

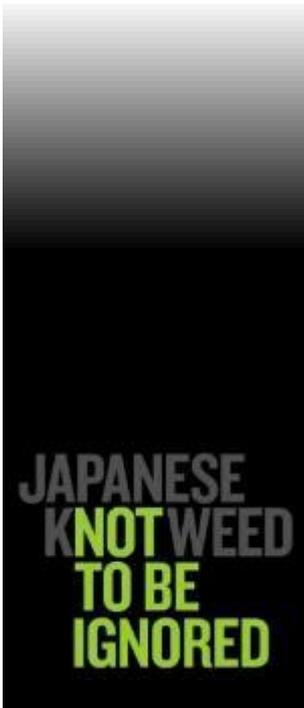


JAPANESE KNOTWEED



METHOD STATEMENT and RISK ASSESSMENT for JAPANESE KNOTWEED REMEDIATION WORKS

NAME OF SITE:	Turing House, Hospital Bridge Road, Twickenham, TW2 6LH
CONTRACT No:	JKLE16807
CLIENT NAME:	Bowmer & Kirkland
SPECIALIST:	Japanese Knotweed Ltd
DOCUMENTS OF REFERENCES	Japanese Knotweed Ltd Health and Safety Manual Health and Safety Data Sheets Health and Safety Executive Agricultural Policies Health and Safety Executive Horticultural Policies
PREPARED BY:	Andy Hillier of Japanese Knotweed Ltd
DATE PREPARED:	04/05/2020



JAPANESE
KNOTWEED
TO BE
IGNORED

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1 SIGN OFF SHEETS

1.1 TOOLBOX TALK

By signing below, you confirm that you have received a toolbox talk from Works Supervisor prior to commencement of works.

Topic of Toolbox Talk:

DATE	NAME	COMPANY	SIGNATURE

1.2 RISK ASSESSMENT AND METHOD STATEMENT

By signing below, you confirm that you have read this Risk Assessment and Method Statement and you will work in accordance to the method and are aware of the risks inherent to this site and the operations that you undertake.

DATE	NAME	COMPANY	SIGNATURE

1.3 PRE-START MACHINE CHECKS

By signing below, you confirm that you have undertaken a visual check of the machine prior to use, to satisfy yourself to the best of your ability (with consideration to the limitations of visual checking only) that the machine is in good working order.

DATE	MACHINE	SUPPLIER	NAME (SIGNATURE)

2 SITE SPECIFIC INFORMATION

2.1 FULL SITE ADDRESS

Turing House,
Hospital Bridge Road,
Twickenham,
TW2 6LH

2.2 SITE MANAGER / CONTACT NAME AND NUMBER

Site Manager Name: tbc
Site Manager Number: tbc

2.3 WELFARE FACILITIES

Welfare facilities to be provided by Client.

