

**JAPANESE
KNOTWEED**



**JAPANESE
KNOTWEED
TO BE
IGNORED**

METHOD STATEMENT and RISK ASSESSMENT for JAPANESE KNOTWEED and OTHER INNS SPECIES REMEDIATION WORKS

NAME OF SITE:	Land at Toynbee Road Toynbee Road Eastleigh SO50 9DN
CONTRACT No:	8884
CLIENT NAME:	Foreman Homes
SPECIALIST:	Japanese Knotweed Ltd
DOCUMENTS OF REFERENCES	Japanese Knotweed Ltd Health and Safety Manual Health and Safety Data Sheets
PREPARED BY:	Andy Hillier of Japanese Knotweed Ltd
DATE PREPARED:	03-02-2023

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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

Land at Toynbee Road
Toynbee Road
Eastleigh

SO50 9DN

2.2 SITE CONTACT NAME AND NUMBER

Site Contact Name: Harrison Langdale
Site Contact Number: 01489 553372

2.3 WELFARE FACILITIES

Welfare facilities are available on site.

3 METHOD OF WORKS

3.1 SITE PLAN

IMAGE 2: SITE PLAN OF PROPOSED SITE LAYOUT SHOWING REMEDIATION WORKS



KEY



Subject Property/Site Boundary



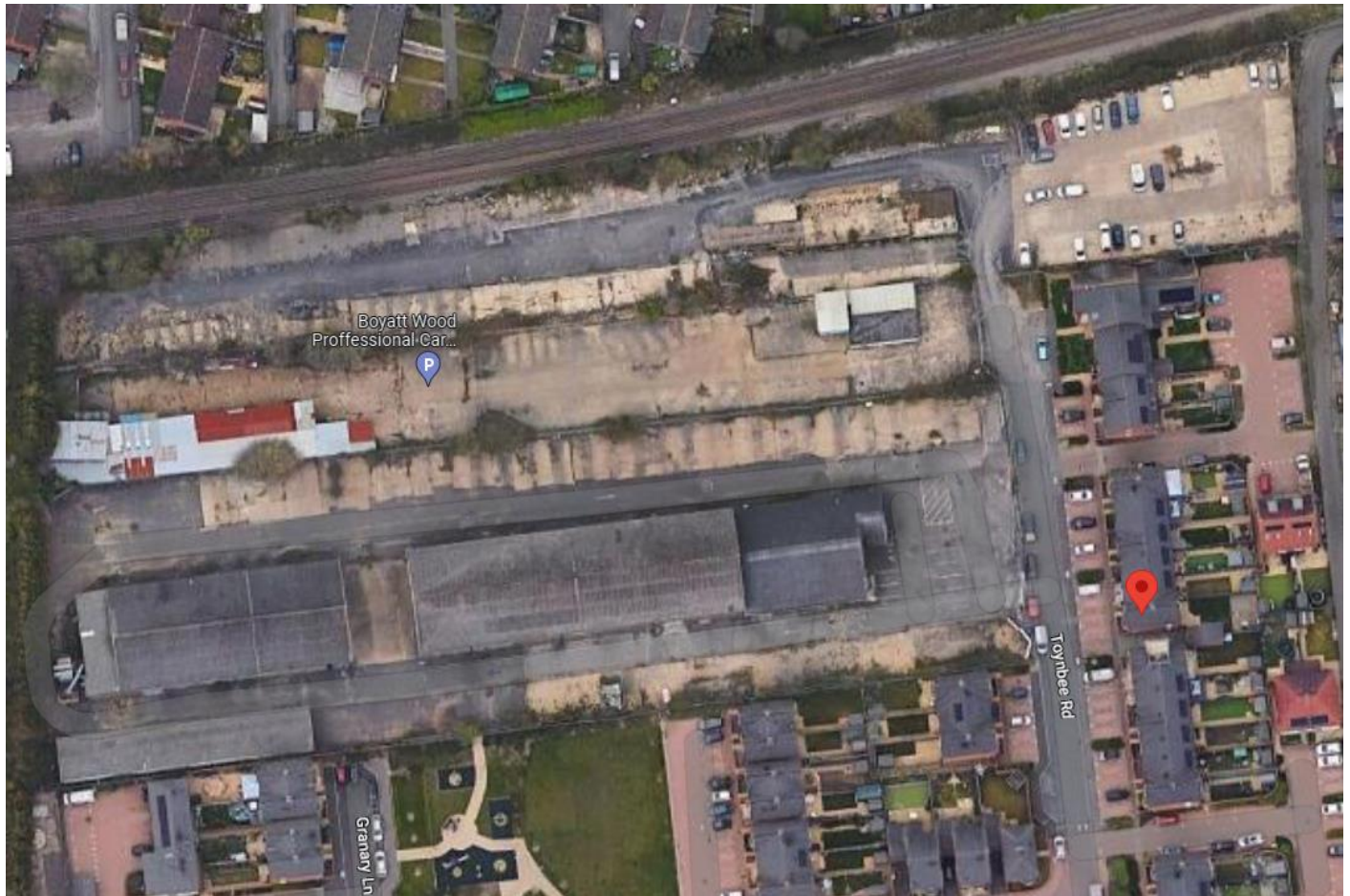
Invasive weed stand(s) to be fully excavated

