



## **Guidance Note**

# **Japanese Knotweed - Guidance for Professional Valuers and Surveyors**

**June 2021**



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Please note this Guidance Note has been produced to support the new RICS publication “Japanese Knotweed and Residential Properties” which is now available for comment (Public Consultation) - (Ref. 1). The consultation closes on August 3<sup>rd</sup> 2021, after which there may be changes before formal publication. Their review process may result, in due course, to changes in this document too. Please contact the PCA or visit the Technical Document library again for updates.

## 1. INTRODUCTION

Inspections of residential properties, including the inspection and valuation of properties for sale, lending, or pre-purchase advice, is carried out by specific groups of professionals including Chartered Surveyors, Surveyors, managing agents and letting agents. This Guidance is written to assist these and others to recognise the presence of Japanese knotweed, its potential significance, how to assess its impact on individual properties and how it might be managed. It is not intended to replace the role and value of an independent expert Japanese knotweed surveyor (**CSJK: Certificated Surveyor in Japanese Knotweed**) whose wide range of knowledge and experience will enable the preparation of a detailed survey report and Management Plan for knotweed control or removal together with costs and, usually, the offer of a guarantee.

**Note 1:** This guidance should be read together with the 2021 RICS Guidance Note “Japanese knotweed and residential property” (Ref. 1; [here](#)). Other useful background information, especially that relating to legislation affecting Japanese knotweed and methods of control or removal, can be found in the PCA Code of Practice (Ref. 2; [here](#)).

**Note 2:** Giant knotweed and Bohemian or ‘Hybrid’ knotweed are closely related species which are considered together with Japanese knotweed within relevant Regulations and Acts and the advice here applies to all three.

**Note 3:** Other ‘Schedule 9’ non-native invasive plants and/or ‘Species of Concern’ (Ref. 3; [here](#)) plus others e.g. buddleia, bamboo may also be relevant to valuers and building surveyors. Further advice can be found on the PCA website (via ‘Contact Us’ or our Technical Document library) or by contacting PCA members.

## 2. PROPERTY INSPECTION AND JAPANESE KNOTWEED

### 2.1. Client requirements

It is understood that residential valuations and surveys are not specifically focussed on finding and advising on Japanese knotweed but **must** be mindful that Japanese knotweed may be encountered during any inspection. When this happens the valuer or surveyor should be capable of providing guidance to the client which is appropriate to the level of inspection.

The requirements for most physical mortgage valuation inspections are specified at UK Valuation Practice Guidance Application (UK VPGA) 11 in the RICS Red Book UK national supplement 2019, or later edition. The RICS Home Survey Standard makes it mandatory for surveys, typically pre-purchase surveys, to be benchmarked against three defined inspection and reporting levels. The level of detail required for any given survey and report will depend on the Terms and Condition and Engagement agreed with the client.

Standard clauses in Terms and Conditions of Engagement attempting to exclude any liability for the presence of Japanese knotweed are unlikely to meet the requirements of the Unfair Contract Terms Act 2015 or to withstand scrutiny of the courts. If a client specifically requires advice on whether or not Japanese knotweed is present at a property, or advice on remediation of an infestation, they should be recommended to commission an inspection or obtain advice from a specialist remediation company (**PCA members can be found at [www.property-care.org](http://www.property-care.org)**).

## **2.2. Knowledge of the area and pre-inspection checks**

The surveyor should be familiar with the type of property to be inspected and the area in which it is situated but there is also a requirement to undertake appropriate pre-inspection research. The depth of desktop research will depend on the level of service but should include information about the general environment, neighbourhood, and the subject property.

Likely locations for Japanese knotweed growth can be identified prior to and after the actual inspection, for example, while driving through the neighbourhood, arriving at, or leaving the property, parking, and preparing for the inspection.

***Note:** Japanese knotweed spreads almost exclusively via soil movement. A particular site may therefore be considered 'more likely' (at greater risk) of having Japanese knotweed present or nearby if it is close to e.g.: water courses, public rights of way, railways, roads, public car parks or commercial/industrial land especially derelict sites (prone to fly tipping). Burrowing animals may also be significant vectors.*

Surveyors are advised to ensure that they do not overlook publicly available resources such as historic images on Google Street View which may show the subject property and surroundings in previous years and in different seasons, including visible Japanese knotweed. On-line distribution map resources may give some rough indication of the local frequency of Japanese knotweed in an area. In some regions, local authorities may provide useful information, especially where Japanese knotweed infestations are common.

It is important that, where relevant and practical, the owner and/or seller or their agent should be asked whether the property or any neighbouring properties have been affected by Japanese knotweed and, if applicable, for details of any Japanese knotweed management plan or guarantees/warranties (see 2.4 below).

## **2.3. The inspection and site records**

An inspection should comprise a visual inspection of the grounds from within the boundaries of the subject property and, where necessary, from adjoining public property. It should include consideration of adjoining properties where reasonably possible, especially along the boundaries, when standing at ground level within the boundaries of the site, when standing at the various floor levels within the property and from adjacent public/communal areas. If views are unduly restricted this should be noted.

When Japanese knotweed is encountered during an inspection the valuer or surveyor is recommended to make a note of its location on a site plan and record details such as:

- proximity to built structures or hard-landscaped areas and any damage or disruption noted
- proximity to boundaries

- the location, height and area of all ‘stands’\* of Japanese knotweed
- any evidence (verbal, documentary or visual) of current or previous management
- photographic records should be taken for later reference even if they are not required for inclusion in reports

\* 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.