3 METHOD OF WORKS

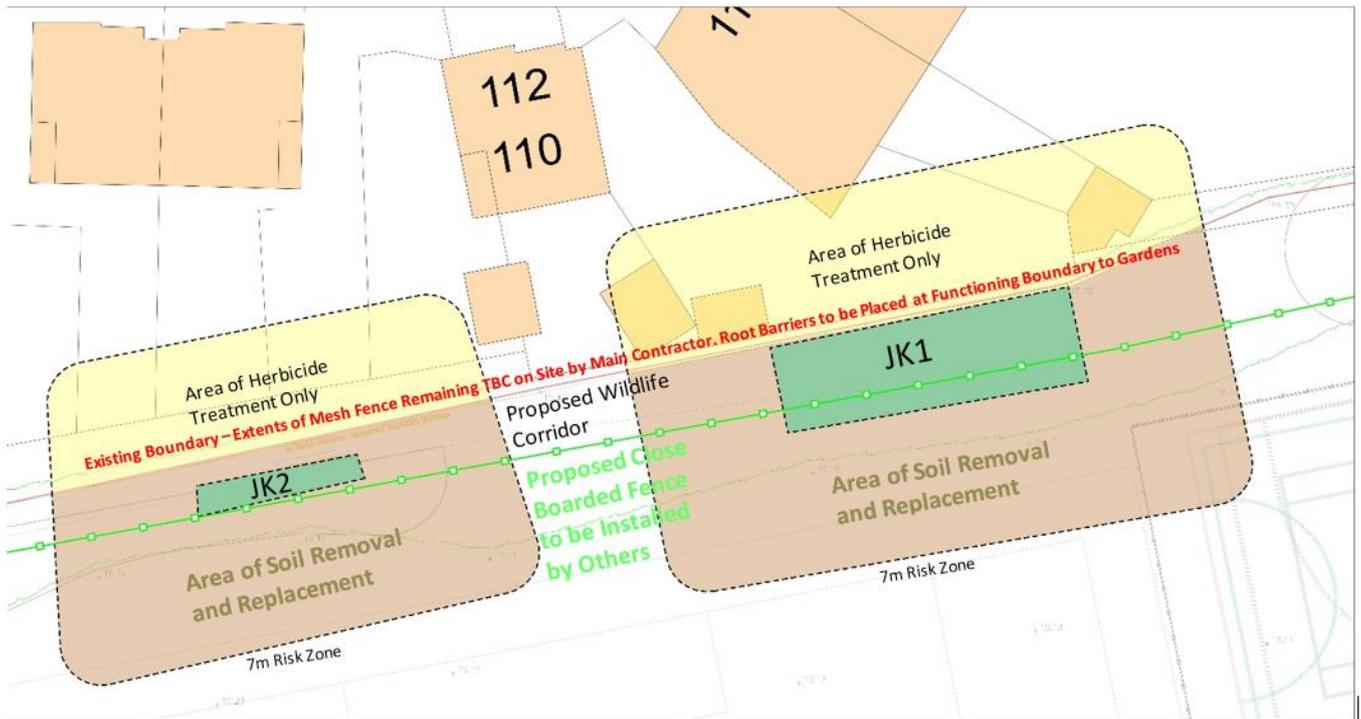
3.1 SITE PLAN

Image 1: Site Plan of current site layout showing knotweed distribution



KEY	
	Active Japanese knotweed growth areas, on and off site
	7m Risk Zone: - Potential Japanese knotweed contaminated ground area

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



Excavation works will take place up to the proposed boundary line with a horizontal root barrier installed to stop any offsite knotweed from growing back onsite. JKL is not responsible for the development/construction of any new boundary fences and will be down to the client to arrange.

NOTE: This plan is to be used as a location plan of the knotweed location at the boundary fence and not as a construction/development plan. It is not to be used by anyone other than to show the location of the knotweed stands and not to describe/show where any development will take place onsite. The development plan shown within the image is for the purposes of locating the knotweed onsite and show how it will affect the development if not removed from site.

3.2 PLANNED ACTIVITIES (REMEDATION STRATEGY)

No site clearance or knotweed excavation will take place until ECoW has undertaken nesting checks.

Following identification of knotweed the plant we recommend a surrounding 7m zone should be cordoned off to prevent accidental disturbance and spread.

Site Clearance works (Tree/Vegetation/Demolition) are required in order to access the area of knotweed and complete excavation works.

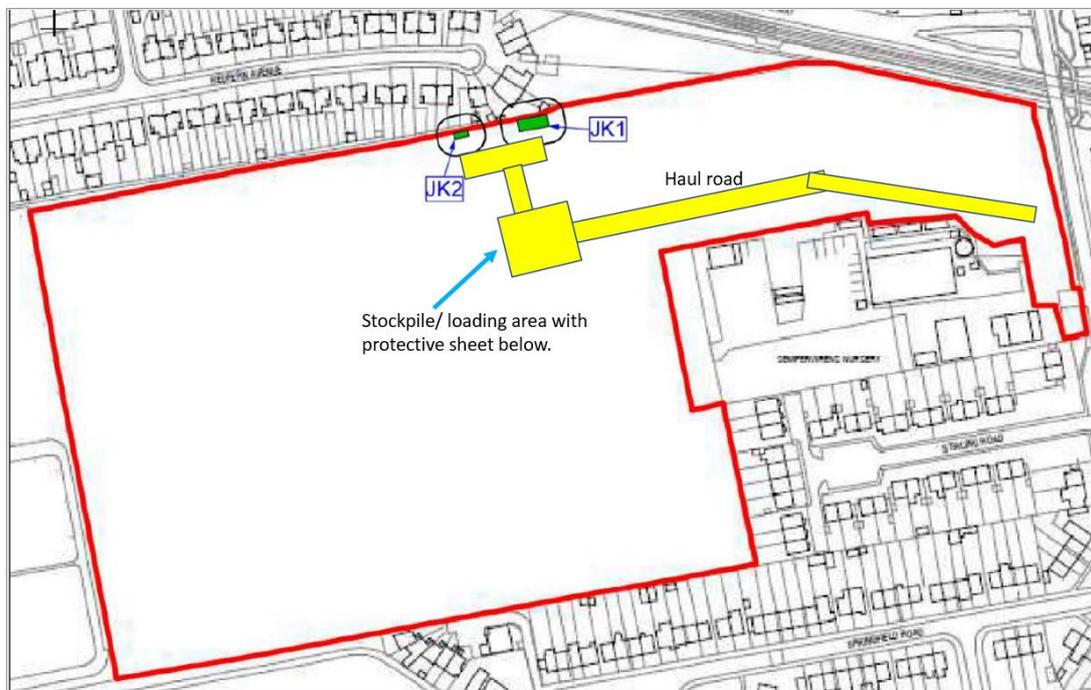
Pre-Dig checks (Machine, Equipment, Services) to be completed and permit to dig obtained where required.