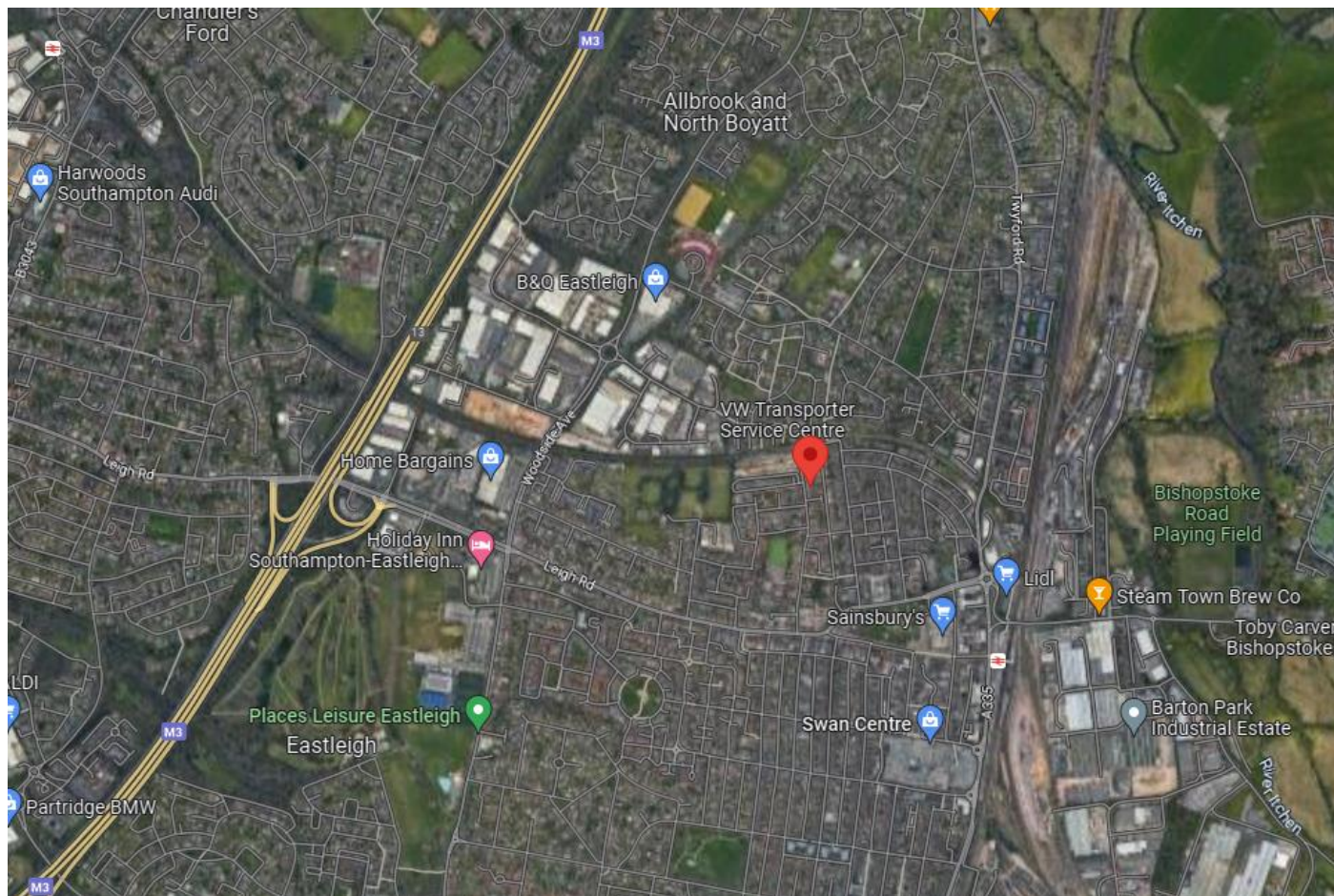


Vertical Root Barrier to be installed



7m Risk Zone (knotweed) *





3.2 PLANNED ACTIVITIES (REMEDIATION STRATEGY)

- Bio-security: Installation of part Chapter 8 and part hazard tape fencing, creating bio-security zone to Japanese knotweed and Hortsetail areas.
- Watching brief to demolition contractor working with bio-security areas.
- Full excavation and cartaway of JK1-JK4, and HT1-HT7.

Keynotes from QuoteMaster:

Previous Site Knowledge (to protect existing INNS control barriers)

*The excavation of JK2a will result in interplay/interference with the knotweed vertical root barrier we previously installed some years ago on the other side of the boundary during the adjacent site development project. JKL understand how and where this was installed to ensure new works are completed correctly to retain integrity to previously installed barriers. **PREVIOUS WORKS REFERRED TO – CONTRACT 1798***

Enabling Works (Site Clearance / Demolition)

We understand that a demolition contractor will be first on site to clear the site, including hard standing break-up and removal (or processing for site-won engineering fill) and building demolition.

Prior to commencement of Demolition works JKL to erect temporary fencing to demarcate the target weed areas (invasive weed risk zones) to avoid accidental disturbance, spread or contaminated of reclaimed materials during the site clearance process.

JKL to oversee (providing watching brief) the Demolition contractor working within the risk zone demarcations.

JKL to direct the contractor to enable hard standing break up, and identify arising demolition materials that can and cannot be removed from the area due to invasive weed contamination.

Most hard standing materials will be removable as clean, but this may require some additional cleaning to remove soil deposits that could harbour invasive weed propagules.

Excavations

Supply specialist supervisor plus plant and operators to excavate and remove target weeds.

Our own skilled plant operators through experience ensure detailed and methodical soil stripping for effective INNS extraction and handling methods are adhered to at all times. We can also manage plant de-contamination potentially better, without the risk of other contractors plant being moved around the site outside our knowledge prior to full decontamination.

The demolition contractor is overseen by JKL in hard standing break up to the areas (plus fencing removals etc) then JKL commence with operated plant to undertake deeper ground excavation to remove the target weeds from site.