The *visible* extent of an infestation may not accurately indicate the *full* extent of the area affected; concealed growth below ground level may be much more extensive. The original growth may have been cut back or partially treated. In some cases there may have been attempts at concealment. Nevertheless, surveyors and valuers are familiar with estimating areas so, as an aid to consistency in reporting, it is recommended that the following descriptive scale is adopted:

Individual stands (visible stems/canes/canopy) can be described in terms of their size:

- *Very small: 1m<sup>2</sup> or less*
- *Small: 1m<sup>2</sup> to 4m<sup>2</sup> [2m x 2m]*
- *Medium: 4m<sup>2</sup> to 25m<sup>2</sup> [5m x 5m]*
- *Large: 25m<sup>2</sup> to 100m<sup>2</sup> [10m x 10m]*
- *Extensive: greater than 100m<sup>2</sup>*

Using this method, one property might be reported as having “several small stands in scattered locations” while another might have “an extensive infestation on adjoining land”. It is worth emphasising that, while the visible growth may be helpful for a preliminary assessment, it cannot be assumed to provide a definitive guide as to the full extent of an infestation or the likely cost of remediation.

#### **2.4. The Property Information Form TA6**

The residential property conveyance process requires the vendor, through their solicitor, to complete The Law Society’s Property Information Form (TA6; *Ref. 4* - [here](#)). This requires the vendor(s) to provide information across a range of matters which may be pertinent to the prospective buyer, all of which may have an impact on their assessment of value.

Section 7 of the TA6 Form covers Environmental Matters. This includes a question on whether the property is affected by Japanese knotweed (any growth, whether above ground/visible or below ground i.e. rhizomes) either inside the property boundary or off-site within a defined proximity of the subject property boundary. Detailed guidance is provided via the above link (*Ref. 4*).

Failure by the vendor to complete the form correctly or honestly could result in a claim for misrepresentation. Where the vendor relies on a third party to survey for the presence of knotweed the third party can face claims of professional negligence if they fail to complete an accurate survey.

### 3. IDENTIFICATION

#### 3.1. Japanese knotweed

Japanese Knotweed is an herbaceous perennial so the above ground parts of the plant will die off over winter leaving visible brown desiccated stems ('canes'). All-year-round identification characteristics are covered below and in Appendix 1, where chronologically ordered images to assist in year-round identification are provided.

**Note:** *The precise timing of spring emergence and autumn senescence will vary across the UK depending on altitude, latitude, individual site exposure and weather patterns year-to-year. The dates below are intended solely as a guide.*

- **March–April:** Spring is when new season knotweed stems are generated from the plant's underground rhizome system, using the energy stored within to fuel rapid growth. Sitting at ground level, red 'bud like' shoots a few millimetres high will first appear then, as the weather warms, these buds erupt and start to grow as stems, at a rate of up to 12-18cm per day in mature plants. Emergent stems can have the appearance of asparagus-like spears when around 10-20cm high, going on to develop a more distinctive appearance as branches and leaves unfurl.
- **May–July:** By early summer, the plants stems should be reaching full height, which in mature plants is typically 2.5 - 3m high and sometimes higher (especially Giant knotweed). The free-standing bamboo-like stems (canes) can be largely concealed by a semi-dense canopy of foliage above and at the sides of a 'stand'. The branches grow from nodes on the plant's stems in an alternate pattern giving a mild zig-zag shape to the branches. The leaf stalks (petioles) grow from the stems in the same alternate pattern. Appendix 1 highlights just five key characteristics:
  - i. Purple/pink speckling towards the base of the main stems
  - ii. The main stems, that can reach a height of more than 3m
  - iii. The leaf stems (petioles), alternate growth pattern
  - iv. The leaf (shovel shaped)
- **August–September:** In late summer and typically in the month of August mature plants will break out in flower. Flowers can be produced all over the leaf canopy appearing as bunched, drooping clusters of tiny white flowers, also referred to as panicles. The flowers are short-lived, falling off the plant 4-5 weeks after emerging leaving spindly desiccating flower stems on the plant through autumn and winter.
- **October–November:** In the autumn, the plant prepares for winter dormancy by re-absorbing nutrients from the leaves/stems back into the plants underground rhizome system. This turns the leaves and stems yellow then brown as the above ground parts of the plant die off. The brown leaves fall from stems which in turn become a buff-brown colour. The brown stems typically stay standing as they are of a semi-rigid fibrous construction.
- **December–February:** This is, perhaps, the hardest time of year to identify knotweed but only if the stems have been blown down by strong winds or cut and cleared. Otherwise, the dead canes are themselves a good diagnostic aid for the presence of knotweed. The brown desiccated stems are

identifiable by their height, alternate growth patterns of the branches and spindly desiccating flower stems towards the end of the branches. Where stems *have* been blown down or cut and cleared you may be able to find the cut or wind snapped base of the stems at ground level. These will appear as tell-tale hollow stem bases (See Appendix 1).