Tool Box Talk: Operatives will be debriefed in accordance to the Knotweed Management Plan, Risk Assessment and Method Statement.

JK1-JK2: Complete methodological excavation of knotweed to remove all lateral spread of knotweed rhizome up to the boundary of the site, and vertical spread of rhizome to a maximum depth of 2m (unless specified elsewhere).

Operative and Machine to be expertly managed (haul routes, working areas) to minimise contact with Japanese knotweed material.

Knotweed waste will be double handled via dumper to move the material from source to an area suitable for loading to road going cart-away lorries. Location of temporary stockpile has been confirmed, please see image below



Root barriers to be expertly installed to the boundary of the site where knotweed rhizome is present to the neighbouring site.

Expert Supervision ensures complete removal of the knotweed in accordance to the methodology and a clean site on completion.

Operatives, Machine and Equipment to be thoroughly decontaminated before commencing backfilling works or leaving site during and on completion of works.

Created voids to be backfilled with soil certified under BS3882:2015 low fertility spec and adhering to 20mg/l phosphorous limit.

Provision of an Insurance Backed Guarantee on these works will require any off site knotweed to be treated under a Herbicide Programme.

3.3 FULL DIG AND DUMP (DOUBLE HANDLE) - METHOD OF WORKS – EXCAVATION ACTIVITY

Arrive on Site and report to site office.

Liaise with Site Manager /Client, follow site rules including signing in/out procedures.

Ascertain if permit to dig required and obtain.

No weather considerations apply to this method of removal

Toolbox talk.

Where there are dangerous occurrences (including finding sharps) report to client and line manager for advice before proceeding. Do not enter an unsafe area/ situation.

Unload tools and equipment required for the works.

Establish working area.

Establish access routes across site between excavation area and stockpile loading area for lorries.

Review site service plan and complete CAT scan of working area.

Take delivery of machines, complete prestart checks. Be sure to take images of all documentation and save in the diary.

Hand dig trial pits using insulated hand tools to establish location, depth and direction of underground services within the excavation area.

Where it is established that underground services are within dig area follow *HSE guidance (<http://www.hse.gov.uk/pubns/priced/hsg47.pdf>)

Undertake excavation of Japanese knotweed via mechanical excavator ideally using a flat bladed bucket, excavating in layers.

Where we come across suspected asbestos, works must stop. Remove and keep all persons out of the area. Where practicable close or seal or lock off the area. Do not remove any equipment or material. Report to the site manager/principal contractor/client.

Work must not re-commence until an asbestos specialist has been called in to identify/deal with the asbestos before works can continue.

A visual inspection with aid of hand tools of each layer will determine if full extent of knotweed rhizomes have been reached.

Extend excavation vertically to the full depth of rhizome.

Extend excavation laterally to the extent of rhizome up to site boundary only.

Where knotweed rhizomes extend to or beyond boundary follow method diagram

Load soils into dumper, do not overfill.

Dumpers to traverse designated haul route to tip load at stockpile lorry loading area, route to stockpile to be shown in the site plan.

Once all soils transferred to stockpile, clean/inspect dumper to ensure that it is free of knotweed.

Receive cartaway lorries on site and direct to the loading area.

Load stockpiled soils into 8-wheel tipper lorries. Prior to last load leaving site inspect excavator to ensure it is clean of knotweed contamination. Take images of the stockpile location area after the last load is removed.

Lorries to sheet down/ auto sheet prior to leaving the loading area.

Lorries to leave site and transport excavated soils directly to licenced landfill site.

Complete waste transfer note and waste tracking record for each load that leaves site.

Decontaminate clothing, apparatus and machinery of Japanese knotweed. Visual inspection by supervisor.

Receive / unload root barrier.

Install vertical root barrier where rhizomes are beyond the required excavation (e.g. site boundary).

Fix vertical root barrier to the final boundary detail. If this is not in place, the top of the root barrier is to protrude above final ground levels along the line as predetermined and set out by the site manager/client.

Ensure that the working area is left safe at the end of each shift by battering sides or installation of fencing

Receive backfill lorries, place into excavation and tidy the works area.
Advise client / site manager of works completion.
Leave site.

