotweed stand will be classified as a 'High Priority area' and will either be treated, with an aim to remove the Knotweed, or isolated depending on whether access is necessary to complete the works. Signage will be put up to indicate restricted access to these areas.

Any construction works including vegetation clearance and excavations within the fenced areas will be subject to the management actions in this plan.

All contractors and site operatives will receive training in Japanese Knotweed identification, location of the affected areas and appropriate site practices to be adopted during construction including waste management and biosecurity. Training will be given during inductions for the site. Information highlighting the key features of the plant will be displayed in communal areas.

Biosecurity procedures will be adopted for all construction staff and plant that has to enter knotweed areas. Cleaning areas will be designated at all site egress points for plant and machinery, which would comprise an area covered in a heavy duty impermeable sheet. All machinery and tools used to carry out the works should be cleaned thoroughly in the designated area following completion of control measures.

A large volume of earth will be excavated in order to construct the swale. If possible, material will be reused on site, to reduce the volume sent offsite as waste. However, if any of the material is known or thought to be contaminated with Japanese Knotweed, it will not be re-used in areas that are currently free of knotweed.

No construction or waste materials will be stored adjacent to Japanese Knotweed infected areas.

This KMP will be reviewed on a continuing basis by the site management team from the start of construction to completion in order to ensure the effectiveness of the management requirements and to determine the requirement for any additional control measures.

2.4 Objective 2: Eradicate Japanese knotweed colonies within the works area

Control measures including herbicide application will be practiced up to the start of construction.

In order to minimise the risk of spread of Japanese Knotweed, the project will ensure the effective management and disposal where necessary of all potentially contaminated materials.

All Japanese Knotweed waste materials generated within the site i.e. vegetation, soil or construction waste, will be temporarily stored on an impermeable membrane within the

affected areas or areas that are already contaminated. Any materials removed offsite will be disposed of at an appropriately licenced facility.

Movement of Japanese Knotweed contaminated material across site will be on designated haul routes, avoiding Japanese Knotweed infected areas.

2.5 Objective 3 (aspirational): Successfully treat all Japanese Knotweed onsite

Following completion of construction, all remaining stands of Japanese Knotweed in the site area will be controlled through a programme of herbicidal spraying (following manufacturer's recommendations), in accordance with existing management practices.

All parts of the fenced areas unaffected by construction activities will be routinely monitored for evidence of Japanese Knotweed. Any remaining Japanese Knotweed growing in these areas will be subject to periodic herbicidal treatment until successfully treated.

Regular monitoring will be undertaken during and after construction, and management practices will be reviewed and revised, if necessary, in response to findings.

3 Specific control plans for Japanese Knotweed

3.1 Management Objectives

As mentioned in the previous section, management objectives have been developed to inform the preparation of the KMP and the measures to be undertaken. These are:

- Objective 1: Immediately contain existing Japanese Knotweed in the construction areas to prevent further spread;
- Objective 2: Eradicate Japanese Knotweed colonies within the works area; and
- Objective 3 (aspirational): Successfully treat all Japanese Knotweed onsite.

3.2 Management options

The aforementioned UK Government guidance describes a range of management options for the control of Japanese Knotweed. These are:

- Spraying with chemicals;
 - Ensure anyone spraying holds a certificate of competence for herbicide use or works under direct supervision of a certificate holder;
 - Carry out a Control of Substances Hazardous to Health (COSHH) assessment;
 - Get permission from NRW, as the plants are near water.
- Bury it;
 - At a depth of at least 5m;
 - Cover the remains in a root barrier membrane layer;
 - Do not bury other types of waste with it.
- Burn it;
 - If burning it is an intention, NRW and the environmental health officer at the relevant Local Authority (in this case MTCBC) must be informed in advance.

All management options for knotweed will be considered. The approaches adopted will be confirmed once waste volumes and treatment constraints are known.

Any material excavated within a 7m perimeter of Japanese Knotweed stands will be subject to the procedure of controlled excavation. A regime of herbicide spraying will be applied to the remainder of any stands within the 7m perimeter should evidence of Japanese Knotweed be identified.

3.3 Limitations and threats to management objectives

The presence of Japanese Knotweed onsite is an important consideration during construction of the proposed scheme. The proposals include the creation of a new culvert and outfall in an area where Japanese Knotweed is widespread. Careful management of construction activities and waste materials will be required in order to ensure the scheme does not cause the spread of this invasive species.

3.4 Actions planned

3.4.1 Construction works in potentially affected areas

Before excavation, Japanese Knotweed will be treated with herbicide in accordance with manufacturers recommendations. All users of the herbicide must be appropriately trained.

Before there are any works in contaminated areas, all site operatives will be inducted in good biosecurity practices, including the Check-Clean-Dry campaign.

