LESLIE STREET, BARNSLEY

INVASIVE PLANT MANAGEMENT

JAPANESE KNOTWEED SURVEY

Prepared for:

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1 INTRODUCTION

1.1 *Background*

LK Pollution Response has been commissioned by Keepmoat Homes to carry out a Japanese Knotweed Survey for Leslie Road, Barnsley. This study is designed to investigate the presence or absence of Japanese Knotweed under the control of legislation **Section 14(2) of the Wildlife and Countryside Act 1981 (WCA 1981).**

The site is a brownfield site which is surrounded to the West by an existing housing estate and a railway line to the East. The site shous signs of demolition arising along with minimal vegetation growth to the entire site.

Trees remain to the East of the site near to the railway line and leslie Road dissects the site in two joining Raymond Road and Reginald Road.

Figure 1: Ordnance Survey map showing the location of the site

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1.2 *Disclaimer*

This report has been prepared by LK Pollution Response who have exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant experienced in preparing reports of a similar scope.

This report is prepared solely for the benefit of Keepmoat Homes. It may not be relied upon by any other party without the prior written consent of LK Pollution Response. Those using this information in subsequent assessments or evaluations do so at their own risk.

2 ECOLOGY

2.1 *Japanese Knotweed*

JK or *Falopia japonica* is an herbaceous perennial which forms large clumps 1-3 metres high. It is fully dioecious and can reproduce by seed (however not in this country) and by large rhizomes which may reach a length of 5-6 metres. A very small fragment of the rhizome, as little as the size of a finger nail, can potentially regenerate a whole new plant.

The stout stems are hollow and bamboo-like, extend from an erect base and are simple or little branched and glabrous with thinly membranous sheaths. Leaves are broadly ovate, truncate to cuneate at base, abruptly cuspidate, 5-15 cm long, 5-12 cm broad, with petioles 1-3 cm long.

2.2 *Legislation*

Section 14(2) of the Wildlife and Countryside Act 1981 (WCA 1981) states that "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." Japanese knotweed is one of the plants listed in the Schedule. 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.

The Environmental Protection Act 1990 (EPA 1990) contains a number of legal provisions concerning "controlled waste", which are set out in Part II. Any Japanese knotweed contaminated soil or plant material that you discard, intend to discard or are required to discard is likely to be classified as controlled waste.

The most relevant provisions are in: section 33 (1a) and (1b) which create offences to do with the deposit, treating, keeping or disposing of controlled waste without a licence. Exemptions from licensing are available in some circumstances, and are set out in Schedule 3 to the Waste Management Licensing Regulations 1994 as amended (the WMLR 1994) s.33 (1c) which makes it an offence to keep, treat or dispose of controlled waste in a manner likely to cause pollution of the environment or harm to human health.

Section 34 places duties on any person who imports, produces, carries, keeps, treats or disposes of controlled waste. Waste must be handled responsibly and in accordance with the law at all stages between its production and final recovery or disposal.

Waste must be transferred to an authorised person, in other words a person who is either a registered carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991. A waste transfer note must be completed and signed giving a written description of the waste, which is sufficient to enable the receiver of the waste to handle it in accordance with their own duty of care.

The provisions concerning waste transfer notes are set out in the Environmental Protection (Duty of Care) Regulations 1991 (as amended). Failure to comply with these provisions is an offence.

3 METHODOLOGY

A site survey was undertaken on the 25th August 2009 by an experienced member of LK Pollution Response. The survey was undertaken to establish the location and extent of the Japanese Knotweed on site. The survey was carried out following non-intrusive measures and should be seen as a visual inspection only. The survey results will therefore are limited to only showing only what Japanese Knotweed was visible at the time of the survey.

4 RESULTS

This section is to be read in conjunction with the Site Plan in Appendix A and the photographs in Appendix B.

As mentioned previously, the site looks to have been subjected to a demolition and site clearance in the past.

The Japanese Knotweed has been found in three main areas as identified below.

A1 – Approximately 3m2 of semi mature plants
A2 – Approximately 8m2 of scattered emerging growth
A3 – Approximately 25m2 of emerging growth

Areas A2 and A3 seem to have been caused during the demolition and site clearance and are indicating signs of emerging growth, therefore should not be at an established stage of root growth.