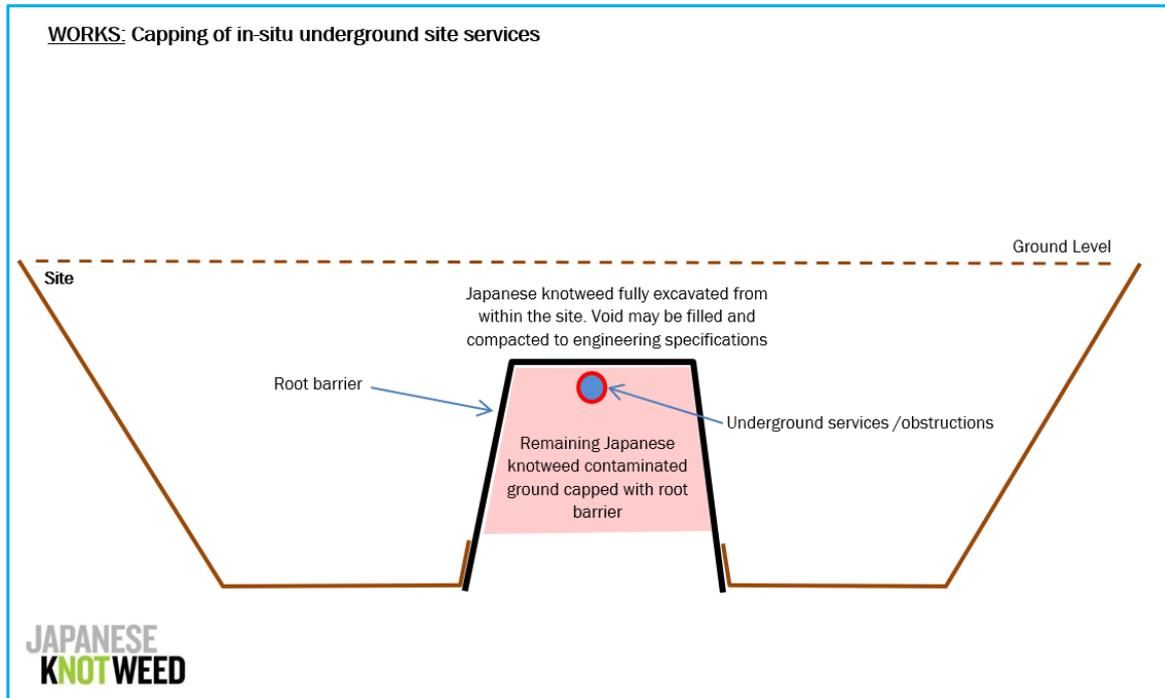
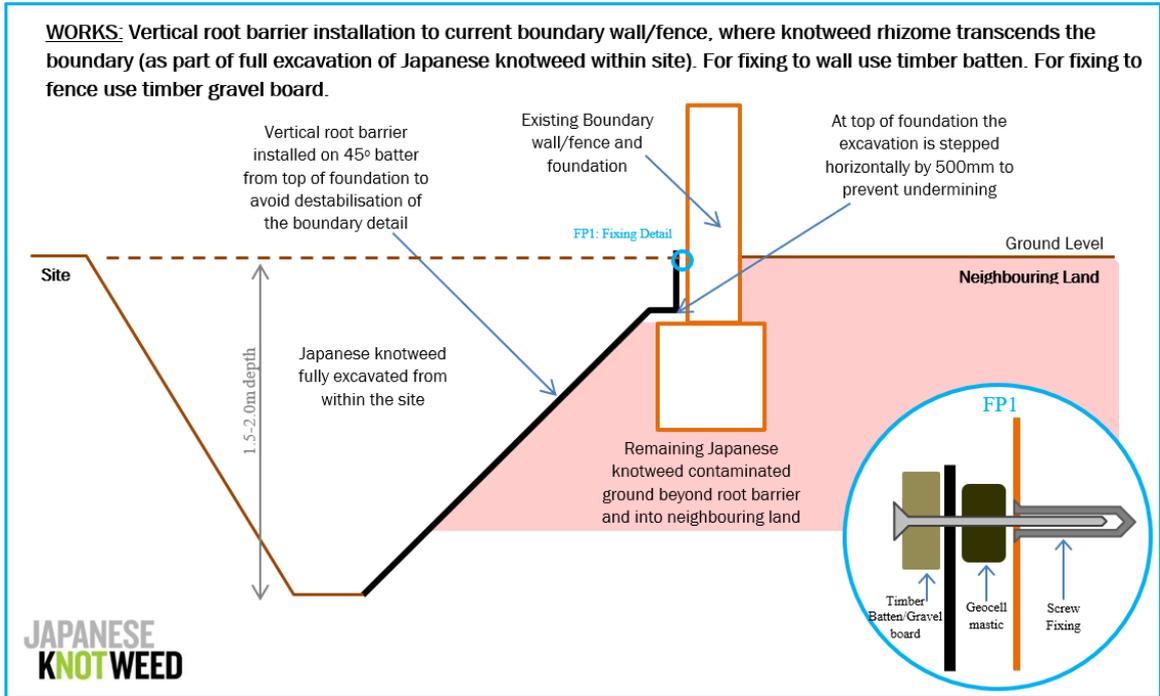
3.4 **HERBICIDE TREATMENT - METHOD OF WORKS – HERBICIDE TREATMENT ACTIVITY – OFFSITE NEIGHBOURING AREAS OF JAPANESE KNOTWEED**