### 3.2. Mis-identification with other plants

Other plants are commonly mistaken for Japanese Knotweed. Familiarity with the above distinguishing characteristics of Japanese Knotweed will assist the surveyor or valuer in differentiating Japanese Knotweed from other plants. A few examples of plants commonly mistaken for knotweed include Common bindweed, Dogwood, Dock, Himalayan honeysuckle, Lilac and Russian Vine.

Knotweed is a free-standing plant so discounting climbers such as Common bindweed or Russian Vine should be easy once you know what to look for (see Appendix 1).

### 3.3. Difficult identification circumstances

As described through section 2.1, with research and practice/experience, Japanese knotweed can be relatively easily identified. However, there are circumstances which may prevent plants, even those which have been present for some time, being seen (or recognised) during a walk-over visual survey:

a) **Time of year.** Knotweed will be visible in the winter by its brown desiccated stems, but if these have been cut and cleared before a survey, visual evidence to the presence of knotweed could be hard to find. Until new season stems in late-spring early-summer have grown high enough to be seen over any surrounding vegetation it will remain difficult to spot.

b) **Previous management.** Where short, medium, or long-term herbicide treatment and vegetation removal works have been conducted previously. This could have been recently or some time ago by the current or previous property owner or a hired contractor. Treatment works can remove the visible identifiable above ground presence of the plant, but the invisible underground rhizome may persist in the soil. Normally, if thorough chemical treatments are applied by e.g. an accredited PCA contractor, any rhizome should be moribund for at least the period of any guarantee. But poor or inconsistent treatment can result in only short-term rhizome dormancy so that the above ground growth will return. Where treatment has been conducted by a reputable contractor there should be a record (management plan) of works including a map/plan/drawing of the knotweed location. Since 2014, The Law Society's Property Information Form (TA6) has included a specific question on Japanese knotweed, requesting management plan information if available in respect to knotweed when its presence, current or historical, is known (see Section 7 below).

c) **Bonsai knotweed etc.** Under certain circumstances Japanese knotweed can produce growths which are deformed. So-called 'bonsai' knotweed is stunted stem and leaf growths growing in sporadic clumps to only a few centimetres above soil/ground level making it difficult to spot amongst other vegetation. Some of the normal growth characteristics may still be discernible but in miniature; typically, the leaf shape as well as being miniature is also elongated. The usual trigger for bonsai growth is previous herbicide treatment but it can also be caused by pollutants in the soils such as hydrocarbons.

d) **Concealment.** Due to the stigma associated with Japanese knotweed it is not uncommon to see attempts to conceal its presence. Sometimes the concealment may have been the result of innocent garden clearance and tidying. Examples of malicious concealment include cutting and clearing stems, cultivating soil beds, or covering areas with tarpaulin, landscape fabrics, aggregates, or ornamental bark chippings and so on. Recent clearance of a garden or part of a garden should raise suspicions in the surveyor's mind, especially if Japanese knotweed is known to be present in the locality. Where there is suspicion of rhizome presence that cannot be verified by visual means above ground, further investigation is advised/recommended.

#### 4. THE IMPACT OF JAPANESE KNOTWEED ON STRUCTURES AND PROPERTY

Japanese knotweed is a fast-growing perennial plant which has seasonal foliated canes above ground and an expansive network of subterranean stems known as rhizomes underground. It usually suppresses native flora and unless otherwise managed establishes itself as a dominant feature. Dense clusters of Japanese knotweed canes known as "stands" will extend in area and, over time, can become very extensive. It is particularly at home in the built environment where it spreads and colonises new ground via human disturbance, especially through disturbance of its underground rhizome system.

##### 4.1 Structural impacts

The extent of the structural damage that arises from Japanese knotweed could be described either as 'minor' (e.g. ruptured tarmac or heave to paved areas) or 'serious' (e.g. blocked or damaged drains, cracked brickwork or boundary/retaining wall displacement).

Japanese knotweed can cause these direct structural impacts *on buildings* (as can some bamboo species) but the severity and frequency of this are probably less than that of many trees and/or shrubs (esp. buddleia) with secondary-thickened (woody) roots.

However, a prodigious growth rate and unique physiology make Japanese knotweed capable of growing through and exploiting defects & weaknesses in concrete, brickwork etc. both within and around buildings (in new and old buildings). This can cause various degrees of disruption or disfigurement which, if not managed, can lead to significant repair costs over time (*Ref. 5 [here](#)*).

The canes (above ground stems) are fast growing in the spring and can have diameters typically in the range of 10-25 mm but are fibrous, not 'woody'. As such the cane growth is unlikely to cause serious structural damage. A more significant risk is posed by the plants complex branching underground network of rhizomes. The rhizome acts as the plant's energy store and even a small piece of rhizome can produce a significant volume of new cane/stem growth relative to its size. This makes Japanese knotweed particularly troublesome in new-build situations (hard standing, structures, properties, or extensions/renovations). Disturbed or introduced rhizome can quickly produce new stem and cane growth running through cavities in the walls and/or floor construction looking for air and light and appearing (alarmingly) within internal building spaces.

If left untreated, overtime (years) the rhizomes grow in volume to form a mass called a 'crown' between the rhizome network and the base of the canes. These are dense and fibrous; sometimes described as 'woody' in texture. As the rhizomes and crowns grow, significant structural impacts may occur. The pressure exerted by its expanding growth in immediate proximity to a wall, for example, may cause or exacerbate pre-existing

structural damage by displacing bricks, mortar, concrete. Potentially, where crowns are ‘trapped’ between two free-standing walls, these effects can lead to complete collapse. Under driveways, paths, and patios a maturing crown can cause significant heave effects. Notwithstanding these observations, it is extremely rare for Japanese knotweed to cause *structural* damage to the foundations of buildings.

