

Japanese Knotweed Solutions Ltd

WORKING ON BEHALF OF
Caddick Construction (NW) Limited

Japanese knotweed Management Plan
for
Chorlton Baths, Manchester Road,
Chorlton-cum-Hardy, Manchester, M21 0UA

Prepared by:



Japanese Knotweed Solutions Ltd

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JKSL Ltd unless written approval granted*

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INTRODUCTION

Japanese Knotweed Solutions Limited (JKSL) were instructed by Caddick Construction (NW) Limited to assess the extents of Japanese knotweed within the development site at Chorlton Baths, Manchester Road, Chorlton-cum-Hardy, Manchester, M21 0UA, and to develop a Japanese knotweed management plan which will include appropriate remedial options to facilitate the future development of the site and also discharge planning condition 22 (relating to planning application 136791/FO/2023) which states:

22) Prior to the commencement of development, an invasive non-native species protocol shall be submitted to and approved by the City Council as Local Planning Authority, detailing the containment, control and removal of Japanese Knotweed and any other invasive species identified on site. The measures shall be carried out strictly in accordance with the approved scheme and implemented prior to the commencement of the development hereby approved.

Reason - To control the spread of invasive species, pursuant to policy EN15 of the Manchester Core Strategy.

JKSL has used its understanding of the current legislation and the recommended best practice in developing this management plan document and continue to evolve our methods and recommendations to clients in line with current understanding of the problem.

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MANAGEMENT PLAN OBJECTIVE

The objective of this Management Plan Ltd is to:

- assist the client, Caddick Construction (NW) Limited with controlling and preventing the spread of known areas containing Japanese knotweed situated within the development boundary, to facilitate proposals for the site (illustrative masterplan, enclosed within Appendix 1).
- implement ongoing monitoring pre and post development.
- ensure that all works specifically relating to the Japanese knotweed are carried out in accordance with the relevant laws and statutes.

To ensure the above objective is achieved, the following measures are to be implemented:

- Identify all areas of Japanese knotweed situated within the development boundary, and within immediate areas on neighbouring land;
- Determine the areas of Japanese knotweed which are to be directly/indirectly affected by the proposed development;
- Implement biosecurity control measures when working in and/or in close proximity of known infestations, to aid in minimising the risk of propagules (i.e. a vegetative structure that can become detached from the main plant and give rise to a new plant) being spread around site and off-site; and
- Implement an appropriate remediation strategy to facilitate the proposed development e.g. excavation and removal of impacted materials that are directly affected by the proposed development, and in-situ monitoring/treatment of impacted materials that are not affected by the proposed development.

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JAPANESE KNOTWEEED (General Information)

Japanese knotweed (*Reynoutria japonica*), a rhizomatous perennial was introduced from Asia to Europe in the mid-nineteenth century as an ornamental and fodder plant. It is an impressive species which grows to a height of 2-3 metres, with bamboo like stems, arching branches and clusters of creamy white flowers appearing late in the season. The orange to brown coloured, woody, dead stems persist erect throughout the winter and new shoots, produced from the extensive rhizome system, grow up amongst these the following spring to form dense thickets. The dead stems and leaf litter decompose very slowly and form a deep organic layer, which prevents native seeds from germinating. Once present at a site, Japanese knotweed increases in area very rapidly and soon forms monoculture stands (a stand of Japanese knotweed is a term normally used to describe a collection of stems/canes arising in a group and which have a continuous foliar canopy when mature). Unless otherwise managed, Japanese knotweed will usually suppress native flora, establishing itself as a dominant feature.

Reproduction is primarily by vegetative regeneration of rhizomes (underground stem system – a regenerative part of the plant) and fresh / viable (above ground) stems; it does not normally spread via seeds in the UK. Generally, in most situations the associated rhizome network (i.e. rhizosphere) from the parent plant will typically spread laterally up to circa 3m and vertically down up to a depth of 1m to 2m (based on latest research and consensus), however extents of the associated rhizosphere can also be more than this in some situations.

Japanese knotweed thrives on disturbance and has been spread by both natural means and by human activity. In riparian areas, high water flows disperse fragments of the plant downstream where new colonies form. In the past, fly tipping and transportation of soil containing rhizome fragments have been a major cause of spread, particularly in the urban environment.

Japanese knotweed is known to have significant impacts on development and infrastructure. While damage to structures, particularly existing buildings, is uncommon (particularly where substantial foundations are present), it is known to occur and is much more likely when the structures are built on top of areas where Japanese knotweed is already present or where soils containing Japanese knotweed are imported during the development process. Damage to hard surfaces,

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landscaping and retaining walls (where foundations are less significant) is common and growth within buildings and infrastructure damage have all been recorded on sites / properties which JKSL have investigated.