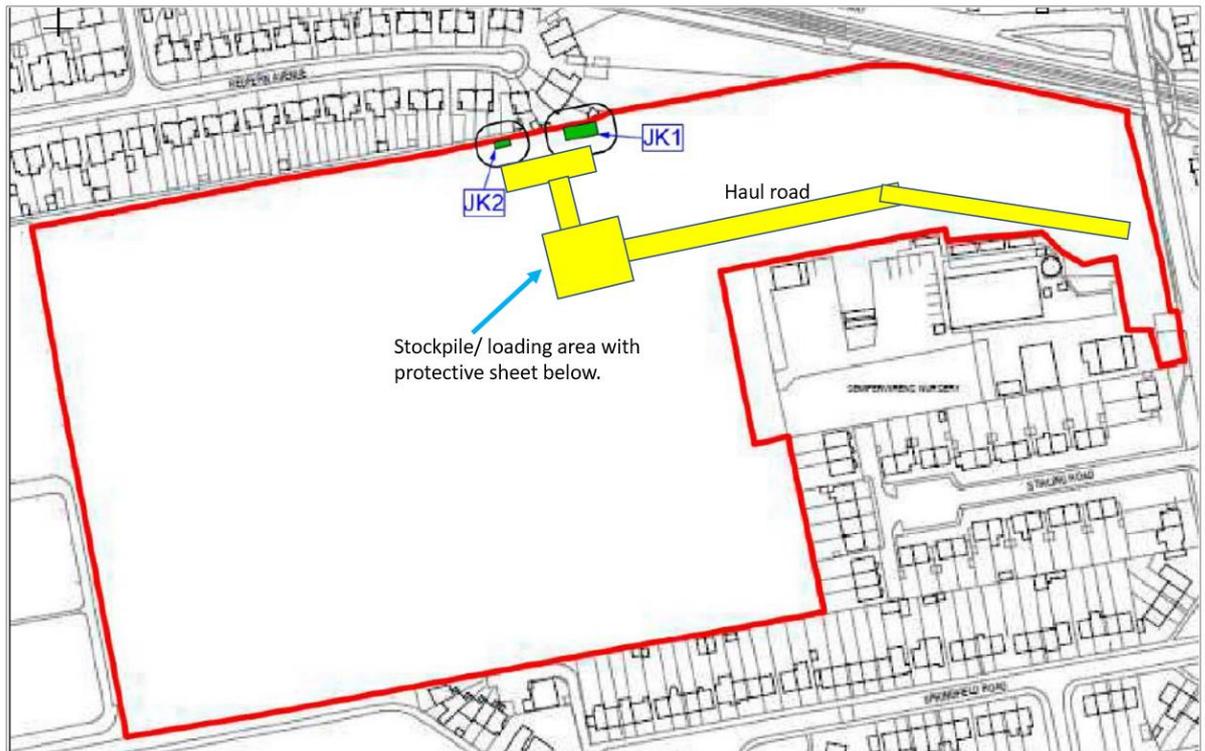
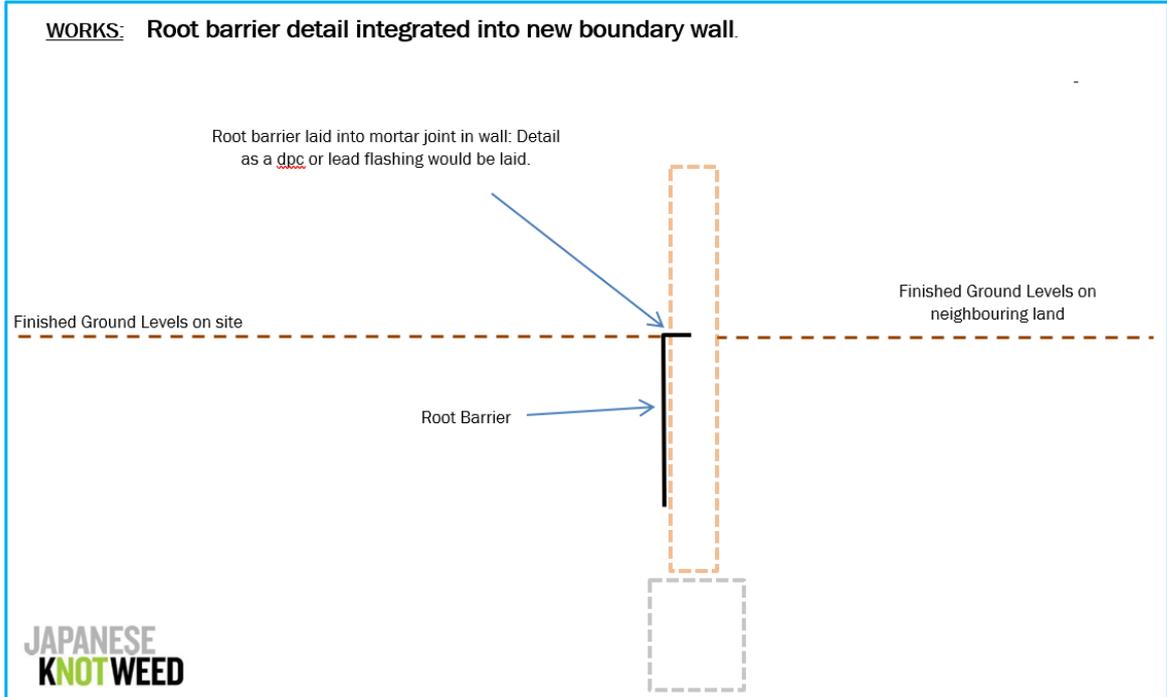
Arrive on Site and meet client/ report to site office if applicable
Liaise with Site Manager /Client, follow site rules including signing in/out procedures and other site activities.
Liaise with client and explain procedures, establish access routes and working areas.
Confirm welfare facilities (whether we are using client's facilities or other).
Be aware of trip hazards and ground conditions, establish best access route to the areas requiring herbicide application.
Where there are dangerous occurrences (including finding sharps) report to client and line manager for advice before proceeding. Do not enter an unsafe area/ situation.
Check weather conditions, location of treatment area, location of proximity to non-target plants (including lawns) and take all this into consideration to determine the most appropriate method of application: Knapsack sprayer; hand held sprayer; stem injection; weed wipe.
If applying herbicide near watercourse ensure that AqHerb license is in place.
Set out signage at strategic locations to ensure that nearby persons are aware of herbicide activities.
Only trained and appropriately qualified operatives can undertake herbicide application.
Use appropriate PPE when handling concentrate and applying herbicide.
Ensure that the applicator has been calibrated correctly and herbicides are mixed in accordance to manufacturers recommendations.
Concentrate herbicide to be kept in Chembox
Apply herbicide in accordance with NPTC training, rinse out herbicide applicator at least at the end of each shift. The herbicide typically used (as being very effective against knotweed) is Roundup ProVantage MAPP: 15534, 18ml per litre of water, 3.75 litres per hectare. The herbicide is typically applied by knapsack spraying using highly directional nozzles. Stem injection is not likely to be feasible as the growth if any will be very small and very weak, unable to support the injection of a needle to apply the herbicide.
Complete pesticide application record for each site sprayed
Clean out applicator either after each use or at least at end of shift – in accordance with NPTC training triple wash method
Empty concentrate containers to be triple rinsed/washed out in accordance with NPTC training, washings to be used as herbicide solution
You can dispose of rinsed pesticide containers in the following ways:

- Pass them on to a licensed waste-disposal contractor;
- Take them to a licensed waste-disposal or waste-recovery site, after checking whether the site will accept rinsed containers;
- Burn them only in an incinerator licensed by your local authority or the Environment Agency.

Contact your local Environment Agency office for more information (your line manager can do this on your behalf).
Containers that have been thoroughly rinsed and drained will generally be accepted at licensed waste-disposal sites as long as the conditions of the site operator's licence allow this. The local Environment Agency office can give you details of these sites.
Remove all signage and equipment into your vehicle.
Advise client of works completion, where applicable.
Leave site.

3.5 METHOD DIAGRAMS





Above shows the haulage route taken from Knotweed stands to offsite. This area will be created by the client to allow safe travel across site and reduce the level of damage onsite. Dumper trucks will not be fully loaded to stop any contaminated soils from being transferred over site. Vehicle movement will be restricted to the areas shown above. As site management, the client will be responsible for creating this route. He client will be responsible for covering the dig site overnight with either coverings or ramps for wildlife. JKL have not been asked to price for this so the client will be responsible for supplying this.

4 RISK ASSESSMENTS

4.1 FULL DIG AND DUMP (DOUBLE HANDLE) - EXCAVATION ACTIVITY

Activity:	Excavating Japanese knotweed and moving to area for loading onto lorries for removal off-site			
Hazard Identification and Risk Evaluation				
	Hazards	Who is affected?	Risk Evaluation	Residual Risk
	Access/egress/familiarisation	Operatives/occupants	High/Medium	Low
2.	Use of Excavators	Operatives/site personnel	High	Medium
3.	Use of Dumper	All site personnel	High	Med/Low
4.	Loading lorries	Operatives/site personnel	High/Medium	Low
5.	Asbestos	Operatives	High	Low
6.	Manual handling	All site personnel	Medium	Low
7.	Falls From Height	Operatives	High	Low
8.	Weils Disease	Operatives	Medium	Low
9.	Root barrier installation	Operatives	Medium	Low
Control Measures				
The hazards (problems) above relate to the control measures (solutions) below. Implementing these measures will reduce the risk.				
1	<p>Client to be consulted prior to any work activity to ensure site personnel are fully aware of emergency arrangements, any specific procedures they will have to adhere to while on the premises, and any areas that require specific authorisation. The Site Supervisor will request to see the Asbestos Register. Procedures to be put into place for parking of vehicles and delivery vehicles to and from the site. Pedestrian routes must be clearly defined and barriers and signs provided. Good communication between site personnel is essential and must be maintained at all times, to ensure any work activities does not interface with other contractors and that they are not at risk during the works. Site personnel must be particularly aware of members of public and their potential interface with the work. All barriers, fencing, signs, cones, etc. must be regularly maintained to ensure their effectiveness.</p> <p>Procedures must be put into place for parking of vehicles and delivery vehicles in and around the site. On larger sites, one way systems must be considered to control vehicle movement and to minimize the need for reversing.</p> <p>Speed restrictions must be clearly established. Pedestrian routes must be clearly defined and barriers and signs provided. Signs and notices to be provided and clearly displayed.</p> <p>Notification to the authorities, police, and other emergency services must be considered. All workers must be made aware of the controls during the safety induction, including the</p>			

	<p>significance of signs and notices, safety critical areas and activities, safety restrictions and disciplinary procedures.</p> <p>Adhere to vehicle routes where possible. Pedestrians should adhere to walkways, wear high viz and be aware of machinery close by. Ensure flashing beacons are functioning and that all round visibility is maintained (mirrors or CCTV). Allow a minimum of 600mm clearance between body of machine and any fixed structure. Use a banksman / spotter / slinger when view is limited or when in congested areas and confirm communication signals.</p> <p>Work within safe limits, do not overload excavator or traverse slopes diagonally. Ensure excavator is of sufficient size for depth of dig. Do not exceed SWL capacities when lifting materials.</p> <p>Overhead: refer to Construction phase plan and GS6. If lines are live, goalposts are required to ensure clearance, machines may be modified so they cannot reach into danger area. IF A LIVE O/H CABLE IS STRUCK: Do NOT step down – this can be FATAL. Remain in the machine unless it is on fire, if so – jump well clear.</p> <p>Underground: obtain permit to dig – ground should be scanned and services identified and clearly marked. Areas close to service locations (within 500mm) should be hand dug. Use fully insulated spade to locate/expose electric power cables. Insulated spade must be checked pre-use, by the operative, that it is in good condition.</p>
2	<p>Manual, automatic and semi-automatic quick hitches can be used to secure buckets to the excavator arm. A number of deaths have occurred in recent years when the bucket has fallen from the machine. If your machine has a semi-automatic quick hitch:</p> <ul style="list-style-type: none"> • You should be adequately trained on the use of quick hitches in general and the specific hitch on the machine in use • The correct retaining pin must be available on the machine • ALWAYS check the pin is in place on the hitch before starting the work and every time a different attachment is fitted. If you cannot see from the cab – get out and look from the ground <p>Operator must be trained in the use of the particular machine and hold a recognised certificate of training. The machine must be operated safely in accordance with manufacturers operating manual and operators training.</p> <p>Drivers should carry out daily checks. Any defects must be reported immediately to the hire company and if the defect affects safe working then the excavator must be taken out of service. A thorough Examination Certificate is required for excavators (12 monthly) and for the lifting accessories that attach to them (6 monthly).</p> <p>Assess working area. Consider ground conditions and gradients and working space restrictions to keep a safe distance from excavations.</p> <p>Always remove keys from the excavator and park safely to avoid unauthorised persons operating the plant in your absence. Always wear a seatbelt when operating an excavator.</p>
3	<p>Work within safe load limits ensuring you do not overload the dumper. Make sure that loads are even and stable. Never traverse slopes diagonally. Roll bars must be fitted to the dumper.</p>