*Consequently, each property or site needs to be considered not just in terms of what impact can be seen at the time of the survey but what the potential future impacts may be if the Japanese knotweed is left to grow/spread (more potential for damage, higher costs of remediation). This is true for physical impacts as well as Amenity impacts covered below.*

## **4.2 Amenity impacts**

The presence of Japanese knotweed, even just the presence of the plant’s underground rhizome within the boundary of the property, can have a significant impact on amenity use and value.

Where Japanese knotweed is located there is a restriction of the free amenity use of the land. The restricted-use area can be significant including not only the area of above-ground visible stem growth but also an outlying underground area possessing the plant’s rhizome (with the majority of rhizome typically being found within 3m of the visible plant).

The above ground growth can become dense blocking physical access to areas of a property. Growing amongst landscape beds it will make gardening and grounds maintenance difficult. When growing through lawns it restricts the ability to mow and easily dispose of lawn cuttings (‘nodes’ of knotweed stems are capable of re-growing if introduced to compost heaps).

Ground possessing the plant’s rhizome poses an immediate and long-term restriction and burden on the landowner’s ability to freely use and enjoy their property; it can be said to interfere with the land’s amenity value. Disturbing the rhizome, even after herbicide treatment (see below Section 6), can cause growth to be triggered and moving the soil increases the risk of spreading the plant to other areas (on or off the property).

Further, a change of land use (e.g. landscaping or development) will incur additional difficulties *and significant expense* in excavating and removing the rhizome. Cut and cleared ‘green’ stems and dug/excavated soils containing knotweed rhizome if removed from site are classed as a Controlled waste, making legal disposal difficult to organise and incurring higher disposal costs than general garden or household waste. The remediation or removal of contaminated soil is by far the largest potential cost associated with Japanese knotweed management.

## **5. RISK ASSESSMENTS FOR JAPANESE KNOTWEED**

In the previous Section we highlighted the potential impact of Japanese knotweed in the built environment. As a result of these impacts (minor → more severe structural effects, plus general nuisance aspects such as loss of amenity, restrictions on development etc.) the presence of Japanese knotweed has been a matter of concern to mortgage lenders and valuers. As a result, approx. 10 years ago, RICS published an Information Paper (Ref. 6; [here](#)) which included guidance for property surveyors to enable the objective assessment of risk (on a scale from 4 – the highest, to 1 – the lowest) posed by Japanese knotweed to individual residential properties.

This helped the valuation process and mortgage companies were able to establish lending decisions based on such categories (when taken together with other factors). The Risk Categories were based on a simple metric – the distance of Japanese knotweed stands from buildings etc. and/or boundaries (7m being used to differentiate between categories, this being the best estimate available at the time for potential rhizome extension).

Following an extensive review of their Risk Assessment framework RICS have now published a new Guidance Note GN2021 (“Japanese knotweed and residential property” – *Ref. 1*) which sets out a fresh approach. Four ‘Management Categories’ are established, A – D, and these are based on the actual or potential impacts of Japanese knotweed on buildings, hard surfaces *and* amenity spaces NOT solely its distance from buildings etc. It is also based on a more conservative assumption regarding typical rhizome extension distances (3m; see *Ref. 5*).

The framework is published together with extensive notes to guide the individual surveyor to arrive at an objective conclusion. Some summary points are given below:

- The new risk assessment framework acknowledges that even when Japanese knotweed is not directly damaging to buildings etc. at the time of survey, it is still capable of causing a ‘loss of amenity’, is difficult (costly and disruptive) to manage and, especially when close to boundaries, imposes a significant liability on the owner (to prevent encroachment to their neighbours).
- Whilst structural damage to ‘sound’ buildings is rare it is acknowledged that the ability of Japanese Knotweed to grow through cracks and fissures within walls/concrete can lead to significant anxiety and the need for repairs.
- Loss of amenity as well as the costs associated with measures to control Japanese Knotweed can be very significant if it is found to be present close to a property or anywhere where development (including landscaping) is anticipated.
- Rhizome extension in the soil relative to the position of ‘green’ canes above ground is accepted as ‘probable’ to at least 1m and up to 3m *in most situations*. Surveyors must therefore remain aware of the impact of so-called *buffer zones* when assessing an individual stand of Japanese knotweed. Whilst a qualified Japanese knotweed surveyor (e.g. CSJK) may be able to determine by direct exploration the extent of rhizome extension in individual cases, 3m is used as a rule-of-thumb to aid the initial categorisation for valuation purposes.

**Some examples of management categories are given in survey maps/plans in section 7 below.**

## 6. EFFECTIVE TREATMENT OF JAPANESE KNOTWEED

### 6.1 Introduction

Once it is established, treating Japanese Knotweed can be challenging. As the Royal Horticultural Society states on its website: *Eradication requires determination as it is very hard to remove by hand or eradicate with chemicals.* (Ref. 7: [here](#)).