Japanese knotweed is an invasive non-native Schedule 9 plant under Section 14 of the Wildlife and Countryside Act 1981. Soil/materials containing Japanese knotweed propagules are regarded as 'controlled' waste and should be disposed of at an appropriate licenced facility if taken off-site. Associated impacted materials should not be reused in further construction or landscaping without an appropriate remediation strategy being implemented.

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SITE INFORMATION

The site is circa 0.27ha in area, comprising of the main building (extended) with the disused formed swimming baths, hardstanding area mainly in the northern area of site and area of scrub vegetation in the south-eastern area of site.

The site is mainly secure, and accessed via Manchester Road along the western boundary.

Surrounding land use include commercial and residential to the west (beyond Manchester Road), commercial to the south, railway to the east, and a pipeline to the north (beyond which are residential, allotments and railway).

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SITE DEVELOPMENT

The proposed illustrative masterplan is enclosed within Appendix 1.

The proposal for the site is to construct housing units (includes detached, semi-detached, terrace and apartment buildings) with associated soft landscaping and hard landscaping areas.

It is important that JKSL are provided with up-to-date information about site plans, including accurate site drawings and details of any additional planned works, particularly in any contaminated area. Japanese knotweed is easily spread and even tiny fragments can cause new infestations if they are moved out of a contaminated area. It is important to implement a Clean Site Policy (includes biosecurity control measures) and Management Plan as soon as practically possible.

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SURVEY RESULTS

JKSL surveyed the site on 29th February 2024. The survey was undertaken by Jonathan Harris who is a certified surveyor in Japanese knotweed (CSJK) and has nearly ten years experience in dealing specifically with invasive plant species (and over fifteen years in environmental consultancy). The results as summarised below should be read in conjunction to drawing JK24-9348-05 (Japanese knotweed location plan), enclosed within Appendix 2.

Six areas containing Japanese knotweed (denoted as JK1-JK6 on drawing JK24-9348-05) were recorded within the development boundary. See below table for information relating to these areas of Japanese knotweed.

Japanese knotweed Area reference number	Location (includes proximity to boundary)	Proximity to built structures or hard-landscaped areas (m)	Area and size of infestation <i>Scales -</i> <i>Very small: 1m² or less</i> <i>Small: 1m² to 4m²</i> <i>Medium: 4m² to 25m²</i> <i>Large: 25m² to 100m²</i> <i>Extensive: greater than 100m²</i>	Height of growth	Description of growth (includes maturity and condition)	Notes
JK1	Situated circa 3m from the development boundary, in south-eastern area of site.	Currently located adjacent to an existing building.	Surface growth amounted to circa 2 sqm. Size of infestation is considered small (however is considered to be part of a more extensive area of Japanese knotweed)	Up to circa 1.3m	Dead surface growth which is likely due to the time of the survey (winter period when Japanese knotweed enters a state of dormancy). Japanese knotweed considered to be mature and established.	<p>Area JK1 is likely to share the same rhizome system with adjacent areas of Japanese knotweed.</p> <p>Associated rhizome could potentially extend beneath existing building structure (which is to be demolished as part of the development proposals).</p> <p>There was evidence of herbicide treatment on site, with other areas of recorded Japanese knotweed containing stunted surface growth. Previous chemical treatment is likely to suppress the amount of surface growth currently visible; the underlying extents of rhizome is likely to be / could potentially be greater than what is indicated by the amount of current visible surface growth (if suppressed).</p> <p>February is a suboptimal period of the year for assessing Japanese knotweed, due to the plant tending to be in a state of dormancy during this period. Japanese knotweed can still normally be identified during the winter period with the presence of dead surface growth from previous growing seasons (however this can be affected should there be chemical treatment and/or disturbance).</p>