Use of herbicide in close proximity to the River Taff has the potential to cause significant damage to the biological communities in the watercourse, which is a locally designated

wildlife site. As a result, herbicide will not be used when it is raining or rain is forecast in the day, when it is windy or windy conditions are forecast in the day, or when the soil is saturated. During any construction works, care will be taken to avoid spread. Aspects of the construction works that could result in the spread of Japanese Knotweed include:

- Vegetation clearance;
- Excavation;

Potentially contaminated materials include:

- Japanese Knotweed stems, leaves, roots and rhizomes;
- Other vegetation within the stand of Japanese Knotweed and the surrounding 7m buffer area;
- All soil (including topsoil and subsoil) excavated in this area;
- Construction plant and personal protective equipment (PPE) accessing this area (if appropriate biosecurity procedures are not adopted).

A cleaning area will be installed. This area will comprise an area protected by a membrane or hard surface upon which machinery and equipment can be checked and cleaned of soil and vegetation after each instance of working in an infected site. The same process will be undertaken before any plant leaves site. The cleaning area will be immediately adjacent to the works area or within an existing area of contamination.

Contaminated material that is to be excavated for construction will be removed to a receptor area for treatment or offsite to an appropriate disposal facility.

If material needs to be stored temporarily it will be on an impermeable membrane within the area from which it is sourced. Any temporary stockpile will be clearly signed. The membrane should be a root barrier membrane layer such as Hy-tex root barrier C3.

Where excavation and transportation of potentially contaminated material occurs, it shall be covered. Vehicles transporting waste will not be overloaded, in order to prevent any accidental spillage.

3.4.2 Removal offsite

Great care must be taken to ensure that material which is free from Japanese Knotweed does not become contaminated.

Material where possible will be dealt with on site. If it is decided that Japanese Knotweed will be sent offsite then the contaminated areas will be treated with an approved herbicide two weeks before it is excavated. This will make any rhizome that may have been left behind after it is excavated, less likely to survive.

Any material moved off site must be sent to a waste facility licenced to deal with Japanese Knotweed and appropriate waste transfer licences will be obtained for all material moved off site

3.4.3 Transportation

Within potentially contaminated areas, vehicles with caterpillar tracks should not be used. Any vehicles accessing these areas will be thoroughly cleaned with a pressure-washer before leaving the area. Pressure wash waste will be carefully contained and treated in the same way as other contaminated waste. Access to areas with Japanese Knotweed will be limited to essential vehicles only.

Haulage routes should be assessed and avoid watercourses, transport corridors and areas of high conservation value.

All vehicles used to transport potentially contaminated materials will be suitably enclosed to prevent Japanese Knotweed escaping. Trucks will only be filled to a maximum of 20cm from the top and sealed with a well-secured membrane.

All vehicles will be thoroughly cleaned after transporting Japanese Knotweed. The rear of the vehicle will be cleaned after it has finished moving soil. To clean the vehicle, a pressure washer and stiff-haired brushes will be used, making sure that any areas that may retain rhizomes are thoroughly scoured. Particular attention will be paid to tyre treads and wheel arches. Any material dislodged will be included in the Japanese Knotweed waste. The cleaning process will be carried out over an impermeable membrane layer or hard surface that can contain and collect material washed off. This material must not contaminate the watercourse or any drains in the area. Personnel that undertake the cleaning will have training in what a rhizome looks like.

3.4.4 Treatment

Knotweed will be treated by applying an appropriate herbicide in accordance with manufacturer's guidelines. New growth will be looked for at 4-6 week intervals after treatment and re-treatment would be applied accordingly (application records will be kept). These records will include details of herbicide used, dose rate and application rates and dates applied. Herbicides shall only be applied by persons holding a valid certification. If treatment is ineffective, management techniques will be reviewed.

3.5 Working near water

To avoid the distribution of Japanese Knotweed fragments or rhizomes within the water course system a flail will not be used within 5m of the watercourse. All JK removed from within 5m will be done so by hand.

3.5.1 Using herbicide near water

The use of herbicide adjacent to a watercourse is subject to a NRW licence process. In this case it is probable that the works would constitute a low risk agreement with NRW as they conform to the following criteria

- herbicide is to be used near water, but not actually in or on water. For example, you intend to use herbicide along the top of a river bank, but not within the channel
- the treatment location is not within a designated site (Site of Special Scientific Interest, Special Area of Conservation, Special Protection Area or Ramsar)
- the treatment location is not within 1 kilometre of a drinking water abstraction point and not within 500 meters of any other type of licenced water abstraction point

The works will be carried out by a contractor that holds the relevant NPTC or LANTRA certificate of competence and a method statement will be produced that includes all of the standards set out by NRW. These can be found here

<https://naturalresources.wales/permits-and-permissions/water-discharges-and-septic-tanks/using-herbicides/?lang=en>