Different treatment options that are currently in use are discussed below. The relative merits of these remediation techniques can only be fully assessed following a site inspection by a qualified Japanese knotweed surveyor (CSJK) who would take in to account the short, medium, and long-term needs of the client plus a number of site-specific factors (Ref. 2). Nevertheless, we provide a reasonably detailed explanation of each management option in order to assist valuation etc. surveyors understand the methods likely to have been used in the past and/or the content of Knotweed Management Plans (see Section 7) and/or guarantees which clients may have in their possession.

In practice, most Management Plans for Japanese knotweed fall in two categories; those that aim to ‘control’ the plant *in situ* with herbicides (a medium-term knotweed management plan e.g. 4 - 10 years) and those that are based on physical removal or relocation, normally aiming to achieve full ‘eradication’ immediately with the caveat that the site is monitored for at least a few years thereafter. We will deal with the latter first but please remember that multiple or combined/hybrid specifications can also be proposed for each site (e.g. herbicide treatment + part excavation + soil screening + root barriers) and qualified CSJK surveyors can provide cost-optimised solutions tailored to each situation.

### 6.2 Excavation of the plant and its roots

Japanese Knotweed-infested soils can be excavated and removed to an off-site, appropriately licensed, waste-management facility.

The most recent research (Ref. 5) suggests that the plants underground rhizomes extend *on average* approx. 1.5 m vertically (i.e. downwards, rarely up to 3 m) and 2.5 m horizontally (rarely up to 7 m, possibly even more if growing via culverts, drains etc.) from the above-ground growth. Potentially, this can result in large volumes of waste soil being excavated (classed as ‘Controlled waste’ if removed from site to landfill). Where excavations are directed by an experienced contractor these volumes can be minimised by careful site monitoring and selective digging which helps to control costs. Even then, the excavation of even a relatively small Japanese knotweed infestation can cost several thousands of pounds in waste charges alone (excavation, transport, and landfill taxes).

Although costly the physical removal of Japanese knotweed plants and the entire associated rhizosphere is usually considered as the method most likely to result in complete *eradication* of Japanese knotweed from the site (although this definition only applies when the process is followed by a minimum of two years monitoring to ensure no fragments were missed or misplaced).

#### 6.2.1 On-site burial and/or encapsulation with membranes

Japanese Knotweed can be excavated and then buried on-site in accordance with Environment Agency guidelines (Regulatory Position Statement 178; Ref. 8 [here](#)); the minimum depth of the burial ‘cell’ depends on a number of factors but if less than 5m the waste soil must be encapsulated in durable root barrier membranes.

However, *neither burial option is a practical option in the majority of residential properties* due to the space requirements to work in (access for plant and equipment) and/or to bury the soil but this method is often used as a reliable and cost-effective method on development sites.

Another on-site physical management technique is the use of vertical barriers to prevent Japanese Knotweed crossing property boundaries. This can help where adjoining landowners are not co-operating with a cross-boundary programme to treat Japanese Knotweed infestation.

However, vigorous Japanese Knotweed growths can often breach a poorly designed root barrier installation, so the advice of an appropriately qualified and experienced person is essential. In most circumstances, root barriers are used in conjunction with other treatment methods (*Ref. 9: PCA Guidance Note on Root barriers [here](#)*).

In all situations where excavation, screening and encapsulation has taken place it is considered best practice that the site should be the subject of inspection for **at least** two full growing seasons to ensure that the site is effectively free of viable Japanese Knotweed rhizomes etc.

### **6.2.2 Relocation and Screening**

Japanese knotweed can be excavated from an undesirable location (e.g. site of a proposed building project) and, if the site is large enough, relocated to another area (e.g. a public open space/park). The subsequent stockpile/bund can then be monitored and treated long-term with herbicides. The excavated area should also be monitored to check for any recurrence of growth.

Japanese knotweed-contaminated soils can also, once excavated, be passed through a mechanical screener and the pass-through soils inspected for rhizome with the rhizome manually extracted while passing over an inspection conveyor belt. The process, if done diligently and depending on soil types etc., can remove the great majority of the rhizome but as even very small fragments can re-generate, even screened soils remain classified as Controlled waste. Consequently, this service is normally only offered where the screened soil *is to be retained on-site* in a recorded location subject to monitoring for re-growth for at least two years.

### **6.3 Chemical control**

Chemical control is the application of herbicide to Japanese knotweed plants over a period of several growing seasons. This is often the most economical treatment option but will usually require a minimum of four years (2 years treatment, two years monitoring) before control can be assured. In fact, it is not uncommon for treatment plans to take longer, especially for older/larger stands or those which have been subject to historical treatment (e.g. bonsai knotweed, see 3.3).

Modern herbicide treatment plans rely almost exclusively on Glyphosate-based herbicides, which have been proven to be by far the most effective for treating Japanese knotweed. Herbicide treatments are very effective if done systematically and at the right time (see *Ref. 10: [here](#)*) and can result in the complete cessation of above ground visible growth for an indefinite period. However, herbicides cannot be relied upon to penetrate and act uniformly *on every part* of the plants extensive underground rhizome system. Most often a successful herbicide programme will kill some parts of the rhizome and place the rest (deep or large dense sections) into long-term dormancy. With this comes the risk of recurrence of growth especially if the rhizome contaminated ground is disturbed, by development works for example.

For these reasons it is recommended that Japanese knotweed herbicide treatments are best considered as part of long-term management strategies rather than ‘eradication’ processes. If there are known change-of-land-use plans for an area of ground possessing Japanese knotweed an excavation method is most suitable.