Specific note on remediation of Horsetail

The successful completion of our Horsetail excavation works will be to remove the most heavily infested soils only. On completion of our proposed works the site will still possess some ground infested with Horsetail.

We will excavate the surveyed dense areas of Horsetail to remove the most heavily infested soils. Some Horsetail may be present on site in areas outside the surveyed planned excavation extents but to an incidental extent (as a natural plant to the UK). Incidental amounts of Horsetail may naturally be present in soil strips from site for site won material, as a naturally occurring weed in the UK.

3.3 RSZ FENCING - METHOD OF WORKS – INSTALLATION OF RSZ FENCING ACTIVITY

Arrive on Site and report to site office.

Liaise with Site Manager /Client, follow site rules including signing in/out procedures, permit to break ground and other site activities.

All personnel to read and sign up to the RAMS.

Check underground service drawings.

Be aware of trip hazards and ground conditions, establish best access route to the knotweed areas. 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.

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.

Use CAT & Genny to scan for unknown services prior to breaking ground.

Install steel road pin and knotweed barrier fencing/ tape 5m to 7m beyond Japanese knotweed stands, as far as site boundaries.

Mark locations of fencing on the site plan

Advise client / site manager of works completion.

Leave site.

3.4 SUPERVISION - METHOD OF WORKS – SUPERVISION OF WORKS BY OTHERS

Arrive on Site and report to site office.
Liaise with Site Manager /Client, follow site rules including signing in/out procedures.
Understand Method Statement and Risk Assessment by other contractors of excavation works that we are to supervise.
All personnel to read and sign up to the RAMS.
Give a toolbox talk to the team that we are to supervise.

The client is providing the team and they are responsible for:

- Operated machinery, banksmen and labour to assist.
- Carrying out pre-dig checks for underground services, hand digging to locate as necessary
- Safe excavation and ensuring open excavations are fenced, secure and any safety checks and recording of open excavations

We are providing a Knotweed Supervisor to oversee that this methodology is adhered

Advise client / site manager of works completion.
Leave Site.