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JK2	Situated circa 0.5m from the development boundary, in south-eastern area of site.	Circa 4.5m from existing building.	Surface growth amounted to circa 0.5 sqm. Size of infestation is considered very small (however is considered to be part of a more extensive area of Japanese knotweed)	Up to circa 0.25m	Dead surface growth which is likely due to the time of the survey (winter period when Japanese knotweed enters a state of dormancy). Surface growth appeared to be stunted.	<p>Area JK2 is likely to share the same rhizome system with adjacent areas of Japanese knotweed.</p> <p>There was evidence of previous herbicide treatment with the presence of stunted surface growth. Previous chemical treatment is likely to suppress the amount of surface growth currently visible; the underlying extents of rhizome is likely to be greater than what is indicated by the amount of current visible surface growth (if suppressed).</p> <p>February is a suboptimal period of the year for assessing Japanese knotweed, due to the plant tending to be in a state of dormancy during this period. Japanese knotweed can still normally be identified during the winter period with the presence of dead surface growth from previous growing seasons (however this can be affected should there be chemical treatment and/or disturbance).</p>
JK3	Situated on/beyond development boundary, in south-eastern area of site.	Circa 6m from existing building.	Surface growth amounted to circa 0.5 sqm. Size of infestation is considered very small (however is considered to be part of a more extensive area of Japanese knotweed)	Up to circa 0.25m	Dead surface growth which is likely due to the time of the survey (winter period when Japanese knotweed enters a state of dormancy). Surface growth appeared to be stunted.	<p>Area JK3 is likely to share the same rhizome system with adjacent areas of Japanese knotweed.</p> <p>There was evidence of previous herbicide treatment with the presence of stunted surface growth. Previous chemical treatment is likely to suppress the amount of surface growth currently visible; the underlying extents of rhizome is likely to be greater than what is indicated by the amount of current visible surface growth (if suppressed).</p> <p>February is a suboptimal period of the year for assessing Japanese knotweed, due to the plant tending to be in a state of dormancy during this period. Japanese knotweed can still normally be identified during the winter period with the presence of dead surface growth from previous growing seasons (however this can be affected should there be chemical treatment and/or disturbance).</p>
JK4	Situated on/beyond development boundary, in south-eastern area of site.	Circa 6m from existing building.	Surface growth amounted to circa 2.6 sqm. Size of infestation is considered small (however is considered to be part of a more extensive area of Japanese knotweed)	Up to circa 1.4m	Dead surface growth which is likely due to the time of the survey (winter period when Japanese knotweed enters a state of dormancy). Surface growth appeared to be established.	<p>Area JK4 is likely to share the same rhizome system with adjacent areas of Japanese knotweed..</p> <p>Associated rhizome could potentially extend beneath existing building structure (which is to be demolished as part of the development proposals).</p> <p>Previous chemical treatment is likely to suppress the amount of surface growth currently visible; the underlying extents of rhizome is likely to be greater than what is indicated by the amount of current visible surface growth (if suppressed).</p> <p>February is a suboptimal period of the year for assessing Japanese knotweed, due to the plant tending to be in a state of dormancy during this period. Japanese knotweed can still normally be identified during the winter period with the presence of dead surface growth from previous growing seasons (however this can be affected should there be chemical treatment and/or disturbance).</p>

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JK5	Situated circa 1.2m from development boundary, in south-eastern area of site.	Circa 3.2m from existing building.	Surface growth amounted to circa 2.0 sqm. Size of infestation is considered small (however is considered to be part of a more extensive area of Japanese knotweed)	Up to circa 1.2m	Dead surface growth which is likely due to the time of the survey (winter period when Japanese knotweed enters a state of dormancy). Surface growth appeared to be established with some stunted surface growth present.	<p>Area JK5 is likely to share the same rhizome system with adjacent areas of Japanese knotweed.</p> <p>There was evidence of previous herbicide treatment with the presence of stunted surface growth. Previous chemical treatment is likely to suppress the amount of surface growth currently visible; the underlying extents of rhizome is likely to be greater than what is indicated by the amount of current visible surface growth (if suppressed).</p> <p>February is a suboptimal period of the year for assessing Japanese knotweed, due to the plant tending to be in a state of dormancy during this period. Japanese knotweed can still normally be identified during the winter period with the presence of dead surface growth from previous growing seasons (however this can be affected should there be chemical treatment and/or disturbance).</p>
JK6	Situated circa 4.8m from development boundary, in south-eastern area of site.	Circa 0.8m from existing building, and adjacent to existing raised hardstanding area	Surface growth amounted to circa 1.4 sqm. Size of infestation is considered small (however is considered to be part of a more extensive area of Japanese knotweed)	Up to circa 0.2m	Dead surface growth which is likely due to the time of the survey (winter period when Japanese knotweed enters a state of dormancy). Surface growth was stunted / appeared to be bonsai.	<p>Associated rhizome could potentially extend beneath existing building structures (which are to be demolished as part of the development proposals).</p> <p>Area JK6 is likely to share the same rhizome system with adjacent areas of Japanese knotweed.</p> <p>There was evidence of previous herbicide treatment with the presence of stunted / bonsai surface growth. Previous chemical treatment is likely to suppress the amount of surface growth currently visible; the underlying extents of rhizome is likely to be greater than what is indicated by the amount of current visible surface growth (if suppressed).</p> <p>February is a suboptimal period of the year for assessing Japanese knotweed, due to the plant tending to be in a state of dormancy during this period. Japanese knotweed can still normally be identified during the winter period with the presence of dead surface growth from previous growing seasons (however this can be affected should there be chemical treatment and/or disturbance).</p>

General information

The visible extent of an infestation may not accurately indicate the full extent of the area affected; concealed growth below ground level could be more extensive.