#### 6.4 Biological Control

Biological control involves the introduction of a ‘pest’ species (insect or fungus) that will attack and control the target ‘host’ species (in this case, the Japanese Knotweed).

When such strategies are available (subject to successful trials and government release permits), they can be used to control the host plant to a degree but are rarely completely effective. There are no Biological Control options currently available (i.e. licenced) for commercial use in the UK (where trials have been, so far, unsuccessful) although some new trials with Psyllid (sap-sucking) insects from Japan are currently underway in the Netherlands (started 2020; Ref. 11 [here](#)).

**Note:** If and when licenced, biological control strategies are unlikely to be appropriate or effective in domestic residential situations especially where a Guarantee of effectiveness is a pre-requisite.

#### 6.5 The costs of effective treatment

Preparing a property valuation requires an assessment of the number of considerations (some general guidance is given in Ref. 1 (7.0)). One of the key considerations in valuing a property impacted by Japanese knotweed will be the cost of remedial treatment any subsequent property repair.

The cost of knotweed remediation depends on a great many factors, including physical ease of access for undertaking remedial works. Actual costs will be attained from a specialist knotweed contractor inspecting the property and providing a detailed Management Plan proposal and quotation to the vendor/buyer.

The below costs are therefore provided only as guideline to potential costs specifically to assist the valuation process for mortgage lending purposes:

Description of works	Area of Knotweed	Cost Range	Comment
Residential Herbicide Treatment and Control Programme.	1-25m <sup>2</sup>	£2,000-£4,000	For typical residential infestations.
Residential full excavation/ removal (and backfilling).	1 m <sup>2</sup>	£3,000-£6,000	Ranges of cost due to variables such as access, waste handling, and waste disposal charges*.
	10 m <sup>2</sup>	£8,000-£16,000	
As a standalone exercise. Install vertical root barrier to boundary where knotweed is off site in close proximity to the boundary (including fence reinstatement).	10 Linear m	£3,000-£6,000	Ranges of cost due to variables such as access, and amount of rhizome encountered on site-side of root barrier requiring removal*.

\*In some situations, due the site-specific constraints/requirements, the costs could be more than the range quoted above.

## 7. JAPANESE KNOTWEED REPORTS AND MANAGEMENT PLANS

Once Japanese Knotweed has been identified and a qualified and experienced person (CSJK) has visited the site and provided a survey report, a documented Japanese Knotweed management plan should be established for an affected property. This management plan can provide the necessary reassurance to both lenders and buyers that a Japanese knotweed problem is being properly managed.

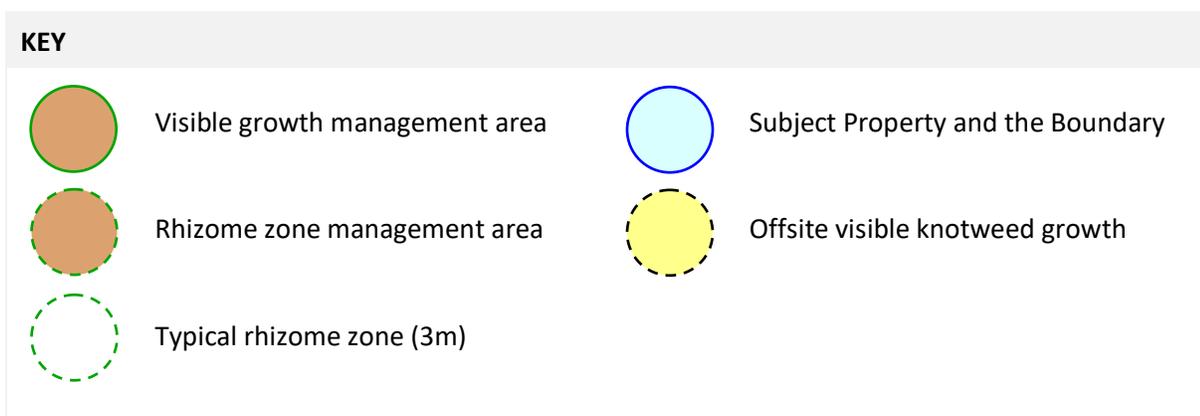
Although the methods of tackling Japanese Knotweed will depend on the site circumstances and the clients' choices the management plan should reflect the current legislation, guidelines and practices as set out in the most up-to-date Codes of Practice (e.g. GBNNSS, PCA, INNSA).