3.5 TOOLBOX TALK FOR JAPANESE KNOTWEED

DO'S AND DON'TS TO PREVENT SPREAD OF JAPANESE KNOTWEED (WINTER SEASON)

DO'S

- Understand how to identify the Japanese knotweed during the winter season
- Identify the Japanese knotweed areas, including the risk zone of underground knotweed stems
- Mark out the extent of the Japanese knotweed areas
- Understand that underground rhizomes are brittle and can be easily broken. Each piece of rhizome can grow into a new plant
- Understand that knotweed can be transported as contaminated within soil on treads of footwear, machinery wheels, machinery tracks and machine parts (such as brushcutters) and hand tools.
- Understand that footwear, machinery, tools and equipment that are cleaned of soil will not risk spread of knotweed contained therein
- Have a clean-down area that is within the knotweed zone but away from working access routes
- Check that machinery and equipment are clean of brown winter stems, place within the clean-down area
- Minimise excavation of soil, where this is not feasible (excavation of posts) the soil is redistributed locally to the excavation and within the knotweed zone.
- Knotweed winter brown stems can be cut/snapped 200mm above ground level and stacked to one side out of the way of the works and within the knotweed zone.

DON'TS

- Traverse bare soil surfaces – lay down polythene or plyboards if this is along an access route
- Remove equipment, machinery or tools from the knotweed area without first having cleaned them of soil
- Walk beyond the knotweed areas without checking that treads of footwear are clean of soil – allow time in the working day for this.
- Traverse loose excavated soils – this is the highest risk of spreading knotweed
- Don't pull and discard knotweed stems as these may still be attached to live plant parts

3.6 FULL EXCAVATION AND CART-AWAY - METHOD OF WORKS – EXCAVATION ACTIVITY (JAPANESE KNOTWEED)

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.
All personnel to read and sign up to the RAMS.
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 and 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.
Do not enter “swing zone” of excavator unless indicated by the Knotweed Banksman that it is safe to do so.
The Knotweed Banksman to position a section of chapter 8 fencing beyond the machine swing zone, beyond which all personnel associated with the works must stand.
Where there is a need to enter the swing zone the Knotweed Banksman will clearly direct the machine operator to lower the bucket to the ground, the machine operator will switch the engine off and signal to the Knotweed Banksman that the area is now safe to enter.
On leaving the swing zone the machine operator will not start the engine until directed by the Knotweed Banksman that the area is clear.
Observation of change in colour within the dig is critical as this may be an unidentified service trench.
Where site services are encountered refer to methodology “Procedure for exposing underground services”.
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.
Document in the site diary the different levels of soil strata that are penetrated (with explanation and photos). Record measurement of the deepest part of the excavation.
Where knotweed rhizomes extend to or beyond boundary follow method diagram
Receive Cartaway lorries on site and direct to the loading area.
Load excavated soils directly into 8-wheel tipper lorries. Prior to the last load leaving site:
Inspect excavator to ensure it is clean of knotweed contamination, place these contaminated soils into the final lorry.

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. Record root barrier dimensions and location onto a site plan, including distance and depth of the base of the root barrier from the site boundary.

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

Prior to completion of the work: Square up the excavation to give vertical sides and a level

base: Arisings produced from this activity to be placed and levelled into the base of the excavation. Then measure and record the length, width and depth, to give the m3 volume of the excavation.

Where client has ordered imported backfill: Receive backfill lorries and place into excavation and tidy the works area.

Where client has not ordered imported backfill: Use surrounding soils as backfill ensure that voids are left less than 1m deep, batter the sides of the excavation to a minimum 2:1 slope and tidy the works area.

Advise client / site manager of works completion. Leave site.

Procedure for exposing underground services

Hand dig trial pits using insulated hand tools (when locating electric cables) to establish location, depth and direction of underground services within the excavation area. Spades and shovels (preferably those with curved edges) should be used rather than other tools. They should not be thrown or spiked into the ground but eased in with gentle foot pressure. Picks, pins or forks may be used with care to free lumps of stone etc, and to break up hard layers of chalk or sandstone. Picks should not be used in soft clay or other soft soils near to underground services.

Make frequent and repeated use of CAT + Genny locators during the course of the work.