Just to reiterate that February is a suboptimal period of the year for assessing Japanese knotweed, due to the plant tending to be in a state of dormancy over the winter period.

Additional areas of Japanese knotweed were recorded on immediate neighbouring land to the east, denoted as areas JK7-JK18 on drawing JK24-9348-05 (appendix 2). The majority of these recorded areas of Japanese knotweed are likely to share

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the same rhizome system and also likely to share the same rhizome system as the Japanese knotweed situated within the development boundary.

During the survey, there was evidence of cut dead Japanese knotweed surface growth present both within the development boundary and on immediate neighbouring land to the east.

The presence of dense vegetation (and also the presence of boundary fencing) restricted viewing access onto neighbouring land during the survey.

There was evidence of some fly-tipped material present on site, adjacent to the recorded areas of Japanese knotweed. Japanese knotweed is commonly fly-tipped because of the high costs of disposal. This means that sites which are subject to fly-tipping are generally at a higher risk of Japanese knotweed being spread via this contamination pathway, however it should be noted that the fly-tipped material appeared to be domestic waste (and didn't appear to contain soils and/or visible Japanese knotweed propagules).

As mentioned above, there was evidence of previous herbicide treatment with the presence of recorded dead bonsai and/or stunted surface growth. The original area / underlying area of infestation is likely to be more extensive than what is indicated by the amount of surface growth currently visible. It should also be noted that online satellite images indicate that the Japanese knotweed was potentially more extensive in the south-eastern area of site and on immediate adjacent land to the east in the past – although the online satellite images are not entirely clear).

Additional exploratory dig exercise

JKSL undertook an exploratory dig exercise on 15th/16th February 2024 to determine the location and extents of associated rhizome. As part of these exploratory works, trial pits containing Japanese knotweed rhizome were also recorded within adjacent areas (which were previously considered to be outside the associated risk zone based on recorded visible surface growth) but were considered to be potentially located within the original area of infestation (as indicated on previous online satellite images). Drawing JK24-9348-05 (appendix B) also includes the approximate locations of these specific trial pits (please note that

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additional trial pits were undertaken within the known risk zone, but these are not included on drawing JK24-9348-05). These additional locations containing Japanese knotweed impacted materials are considered/included as part of the proposed remediation works which are discussed later in this report.

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SITE PHOTOGRAPHS



Evidence of stunted/bonsai surface growth with some cleared Japanese knotweed surface growth (JK5), situated within the development boundary (adjacent to existing building structures)



Evidence of Japanese knotweed surface growth, situated within the development boundary and also on neighbouring land (beyond the development boundary)



Japanese knotweed surface growth (JK1), situated within the development boundary, adjacent to existing building.



Evidence of Japanese knotweed surface growth, situated within the development boundary and also on neighbouring land (beyond the development boundary)



Evidence of fly-tipped material.



The presence of dense vegetation restricted viewing/access (particularly onto immediate neighbouring land)

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CONTAMINATION PATHWAYS

“Contamination Pathways” are routes by which a contaminant can spread into or out of a site – for the recorded Cotoneaster, Japanese rose (and horsetail), this could include movement of soils or other plant materials. JKSL’s surveyor has identified the following current contamination pathways in the course of the survey.

Pathway	Notes
Disturbance activities	There was evidence that previous disturbance activities had taken place on site, which could result in potential cross-contamination to occur; as a result new areas of infestation could potentially emerge in the future.
Propagule Spread (outward)	Should an appropriate remediation strategy not be implemented, Japanese knotweed could potentially migrate onto neighbouring land from site.
Propagule Spread (inward)	Should an appropriate remediation strategy not be implemented, Japanese knotweed could potentially migrate into site from neighbouring land.
Fly-tipping	There was evidence of some fly-tipped material present on site, adjacent to the recorded areas of Japanese knotweed. Japanese knotweed is commonly fly-tipped because of the high costs of disposal. This means that sites which are subject to fly-tipping are generally at a higher risk of Japanese knotweed being spread via this contamination pathway, however it should be noted that the fly-tipped material appeared to be domestic waste (and didn’t appear to contain soils and/or visible Japanese knotweed propagules).

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INVASIVE SPECIES RISK ASSESSMENT

Based on the survey results, this section of the report outlines the risk factors and level of risk of cross-contamination via the contamination pathways identified. The risk assessment was used in the process of devising the Recommended Remediation Option.

The table below outlines potential negative consequences associated with the Japanese knotweed, and how it could spread in and out of the site. A "Risk Level" of "Low / Mid / High" has been included to quantify each risk factor's likelihood of cause damage or cross-contamination on site. A "Low" risk might not cause problems in the short term even if the plant is not treated, a "Mid" risk is likely to cause problems without treatment and a "High" risk is very likely to cause problems. The "Distance" specifies how far the risk factor is from the nearest surface growth. Because of the plant's extensive root system, anything within 7m could potentially be at risk. Anything that is less than an unobstructed 4m away from mature plants is likely to be inside the root network.

