WHITWORTH DESIGN LTD

JAPANESE KNOTWEED SURVEY AND REMEDIATION REPORT

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DUTY OF CARE:
JAPANESE KNOTWEED AND YOUR OBLIGATIONS

This site has been identified as containing Japanese knotweed. Japanese knotweed needs to be handled in a responsible manner to protect the environment and prevent property risk, and any works conducted to control or eradicate this invasive weed should be completed in accordance to the Environment Agency 'The Knotweed Code of Practice' 2013 (version 3).

The spread of Japanese knotweed is governed under the Wildlife and Countryside Act 1981 / Wildlife (Northern Ireland) Order 1985. Part I (Wildlife – Miscellaneous), Section 14, Clause 2 of the Act states: … if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence. Schedule 9 (animals and plants to which section 14 applies), Part II (Plants) lists Japanese knotweed. It is therefore a defence to the provision of the Act to undertake all reasonable steps to control Japanese knotweed on, or infringing onto, your land. The plant is not cited under any legislation that requires its presence to be notified to either DEFRA (Department for Environment Food and Rural Affairs) or local planning authorities, and neither is it listed under The Weeds Act of 1959.

Under the Environmental Protection Act 1990, Duty of Care Regulations 1991, Japanese knotweed material and those material contaminated with Japanese knotweed must be removed to a licensed landfill site for disposal, accompanied by appropriate Waste Transfer documentation.

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1 INTRODUCTION

1.1 CONTACTS

1.1.1 JAPANESE KNOTWEED SPECIALIST DETAILS

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1.2 ENVIRONMENT AGENCY GUIDELINES

The Environment Agency advocate the use of 'Knotweed Management Plans' (KMP) where ever possible on development sites where Japanese knotweed is present. Our KMP's are drafted in accordance to the Environment Agencies 'The Knotweed Code of Practice', 2013 (version 3). The 'Survey & Remediation Report' forms the first section of a KMP.

The KMP records Remedial Activities, Objectives and Evaluations. It stores recordable documents such as: Photos, Pesticide Application Records (PAR), Waste Transfer Notes (WTN) and Landfill Weighbridge Tickets (WBT).

An active or completed KMP should be included with a development site's Operation and Maintenance manual.

2 SURVEY

Date of Survey: 12/08/2015

2.1 FULL SITE ADDRESS

Commercial Street
Slathwaite
Huddersfield
West Yorkshire
HD7 5JZ

2.2 DESCRIPTION OF THE SITE

The site is located off Commercial Street and has a total area of 2.4 hectares. The Eastern part of the site is generally flat and covered with rough gravel in the centre of the site and rough grass and shrubs along the eastern, southern and western boundaries of the site.
The northern end of the site is overgrown with brambles and Japanese Knotweed is present along the eastern, north, north-western and western areas of the site. The western edge of the site is vegetated with dense trees and Japanese knotweed is growing on the slope that runs steeply down to Kitchen Clough, a watercourse running north to south which is around 10m below the site levels flowing towards the north.

A public footpath runs through the centre of the site connecting to a footbridge over Kitchen Clough. To the Northern boundary of the site there is a house with a back garden which is also on the sites boundary. The garden is being landscaped at the moment and the soil removed from the garden has been tipped onto the site and is covering Japanese Knotweed growth. The site has no signs of services, drains, BT, Gas, street lights etc.

2.3 DISTRIBUTION OF JAPANESE KNOTWEED

A thorough walk over of the site was undertaken to identify the presence, locations and extent of Japanese knotweed growth. On undertaking the visual investigation of the site we found the presence of Japanese knotweed. The areas of the site identified as being affected by Japanese knotweed growth are best described as follows:

Japanese knotweed Stand 1 (JK1):
This stand is on a 2m high grass embankment on the eastern boundary adjacent to Commercial Street. The Japanese knotweed is peppered along the embankment covering an area of 185m2. There are a number of trees growing along this area but these trees will be removed prior to development works commencing.

Japanese knotweed Stand 2 (JK2):
This is an area of knotweed growing at the top of the steep river embankment and ends at the southern site boundary covering an area of 22m2. The growth is within trees and shrubs, at the top edge of the embankment is a sheer drop down to the river.

Japanese knotweed Stand 3 (JK3):
This area is to the west of the site and is present on the flat area within trees and brush leading down the steep embankment towards the stream. There is a pathway that runs east to west to a bridge crossing the river. The knotweed stand covers an area of 207m2.

Japanese knotweed Stand 4 (JK4):
This area of knotweed is located to the north east of the site beside the entrance. There is one area beside the entrance and footpath that looks to be mature and the remainder of the area is peppered around a number of trees which are to be removed prior to development works. This stand covers an area of 104m2.