	<p>Always check tyre pressures are correct for the terrain. Drivers must ensure they do not contact or travel close to the edges of open excavations.</p> <p>When the dumper is being loaded, dismount the dumper and stand in a safe place. Loose loads can spread and travel when they are poured, and even the best excavator drivers make mistakes. It takes only a few seconds to get down from your dumper.</p> <p>Only competent operators should drive a dumper. They must have received training to CPCS or equivalent standards, be experienced in the site conditions, and be authorised to operate it. Always remove keys from dumpers and park safely to avoid unauthorised persons operating the plant in your absence. Always wear a seatbelt when driving a dumper.</p> <p>Maintenance of dumpers is important. Any defects must be reported immediately to the hire company and if the defect affects the safe working use and operation of the plant, then the dumper must be taken out of service. Test and thorough examination certificate should be submitted to the site manager agent when the plant arrives on site. All plant must be inspected every 12 months and the certificate obtained during this period.</p>
4	Lorry to be positioned by a banksman/supervisor. All personnel to stay clear of lorry whilst being loaded by the excavator. Driver to ensure auto sheet is in place prior to moving from loading area
5	If a survey identifies asbestos, then this will be removed by a licensed contractor prior to the works starting. The work will then only commence following receipt of certificate confirming all asbestos has been removed. All operatives will be trained for asbestos awareness. Where asbestos is discovered during works: Cease work immediately and report to site manager. Specialist asbestos contractor must be employed to put in place correct control procedures.
6	Manual handling will be reduced as far as is reasonably practicable by the use of mechanical means. Team lifting will be utilised when required. Use Manual Handling chart below to assess and reduce risks.
7	Excavations will be protected with barriers to act as fall prevention placed no closer than 1.2m from the edge of the excavation. Barriers will be maintained and monitored throughout the works.
8	Be aware of symptoms of Weils Disease. (cold, flu like symptoms) Cover any cuts on hands and wear protective gloves. Always wash hands before eating.
9	Be aware of hot element of heat welder – risk of burns. Only use 110V power supply. Use battery powered drills for fixings. Wear dust mask when drilling into concrete/silicate materials
Completed By: Andy Hillier	
Date: 04/02/2019	
Personal Protective Equipment Required	
Hard Hat, Safety Boots, Hi Vis Vest or Jacket, Protective Gloves	

Manual Handling Assessment		For hand digging and installation of root barriers				
Task	Look at the hazards below and evaluate your risk as high, medium or low	High	Medium	Low	Total	Control Measures
Task	Holding loads away from the body?			X	Low	<p>As this is digging a hole through the use of shovels, there will be a lot of bending, twisting and repetitive movements however 2 people are going on the job and numerous rest breaks are expected. Leaving the remaining risk low.</p> <p>Root barriers: Full roll is 36.5m². Barrier to be moved as close to final area by using vehicle/machines/wheel barrow.</p>
	Twisting, bending, stooping, reaching up?	X				
	Is the load to be lifted above head height?			X		
	Large vertical movements?		X			
	Long carrying distances?			X		
	Repetitive handling?	X				
	Insufficient rest or recovery time?			X		
	Will the work last a long time?		X			
Load	Heavy, bulky?		X		Low	<p>As the waste will be collected very near the hole and only shovel sized loads are being moved, the residual risk will be low.</p> <p>Root barriers: Delivered as a roll, roll sizes 2m to 4m in length. Non-porous full roll = 36.5kg. Porous full roll = 58.5kg. 2 man team to lift. If only one person available, load to be manoeuvred by up-ending or rolling to location.</p>
	Size, weight, shape?		X			
	Difficult to grasp?			X		
	Unstable or likely to move, unpredictable?			X		
	Harmful, e.g. sharp or hot?			X		
	Awkwardly stacked?			X		
Person	Do you require unusual capability, e.g. above-average strength or agility?		X		Low	<p>All staff are trained on manual handling and the company also monitors employee's health.</p>
	Do you have an existing back problem			X		
	Are you properly trained?			X		
Environment	Constraints on posture?		X		Low	<p>As this is outside, in the open, on the flat and will be away from others. Along with welfare facilities provided the residual risk is mitigated.</p>
	Bumpy, obstructed or slippery floors?		X			
	Variations in levels?			X		
	Hot/cold/humid conditions?		X			
	Gusts of wind?		X			
	Poor lighting conditions?			X		
	Restrictions on movements or posture from clothes or personal protective equipment			X		
Residual Risks		Further Action Required?			Further Action Required?	
Task						

Load		After the job feedback required for lessons learnt	
Person			
Environment			

5 EMERGENCY CONTACTS AND TELEPHONE NUMBERS

5.1 GENERAL

Call 112 from your mobile in case of emergency to reach the emergency services – where available 112 will geo-tag your call.

5.2 NEAREST HOSPITAL

A&E HOSPITALS

Address West Middlesex University Hospital
Twickenham Road,
Isleworth, Middlesex, TW7
6AF

Emergency Number 999

5.3 ENVIRONMENTAL

MAJOR SPILLS

Contractor: Adler and Allan Ltd

0800 592 827

5.4 UTILITIES

GAS 0800 111 999

ELECTRICITY 0800 40 40 90

BT 0800 400 400

WATER

[Thames Water](#)