We strongly urge that the recommended treatment is started as soon as possible, as this will minimise the spread of the plant. Implementing an invasive plant species management plan immediately (and communicating it to all contractors on site) will reduce the chance of cross contamination during other works on site.

Risk Factor	Distance	Risk Level	Description
Proposed hard standing and building structures associated with the re-development of the site.	n/a	High	Should no appropriate treatment and/or control measures be implemented, future development could be at risk, whereby associated Japanese knotweed rhizome could potentially exploit cracks and weaknesses within proposed hardstanding/building structures.
Ground disturbance during construction phase associated with the future re-development (future risk)	n/a, within development boundary	High	Should no appropriate treatment and/or control measures be implemented, future ground disturbance activities during the construction phase of the development where operatives, and machineries move in and out of the contaminated areas, are likely to cause propagules to be spread around site (and potentially off-site), thus exacerbating the infestation problem further.

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Risk Factor	Distance	Risk Level	Description
Other human activity (future risk)	0m	High	Ongoing grounds maintenance / landscaping activities associated with the future re-development of the site where people move in and out of the contaminated areas, and potentially disturb the soils containing propagules. Should no appropriate treatment and/or control measures be implemented, these human activities can potentially cause the plant to spread.
Infestations near site boundary (on site)	0m	High	The infestations on site are at risk of spreading to neighbouring land – this could potentially result in the Wildlife and Countryside act being compromised, if “reasonable measures” are not in place to control the spread and reduce the viability of the invasive plants. Having a Management Plan in place is an important part of preventing the invasive plants from spreading
Infestations near site boundary (off site)	0m	High	The site is at risk of being infested with infestations from neighbouring land. It is important to take action to prevent the site being infested, such as informing the relevant landowner(s) so that they are aware of the invasive plants and for them to implement an appropriate treatment programme / remediation strategy.
Fly-tipped material	n/a, within development boundary	Low (at this stage)	Areas of fly-tipping were noted during the survey (in the eastern area of site). Japanese knotweed and other non-native invasive plant species are commonly fly-tipped because of the high costs of disposal. This means that there is normally a higher risk of non-native invasive plant spreading into site via this contamination pathway where this occurs, however it should be noted that the fly-tipped material did not appear to contain vegetation/soils and therefore risk of spreading into site via this contamination pathway is considered to be low at this stage.

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IMPACTS ON DEVELOPMENT PLANS

Drawing JK24-9348-06 (enclosed within Appendix 3) shows that all areas of infestation situated within the development boundary, will be directly affected by the proposals.

Construction activities (includes ground disturbance works) will likely exacerbate the infestation problems further, and there is a high risk that this will then cause the spread of propagules around site, and potentially off-site, should an appropriate remediation strategy not be implemented.

Should no appropriate treatment and/or control measures be implemented, future development could be at risk, whereby associated Japanese knotweed rhizome could potentially exploit cracks and weaknesses within proposed hardstanding/building structures.

It is important that JKSL are provided with up-to-date information about site plans, including accurate site drawings and details of any additional planned works, particularly in any contaminated area. It is important to implement a Clean Site Policy and Management Plan as soon as practically possible.

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TREATMENT OPTIONS

Based on the proposed development, and taking in to account the survey results, contamination pathways and invasive species risk assessment, the mechanical remediation option to be implemented has been outlined below. This is designed to get the best results for the lowest possible cost.

Other options may be feasible, and where alternatives are available, these have been listed below the remediation option to be implemented.

Making sure that everyone with a role on site is familiar with the recommendations and ensuring they are actioned from day one will help to minimise the risk of cross-contamination, and increase responsiveness to any undesirable situations, including new or previously undiscovered infestations on site.

While this is no guarantee against infestations recurring on site, while no treatment can be certified as 100% effective and while your site will always be vulnerable to uncontrollable threats, JKSL can offer further protection in the form of ongoing monitoring programmes (based on repeated site inspections). The recommended remediation option will outline the level of protection that we think is most appropriate to the works we have laid out.

Remediation Option to be implemented

Due to the proposed development directly affecting areas of infestation, ground disturbance / construction related activities will likely exacerbate the infestation problems further, unless an appropriate remediation strategy is implemented.

A mechanical remediation strategy whereby the associated impacted materials situated within the development boundary are excavated/removed is therefore required to be implemented. The most robust and viable remediation strategy option to be implemented at this stage (with least risk to the future redevelopment of the site) is to dispose the excavated impacted materials off-site at an appropriate licenced facility.