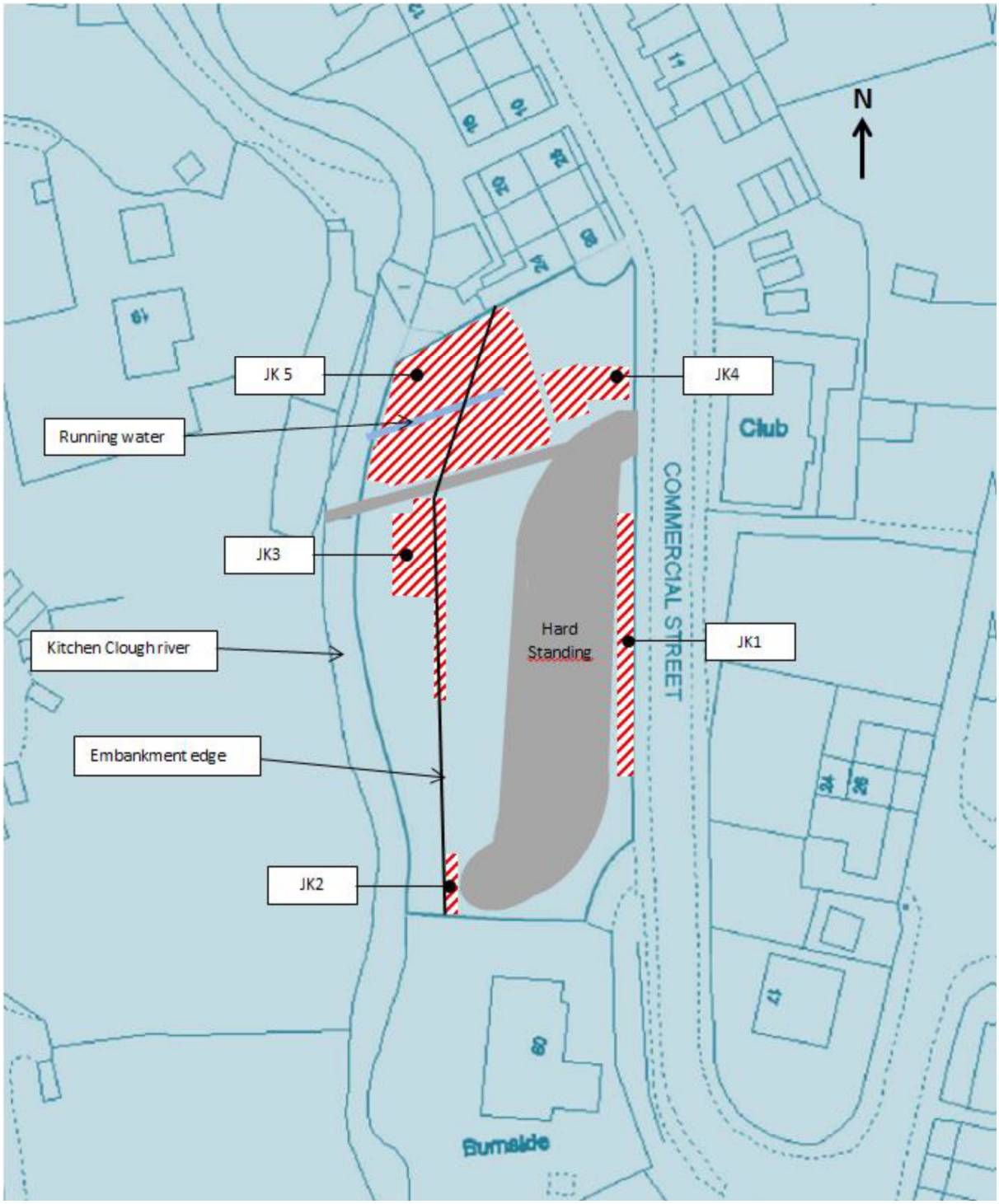
Japanese knotweed Stand 5 (JK5):
This stand is located to the north and north east of the site. The growth is partially on the embankment beside the stream, gradually sloping up to the development area and there is a fast running water course which runs through the middle of this stand. We understand that this is a ground water drain pipe but there is no pipe visible. The Japanese Knotweed is growing flush to the structure of 24 Commercial Street covering an area of 552m2. This property is having the back garden landscaped, and all soil removed from the garden has been dumped onto the site and is covering some of this stand.

See Page 7 for site plan showing distribution of Japanese knotweed on the site.

2.4 LIMITATIONS OF SURVEY

The findings of this survey are the result of a visual inspection only and should not be taken as a guarantee that knotweed or other areas knotweed, are not present on the site or neighbouring land. The presence of Japanese knotweed can sometimes be concealed by property owners (occupiers) or contractors deliberately or by accident by way of: Physical removal of the plants stems and crowns through grounds maintenance, vegetation clearance or site demolition or by being covered over with turf, hard standing, landscape fabric, ornamental gravel, bark mulch and so on.