3.6 How actions will be evaluated

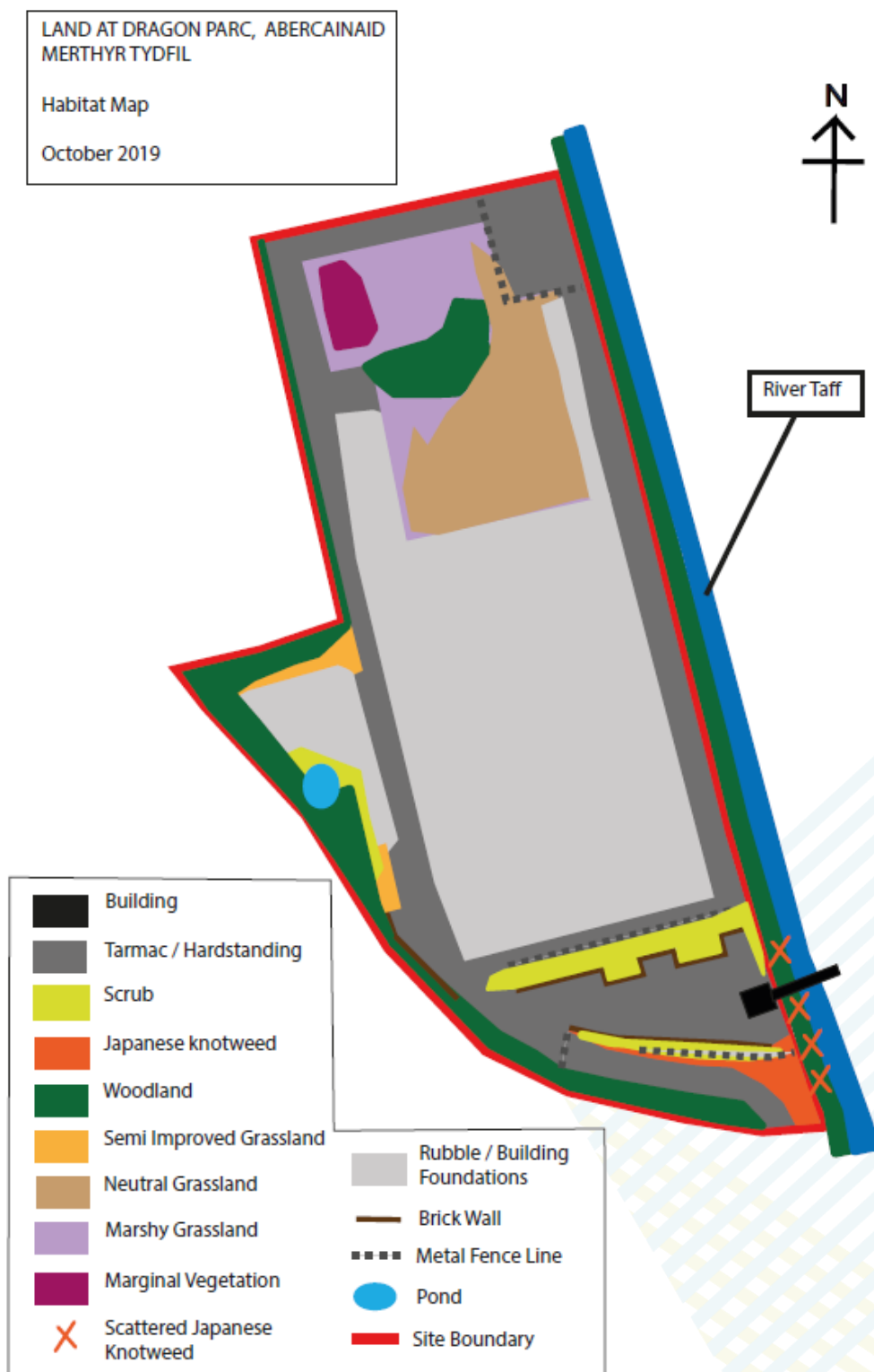
If the level of regrowth is decreasing; then it would indicate the treatment is working. If regrowth remains the same or increases, the treatment is insufficiently effective and may require revision. Revision could be spraying either singly or in combination in weeks between applications, increase in application rate and alteration of herbicide applied (although this may not be possible due to the close proximity of the watercourse).

3.7 Changes to this plan

Should site conditions require a deviation from the steps outlined in this method statement, any changes will be agreed in writing with the county ecologist.

Appendices

A.1 Japanese Knotweed location map



Offices at

Coleshill
Doncaster
Dublin
Edinburgh
Exeter
Glasgow
Haywards Heath
Isle of Man
Limerick
Leeds
Newcastle upon Tyne
Newport
Peterborough
Saltaire
Skipton
Tadcaster
Thirsk
Wallingford
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