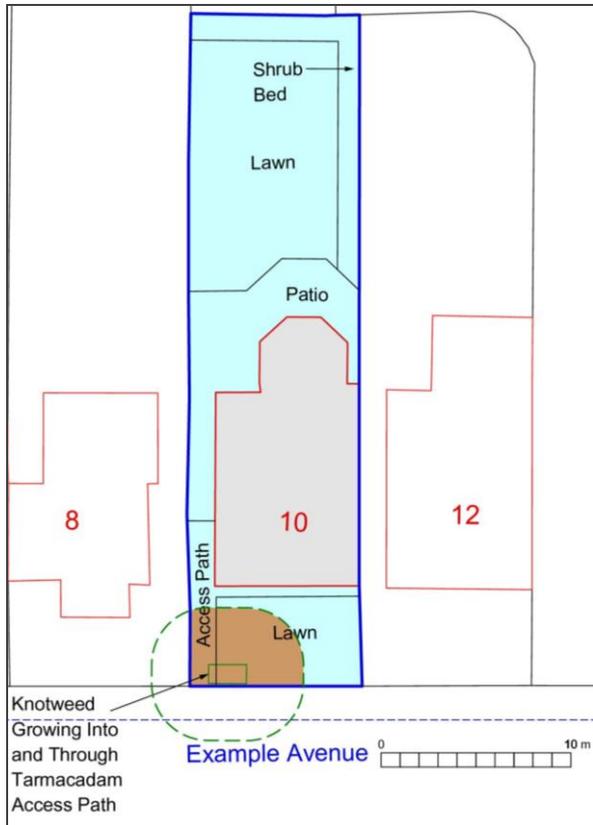
As a minimum the Survey Report/Management Plans should include a property survey undertaken by a qualified surveyor (**CSJK**) and include the following features:

- A description of the property with an accurate record of the Japanese Knotweed infestation.
- A detailed, scaled plan showing property boundaries, the dimensions of each stand and corresponding underground rhizome 'risk zones' (see Fig 1).
- An evaluation of possible treatment methods with pros and cons in consideration of the property, the owners' requirements, and any proposals for the site/property. Culminating with a description of the treatment methods to be used to control or remove Japanese Knotweed.
- A treatment schedule that is updated as treatments (or monitoring) are carried out.
- A completion certificate that confirms the treatment is complete (usually after two full years of no growth) and that the Japanese Knotweed at the property has been remediated (normally combined with the issue of a Guarantee regarding re-growth within 2, 5 or 10 years).

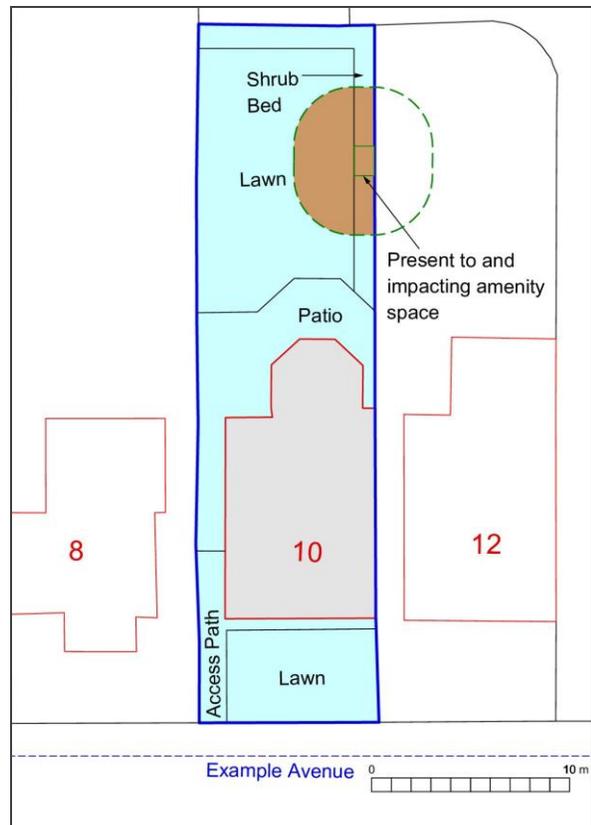
Valuers and surveyors should take account of this range of information when deciding whether the evidence of previous treatment programmes is adequate (see above Section 6.1).