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To aid in minimising the risk of off-site Japanese knotweed migrating back into the development boundary / remediated areas, a vertical root barrier will be installed along the eastern and southern boundaries.

Drawings JK23-9153-04 (enclosed within Appendix 4) and JK23-9153-07 (enclosed within Appendix 5) show the anticipated extents of excavation and location of the vertical root barrier. The extents of excavation have been based on results of the original survey and additional exploratory dig exercise.

A small buffer zone (circa 500mm wide) could potentially be left in-situ between the excavation face and existing boundary wall/fencing, to minimise the risk of the existing boundary wall/fencing being undermined; potential re-growth which could potentially emerge in the buffer zone will be treated in-situ as part of an ongoing 5 year programme (as mentioned below).

During the works, a clean site policy (include biosecurity control measures) will be implemented. The control measures to be implemented include –

- Prior to works commencing, all operatives on site should make themselves familiar to the extents of infestations as shown on the relevant project drawing plans. Should any additional infestations be identified, works in that area should be immediately stopped and the client / specialist informed; the management plan should then be updated accordingly.
- Should the risk of disturbance be considered to be high within areas of site impacted by invasive plant species (prior to the remediation works being undertaken), the area(s) of infestation should ideally be fenced off with signage, including an appropriate exclusion zone.
- Signage should be installed during the excavation-removal works, to distinguish the different working areas (i.e. excavation area, loading area, footwash facility/inspection area)
- During works, site operatives should install a foot wash and/or an inspection point with a small area of geotextile root barrier on the ground for site personnel and equipment to be checked and decontaminated on leaving the contaminated area. Signage may also be installed at the edge of the contaminated area.

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- Any machine, equipment or personnel leaving the buffer zone/exclusion zone at any point will need to undergo decontamination. All equipment (such as machine buckets) and tools (shovels, spades) used within the contaminated area shall be suitably decontaminated prior to each occasion that it leaves the contaminated area. Equipment should be visually checked, and any potential impacted spoil material should be placed back within the original area of infestation or disposed off-site at an appropriate licenced facility (or placed within a temporary waste management area, as mentioned below). Anything which has been used to cut or dig in impacted materials shall be cleaned thoroughly.
- A temporary waste management area (lined with an appropriate membrane) may be created to reduce the risk of cross-contamination occurring while temporary stockpiling impacted soils on site (where applicable/required), or the impacted materials can be placed on an existing area containing impacted materials within immediate surrounding areas on site, prior to the impacted materials leaving site to be disposed of at an appropriate licenced facility.
- Due care will be taken not to spill excavated materials outside the contaminated area, and any spillages were cleaned up as soon as it is safe to do so.
- Vehicles (i.e. dumpers and tipper wagons) used to transfer waste will not be overloaded, to minimise the risk of spillage.
- All tipper wagons leaving site (i.e. vehicles used to haul the excavated Japanese knotweed impacted material impacted to the disposal facility) will not leave site until their cover is secured in place. The wheels of the tipper wagons will not come into contact with any material contaminated with Japanese knotweed propagules.
- During the works, the ground will be inspected by JKSL's site foreman to ensure all rhizome will be chased until fully removed, or up to the development boundary or any other limit laid out by the client's site engineer.
- During the demolition of the adjacent building structures, JKSL are to be in attendance to implement a watching brief to assess for the presence or absence of potential Japanese knotweed beneath these structures. If Japanese knotweed rhizome is identified to be present, the associated

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impacted materials will be removed from site as part of the excavation-removal works.

- Any materials excavated from areas containing Japanese knotweed taken off site will be classified as 'controlled' waste and will be disposed of accordingly at an appropriate licenced facility.
- Relevant information should be saved within the project folder, such as the description of completed works, photographs of the completed works, completed excavation drawing(s), and copies of the waste transfer information provided.

To reduce the viability and control the spread on Japanese knotweed on immediate neighbouring land within any buffer zones left in-situ ("maintenance area"), it is recommended that a 5 year monitoring and treatment programme is implemented. This will also apply should a buffer zone be left in-situ between the excavation face and existing boundary wall/fencing as mentioned above). Potential Japanese knotweed surface re-growth which is likely to occur within the maintenance area will be chemically treated in-situ with a Glyphosate based herbicide. Glyphosate is a broad spectrum and non-selective herbicide so will potentially kill/affect non-target plants should the herbicide come into contact with these. Site operatives will do their utmost to minimise the risk of chemical drift occurring, such as applying herbicide within correct weather threshold limits (so its not too windy), using the correct spray nozzle and spot treating the re-growth (rather than blanket spraying). The programme will normally comprise of 8 no. monitoring visits over a 5 year period, as follows (precise date normally dictated by weather conditions and growth patterns):

- May/June 2024
- Aug-Oct 2024
- May/June 2025
- Aug-Oct 2025
- May/June 2026
- Aug-Oct 2026
- Aug-Oct 2027
- Aug-Oct 2028

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Discussions with / permissions for the relevant owner(s) will be required to facilitate the access/treatment on immediate neighbouring land. In accordance to the latest industry standards, it is recommended that there are 2 no. consecutive growing seasons that show no evidence of re-growth within the affected area to demonstrate that the programme has been successful. Previous chemical treatment may affect the long term success of the 5 year programme. Upon completion of the 5 year programme, the situation will be re-assessed to determine whether additional monitoring (and treatment) visits are required.