All areas have been subjected to a herbicide treatment in the past therefore there may be other areas of Japanese Knotweed on site that are yet to start to grow this season.

5 RECOMMENDATIONS

There are many different types of treatment available for the remediation of Japanese Knotweed. Any successful treatment option must take into account a number of factors including timescales, budgets and most importantly the proposal for the site.

For guidance on any proposed remediation strategy please refer to the Environment Agency's (EA) Japanese Knotweed Code of Practice. If an on site remediation strategy is accepted please not that any burial on site must first gain approval from the EA.

There are three main types of treatment options:

- A herbicide program
- Remediation on site
- Removal off site to a licensed landfill

5.1 *A herbicide program:*

This can take a number of years to be successful. If the Japanese Knotweed is within the development area and development wants to proceed before the end of the spraying program, like in this scenario, then the herbicide program would not be recommended.

5.2 *On site remediation:*

Can take many forms although they all share similarities such as the need to remove the Japanese Knotweed from the development area:

- If there is space to stockpile the material above ground it can then be treated with herbicides over subsequent years. This is typically the cheapest option but can have an undesirable aesthetic appeal.

- Other options typically include the burial of the Japanese Knotweed material however the EA Code of Practice states that if untreated prior to burial, the material should be buried either under 5m of clean fill material or encapsulated within geotextile membranes. Site conditions often exclude this option on a practicality issue.

- If pre-treated, for example through a sifting program to remove the Japanese Knotweed material from the soil, the EA will allow the soil to be buried under only 1m of clean fill instead of the usual 5m. This can drastically reduce cost and make on site treatment a practical option. It is normally recommended that the burial of this pre-treated soil be under soft landscaping or car parks, however, if space on site is limited it can be buried under buildings with the use of membranes.

5.3 *Removal to landfill:*

Is often cost prohibitive and is only ever recommended if there is no space to bury material on site or if the soil containing the Japanese Knotweed material has other contaminants contained within it that require a Waste Management Licence.

5.4 ***The recommended treatment option:***

Due to the location of the Japanese Knotweed within the proposed development plan we would recommend that the area be excavated and sent for off site disposal.

We would recommend that the areas around A2 and A3 receive a scrape with an excavator to determine the depth and spread of the Japanese Knotweed. This will enable a calculation of the volume that will need to be removed prior to works commencing.

At this point we would estimate that a total of approximately 90 m3 of material will need to be removed from site, however this will need to be verified during the initial scrape of the area.