**Fig.1. Example plans based on the RICS Management Categories (Ref.1)**

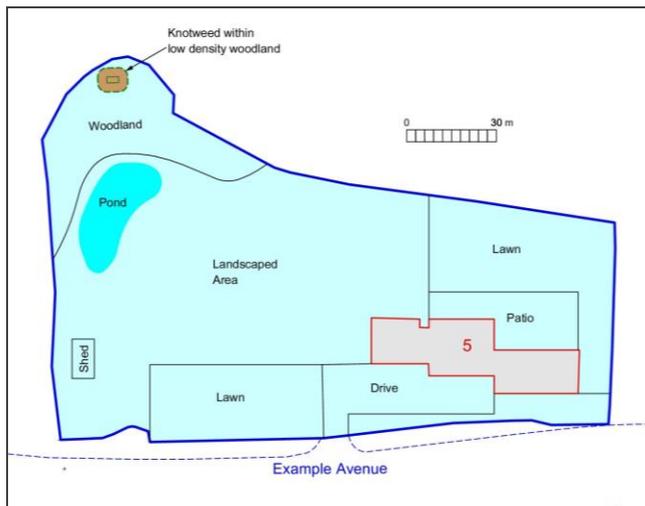




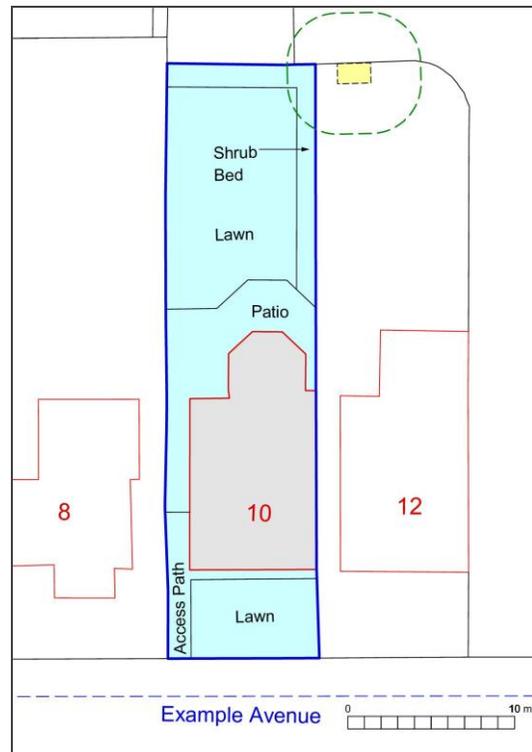
**Management Category A: Action**



**Management Category B: Action**



**Management Category C: Manage**



**Management Category D: Report**

## 7.1 Other matters

To meet third-party stakeholder requirements, other features could provide additional reassurance, as detailed below.

- The current owner may have to pay all costs associated with the management plan ‘up-front,’ so that the treatment programme can be completed without relying on financial support from subsequent owners.
- The management plan (and any associated Guarantee) should be transferable to any subsequent owners.
- For knotweed affected communal or shared ground (such as a block of flats) a Knotweed Management Plan identifies the ground owner/management company as the beneficiary, with flat owners on the property able to rely on the plan as if their own.
- An appropriate insurance-backed guarantee that will ensure that liability cover afforded to the beneficiary will continue in the event of insolvency of the original treatment company.

**Note:** Though it is unlikely that Japanese Knotweed will return following the successful delivery of a professional treatment plan, the biology and nature of the plant, and site variations, means that, in some circumstances, regrowth can occur both during and after any guarantee period.

## 7.2 Neighbouring properties

Where the Japanese Knotweed is confined to the grounds of a single property, its treatment will normally be a straightforward process involving only two parties: the property owner and the contractor. However, where Japanese knotweed straddles the boundaries of a number of different properties, the solution will not be so simple. In some residential areas’ property ownership can be complex and transient and establishing a joint strategy in this situation will be challenging.

In these cases, providing root barriers along the boundary may appear an attractive option to owners and lenders who require a straightforward, time-limited solution. However, this approach may be unsuitable for many domestic properties for two reasons:

- Excavations to the depths required can be expensive, disruptive and can be legally challenging, as the owner’s legal advisers take into account matters relating to boundaries, party walls and general property rights.
- Not all commentators agree that root barriers on their own are effective ways of preventing the lateral spread of Japanese Knotweed (*Ref. 9*).

For this and other reasons the most effective solution will be the treatment of the Japanese Knotweed within the property boundary and any part connected to that infestation whether outside the boundary or not. The management plan should advise of any neighbouring party’s agreements, whether voluntary or legally imposed in place and additional contractual issues if any. These will be required to ensure a successful treatment programme.

## 8. LEGAL MATTERS/ENCROACHMENT

This Guidance Note and the listed reference materials below all advise that Japanese knotweed is capable of causing a variety of impacts. Much of the law surrounding Japanese knotweed relates to controlling its *environmental* impact (see *Ref. 2* for full details); these laws impose certain ‘duties’ on property owners to prevent spread and to dispose of knotweed waste legally. In addition, the Government has issued guidance regarding how the Antisocial Behaviour, Crime and Policing Act 2014 can apply to Japanese knotweed, so giving local authorities and/or the Police, authority to issue Community Protection Notices (and fines if these are not complied with). Finally, the common law statutes of Misrepresentation, Professional Negligence, and Private Nuisance have all been applied to Japanese knotweed.

Allowing knotweed encroachment from one property to another has case-law precedent as an actionable private nuisance (*Ref. 12*; [here](#)). Encroachment can result in unreasonable interference with the claimant’s land or their use or enjoyment of that land. The issue of encroachment has, therefore, become a potential basis for litigation between neighbours. However, we advise caution before advising clients to consider such action. In such situations the first and best advice for the client is for them to establish a dialogue with their neighbour(s), so that all mitigating approaches and any *mutual benefits arising from bringing the knotweed under control* are understood, before considering recourse to the law.

Where a path of litigation is chosen for common law knotweed claims, it is imperative that a qualified Japanese knotweed surveyor (CSJK) is instructed (usually via a solicitor) to help assess the legal merits of any claim for damages under law.

A CSJK qualified surveyor can, for example, provide expert assessment on whether knotweed was present or visible at the time of the claim, or whether knotweed present near a boundary is or is not ‘encroaching’.

**Note:** Providing *expert witness* services to the courts usually requires a surveyor to produce CPR 35-compliant reports in accordance with civil procedures. Further guidance is available from various organisations (*Ref. 13*).

## 9. REFERENCES

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11. CABI Web Page “Japanese Knotweed”. <https://www.invasive-species.org/species/japanese-knotweed/> (CABI – Commonwealth Agricultural Bureau International; see [www.cabi.org](http://www.cabi.org))
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13. Society of Expert Witnesses - <https://www.sew.org.uk/>, Expert Witness Institute - <https://www.ewi.org.uk/>

**APPENDIX**

**JAPANESE KNOTWEED THROUGH THE SEASONS (Identification Guide)**

*With thanks to Japanese knotweed Ltd for the images*

**December-February**



March-April



May-July



August-September



October-November



Bonsai knotweed/summer



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