A clean site policy will also be implemented when works are being undertaken as part of the ongoing 5 year programme.

Just to re-iterate that there are restrictions as to what can be done within a treatment area (i.e. applicable for the maintenance area), as the plant thrives on disturbance, even after the completion of a successful herbicide treatment programme. Rhizome (the underground stem system – most regenerative part of the plant) can stay dormant for 20 years or more, which may result in potential re-growth emerging should any ground material containing viable / dormant rhizome be disturbed. Due to the biology and nature of the plant, and site variations, this means that, in some circumstances, regrowth can occur after the delivery of a successful treatment programme). The appearance of the treatment area can be significantly improved (e.g. by cutting back surface weed plants), however it is important that the ground material is not disturbed and a clean site policy (includes bio-security control measures) is implemented.

In the meantime, all areas containing the Japanese knotweed should be left in-situ and not disturbed (includes a circa an appropriate exclusion zone), to further aid in preventing propagules being spread around site.

All of the proposed remediation and treatment works will be undertaken in-house by JKSL experienced and experienced operatives. JKSL is a full member of both INNSA (Invasive Non-Native Specialists Association) and PCA (Property Care Association), the two leading trade bodies for contractors who specialise in Japanese knotweed (and other invasive non-native plant species).

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Alternative Remediation options

It is considered that there is insufficient space on site to implement other potential mechanical remediation strategy options (includes waste management area, burial or screening) without the future development proposals being compromised.

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EVALUATING SUCCESS OF CONTROL METHODS

Monitoring will be carried out by the Site Foreman and/or Site Operatives prior to any treatment/remediation works being carried out.

As mentioned above, upon completion of the excavation-removal works the ground will be inspected by JKSL's site foreman to ensure all rhizome will be chased until fully removed, or up to the development boundary or any other limit laid out by the client's site engineer.

Upon completion of the excavation-removal works, a completion report will be issued which will outline the summary of works that have been undertaken, photographs of completed works, completed excavation drawing, description of products used (applicable for the vertical root barrier to be installed along the development boundaries) and confirmation of duration/period of works. Waste transfer information (includes copies of individual transfer notes, hauliers waste carriers licence and permit of the disposal facility) will be issued upon completion of the excavation-removal works, to demonstrate that the waste has been disposed of correctly.

As part of on-going monitoring and treatment of Japanese knotweed re-growth within the "maintenance area", inspection reports will be issued upon completion of each monitoring/treatment revisit which will include the following information:

- Date/time of visit
- Name of operative who completed the visit
- Summary of findings, including maturity and density of potential re-growth within the treatment area, as well as other relevant information (e.g. a new feature that might impact on the effectiveness of the management plan or increase the risk of spread or re-infestation)
- Spray record (includes herbicide application and weather condition)

It is recommended that there are 2 no. consecutive growing seasons that show no evidence of re-growth within the affected area to demonstrate that the programme has been successful.

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As JKSL are a full member of an appropriate trade body (includes both INNSA and PCA) an insurance backed guarantee product(s) can be provided to cover the completed excavation area (subject to approvals/review by the insurance provider). The insurance backed guarantee policy (which is a 10 year cover) is only implemented once there has been two consecutive growing seasons of monitoring within the completed excavation area which show no evidence of re-growth (monitoring would commence upon completion of the development).

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SCHEDULE OF WORKS

Excavation-removal works

It is recommended that the proposed excavation works of are undertaken prior to any other ground disturbance works, to prevent/minimise the risk of cross-contamination. At this stage, it is JKSL's understanding that these works will be undertaken in June 2024.

To facilitate access, existing building structures are required to be demolished. As mentioned above, during the demolition of the adjacent building structures, JKSL are to be in attendance to implement a watching brief to assess for the presence or absence of potential Japanese knotweed beneath these structures. If Japanese knotweed rhizome is identified to be present, the associated impacted materials will be removed from site as part of the excavation-removal works.