Image 1: Site Plan showing knotweed distribution



3 REMEDIATION STRATEGY EVALUATION

3.1 UNDERSTANDING SITE DEVELOPMENT PROPOSAL

3.1.1 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The development will require site vegetation clearance, with trees removed from site over winter and all other materials retained on site. The construction will involve the installation of service road and installation of drainage and services, and the importation of fill and construction materials. The proposal is for the construction of new residential housing, with car parking and gardens.
See Appendix Section 6.1.2 for Site Plan of Proposed development

3.1.2 SITE MANAGEMENT OBJECTIVES

Works will not commence until the Japanese Knotweed eradication programme is completed. The site is expected to be handed over and habited 10 months after works commence. Soft and hard landscape works will be the last phase of works probably completed during the final 2 months.

3.2 RECOMMENDED KNOTWEED REMEDIATION STRATEGIES

We believe the following strategies are suitable for treatment:

KNOTWEED ON LOWER SITE LEVEL AREAS THAT WILL BE SUBJECT TO DEVELOPMENT

- Excavation, Sifting & On-Site Bund [DIG and SIFT]

KNOTWEED ON EMBANKMENT AND AREAS OUTSIDE THE DIG ZONE

- Herbicide Treatment Programme [HERBICIDE]

3.2.1 SUITABILITY EVALUATION

Below we provide analysis to the suitability of these options in relation to the site and proposed development. At this stage the site was left as it is during 2015 and the Herbicide Treatment Programme was commenced then. Then given the large volumes that may need to be excavated we recommend the onsite solution of dig, sift and bund.

Option 1: Herbicide Treatment Programme

In-situ treatment with systemic herbicide – Roundup ProVantage 480 (Glyphosate). Successive treatment of over 3 years can control the knotweed but will not remove the knotweed contamination from the ground
APPLIES TO: Part JK3 & JK5
EVALUATION: The ground on the embankment will not be developed. Therefore long term in-situ treatment is OK.
PLUS: Cost effective method, Sustainable remediation method.
CONS: Area contaminated by knotweed and treated with herbicide must remain undisturbed (no change of ground use - i.e. development) for many years.

Knotweed will be treated using the stem injection method, with smaller stems treated by knapsack spraying. Within 5m of the watercourse, no spraying will be employed and all knotweed will be treated using stem injection.

Option 2: Excavation, Sifting & On-Site Bunding

Removes knotweed contamination from its current location, and placed in low level (600mm) bund on site, following sifting to break down the regenerative power of the knotweed. Bund to be located to south of site and placed on root barrier membrane layer to protect the underlying site from Japanese knotweed infestation.

APPLIES TO: All JK1, JK2 and JK4 (part JK3 & JK5)

EVALUATION: Parts of the site will be developed and require the removal of the Japanese knotweed.

PLUS: More cost effective than off-site disposal, Quick removal method, Sustainable remediation method (BREEAM points), Limited construction constraints, No long term treatment programme.

CONS: Requires space on-site to bund sifted knotweed material, location of bund should be recorded (site O&M manual).

3.3 KNOTWEED TREATMENT DRAFT PROGRAMME

2015 – Herbicide treatment to entire site.

2016 – Herbicide treatment to entire site. Excavation of knotweed contaminated areas and construction of bund, following sifting and destruction of crowns and rhizomes. Herbicide treatment to bund.

2017 – Herbicide treatment to entire site

2018 – Potential start of construction. Herbicide treatment to continue if required.

4 GUARANTEE

4.1 TYPES OF GUARANTEE

4.1.1 COMPANY BACKED GUARANTEE

A Company Guarantee Certificate will be issued to the end client, which confirms that there will be a monitoring and treatment service under the terms of the Guarantee with the following liability provided: Whitworth Design Ltd, for a period of 5-12 years, will accept liability for any work (chemical application) deemed necessary to treat any re-growth of Japanese knotweed.
See Appendix section 5 for our Terms of Guarantee

4.1.2 THIRD PARTY BONDED GUARANTEE

A 'Service Performance Escrow Agreement' will be set up to provide a monitoring and treatment service for the period of the Guarantee. The Guarantee contract will be facilitated via a third party solicitor acting on behalf of the end client. All guarantee funds will be secured in an escrow account managed by the third party solicitor. This provides full fund protection for the end client.
Under the agreement Whitworth Design Ltd for a period of 5-12 years, will accept liability for any work (chemical application) deemed necessary to treat any re-growth of Japanese knotweed.