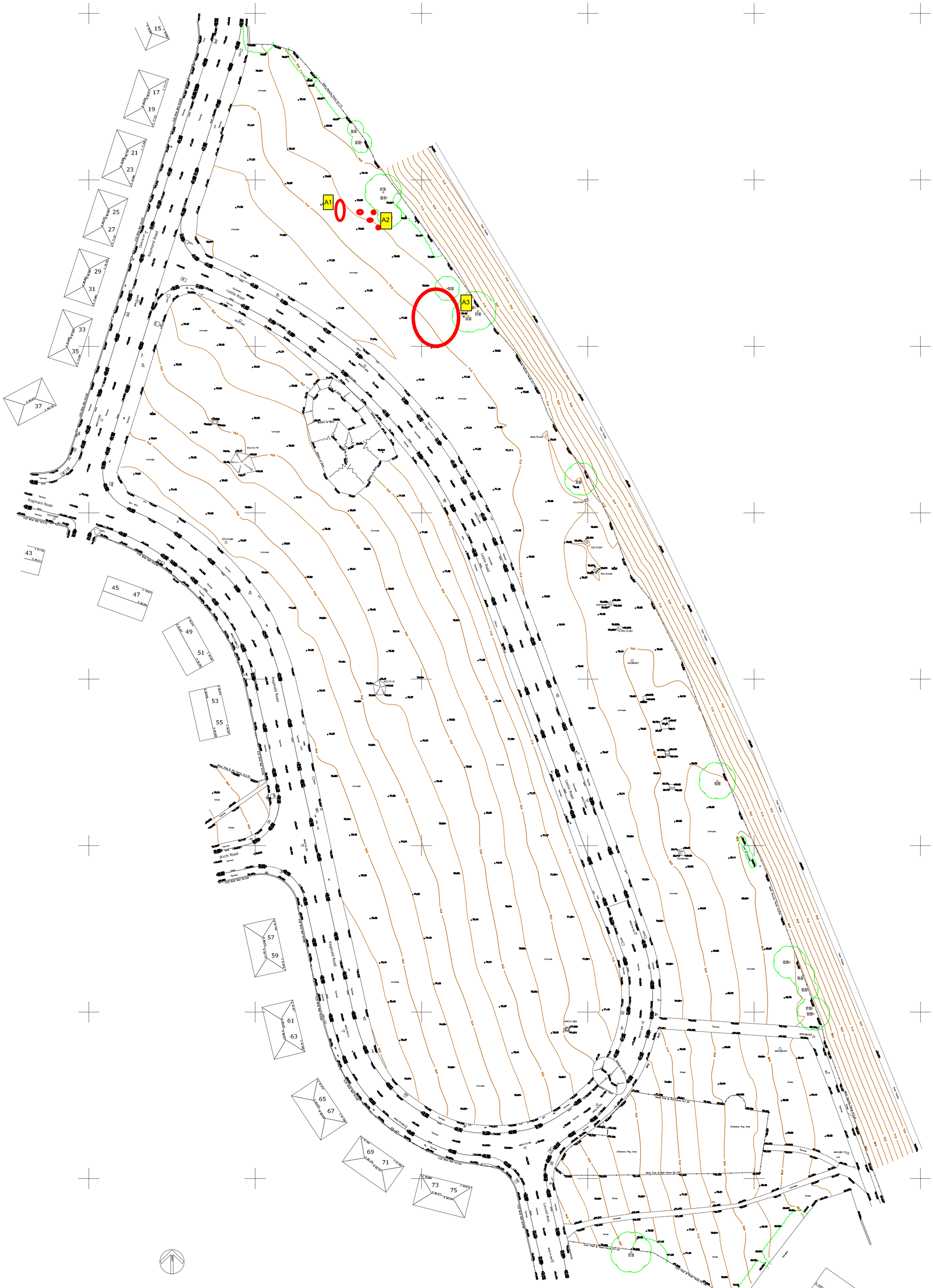
Due to the nature of the plant, it is impossible to guarantee that all traces have been removed. It is therefore often seen as essential by most governing bodies that in order to try and prevent any potential re-growth that the dig and dump option be followed by a period of monitoring and spraying.

Usually this will cover a number of years (typically 4-5) after the works are complete. If any re-growth is observed, spraying with an appropriate herbicide should prevent it from becoming re-established.

Upon completion of the project the contractor should present the client with a report stating and showing photographic evidence of the method employed, dates and details including a detailed site plan.

APPENDIX A

Site Plan


A1
A2
A3
Leslie Road
Reginald Road
Birch Road
Laurel Ave.
Raymond Road
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Childrens Play Area
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Rubble
Gardens
Hedge
Fence
Ditch
Kerb
Conifer
Tree
Bush
Gully
Manhole
Lamp Post
Telegraph Pole
Traffic Light
Post
Bollard
Sign
Cover Level
Invert Level
Fire Hydrant
Gate
Steps
Slope
Contours 5m Interval
Contours 1m Interval
Spot Level
Kerb Line
Fence Line
Hedge Line
Survey Station
Unknown Service
Foul Sewer
Surface Water
Combined Sewer
Gas Main
Water Main
Electricity Cable
Telecom Cable
Overhead Cable
Traffic Signal Cable
Unknown Cable
Unknown Duct
Unknown Signal
Unknown Signlog
Manhole shown thus
Inspection Cover
Manhole
Gully
Lamppost
Telegraph Post
Electricity Poles
Traffic Lights
Road Sign
British Telecom
Fire Hydrant
Water Valve
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Fence Line
Hedge Line
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Contours 1m Interval
Cover Level
Invert Level
Foul Sewer
Surface Water
Combined Sewer
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Gas Main
Water Main
Electricity Cable
Telecom Cable
Overhead Cable
Traffic Signal Cable
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APPENDIX B

Photos

Area 1 – Signs of herbicide treatment

Area 2 – Sporadic immature growth

Area 3 – Sporadic growth up to the boundary

Area 3 – Sporadic Growth