Ongoing 5 year programme

The programme will normally comprise of 8 no. monitoring visits over a 5 year period, as follows (precise date normally dictated by weather conditions and growth patterns):

- May/June 2024
- Aug-Oct 2024
- May/June 2025
- Aug-Oct 2025
- May/June 2026
- Aug-Oct 2026
- Aug-Oct 2027
- Aug-Oct 2028

Discussions with / permissions for the relevant owner(s) will be required to facilitate the access/treatment on neighbouring land. In accordance to the latest industry standards, it is recommended that there are 2 no. consecutive growing seasons that show no evidence of re-growth within the affected area to demonstrate that the programme has been successful. Previous chemical treatment may affect the long term success of the 5 year programme. Upon

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completion of the 5 year programme, the situation will be re-assessed to determine whether additional monitoring (and treatment) visits are required.

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APPENDIX 1

Illustrative masterplan



- B** Note:
Do Not Scale from this drawing.
Dimensions are to be checked on site.
If in doubt please ask.
- Root Protection Area
 - Approx retained tree canopy line
 - Existing tree removed where hatched in red
 - Works to crown
 - Proposed tree
 - Refer to Tree Survey and reports by Lally Tree Management
 - Application Site Boundary

- P01 07/08/23 DC Further planning amendments:
P03 06/07/23 SSU Minor updates to planning comments <400mm to entrance to maintain visibility splay. Bollards added to train line boundary. Access gate to garden terrace added.
P02 16/06/23 DC Cycle store layout revised, cycle stands added to courtyard to street frontage. Vehicular gate relocated into site. Accessible bay repositioned to improve turning radius. Note added to confirm height of boundary wall.
Drawings issued for Planning Submission
- Rev Date Info Details
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Project Title	Chorlton Baths Hggs
Client	Rowlinson Construction, MSV Housing
Location	Manchester Road, Chorlton, Manchester
Drawing ref	Proposed Site Plan
Date	07/08/2023 19:52:47
Checker	DC
Job No:	9136
Scale	As indicated
Size	A1
Status	50
Drawn By	
Project	Origin: Volume: Level: Type: Date: Revision: Rev
CHOBA-BUT-ZZ-00-DR-A-04100-P04	

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APPENDIX 2

Drawing JK24-9348-05 (Japanese knotweed location plan)



DISCLAIMER :
SURVEY BASED ON VISUAL INSPECTION OF SURFACE GROWTH. JKSL HOLD NO
LIABILITY FOR AREAS NOT IDENTIFIED IN INITIAL INVESTIGATION WORKS.
CONTINUED MONITORING OF SITE IS RECOMMENDED

- DEVELOPMENT BOUNDARY
- APPROXIMATE EXTENTS OF RECORDED
JAPANESE KNOTWEED
- 3M RISK ZONE
- ADDITIONAL TRIAL PIT LOCATIONS WHICH
RECORDED PRESENCE OF JAPANESE
KNOTWEED RHIZOME IN THE GROUND
BEYOND ORIGINAL VISIBLE RECORDED AREAS
OF INFESTATION
- DV DENSE VEGETATION



SURVEY ORIENTATED TO MAGNETIC NORTH

Rev	Description	Date	By	Chk
Client Caddick Construction (NW) Limited				
Contract Chorlton Baths, Manchester Road, Chorlton-cum-Hardy, Manchester, M21 0UA				
Drawing Japanese knotweed - location plan				



Drawing No. JK24-9348-05	Revision /
Scales NTS	Date 26-03-2024
Drawn JEH	Checked AD

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APPENDIX 3

Drawing JK24-9348-06 (impacts on development)



DISCLAIMER:
SURVEY BASED ON VISUAL INSPECTION OF SURFACE GROWTH. JKSL HOLD NO
LIABILITY FOR AREAS NOT IDENTIFIED IN INITIAL INVESTIGATION WORKS.
CONTINUED MONITORING OF SITE IS RECOMMENDED

- DEVELOPMENT BOUNDARY
- APPROXIMATE EXTENTS OF RECORDED JAPANESE KNOTWEED
- 3M RISK ZONE
- ADDITIONAL TRIAL PIT LOCATIONS WHICH RECORDED PRESENCE OF JAPANESE KNOTWEED RHIZOME IN THE GROUND BEYOND ORIGINAL VISIBLE RECORDED AREAS OF INFESTATION

Rev	Description	Date	By	Chk
Client	Caddick Construction			
Contract	Chorlton Baths, Manchester Road, Chorlton-cum-Hardy, Manchester, M21 0UA			
Drawing	Impacts on the development			



Drawing No.	JK24-9348-06	Revision	/
Scales	NTS	Date	26-03-2024
Drawn	JEH	Checked	AD

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APPENDIX 4

Drawing JK24-9348-04 (anticipated extents of excavation and vertical root barrier – on existing layout plan)



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APPENDIX 5

Drawing JK24-9348-07 (anticipated extents of excavation and vertical root barrier – on proposed development layout plan)