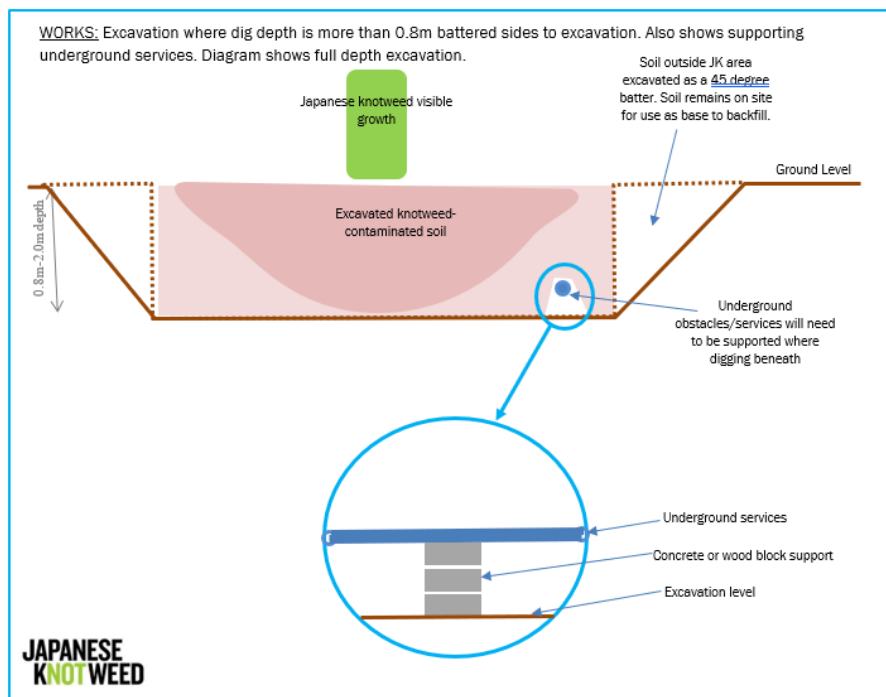
Service location is likely to become more accurate as cover is removed.

Once exposed, services may need to be supported and should never be used as handholds or footholds for climbing out of excavations. Insert concrete or timber blocks at sufficient intervals to prevent sagging to the service pipe/cable.

Sometimes there may be joints in cables. These may be enclosed in earthenware pipes, filled compound, or be of cast iron or plastic epoxy-filled casings. They need proper support and should not be roughly treated. Do not move, except in consultation with the owner.

Where gas pipes cross or run alongside excavations, changes in backfill etc may cause differential ground settlement and increased stress in the pipe. Wherever an excavation may affect support for a gas pipe, consult the owner. In some cases, it may be necessary to divert the gas pipe before work begins.

For further guidance follow *HSE guidance (<http://www.hse.gov.uk/pubns/priced/hsg47.pdf>)



Shovelling and Digging

Generally

Consider stretching before attempting any physical exertion.

Keep your feet well separated for proper balance.

Bend your knees but not your back while shovelling.

Knees should be flexed so that your leg muscles take much of the load.

Work in a radius close to the body use the legs to support the weight, avoid stretching and reaching while shovelling and digging.

Move with the shovel, using the whole body to smoothly follow-through the shovelling motion.

Never twist your body, twisting will only increase the risk of an injury. For ease, step in the direction you are throwing the material, turn your body to face that direction first so that you are not twisting.

You can do this by moving your feet and turning your whole body in unison, rather than keeping your feet planted and only twisting at the waist.

Face toward the direction you will throw the shovelled load, reduce twisting and lessen the strain on joints and muscles.

Do not strain to pick up too much material one time.

Rest when needed and regularly rotate tasks.

Keep hydrated.

Using a shovel (Shovelling)

Stand with your feet shoulder width apart and have your shoulders and hips facing towards the load.

Keep your knees bent, back straight and push from the handle.

Shift your weight from your back leg to your front leg rather than bending at the waist.

Now engage your core muscles, bend your knees and squat down with your legs apart, but remember to keep you back straight while doing so.

Keeping your back straight, lift from the legs until you are in a standing position.

If you need to throw the load off to the side, turn your body to face that way first rather than twisting.

Don't overload the shovel.
If moving the load more than 1m consider using a wheelbarrow.

Using a spade/fork (Digging)

Stand with your feet shoulder width apart and have your shoulders and hips facing towards your spade.

Keep the head of the spade standing straight at a 900 angle from the ground with your feet close by and the handle in front of you.

Keeping your back straight use your body weight to push down with one foot centred on the blade.

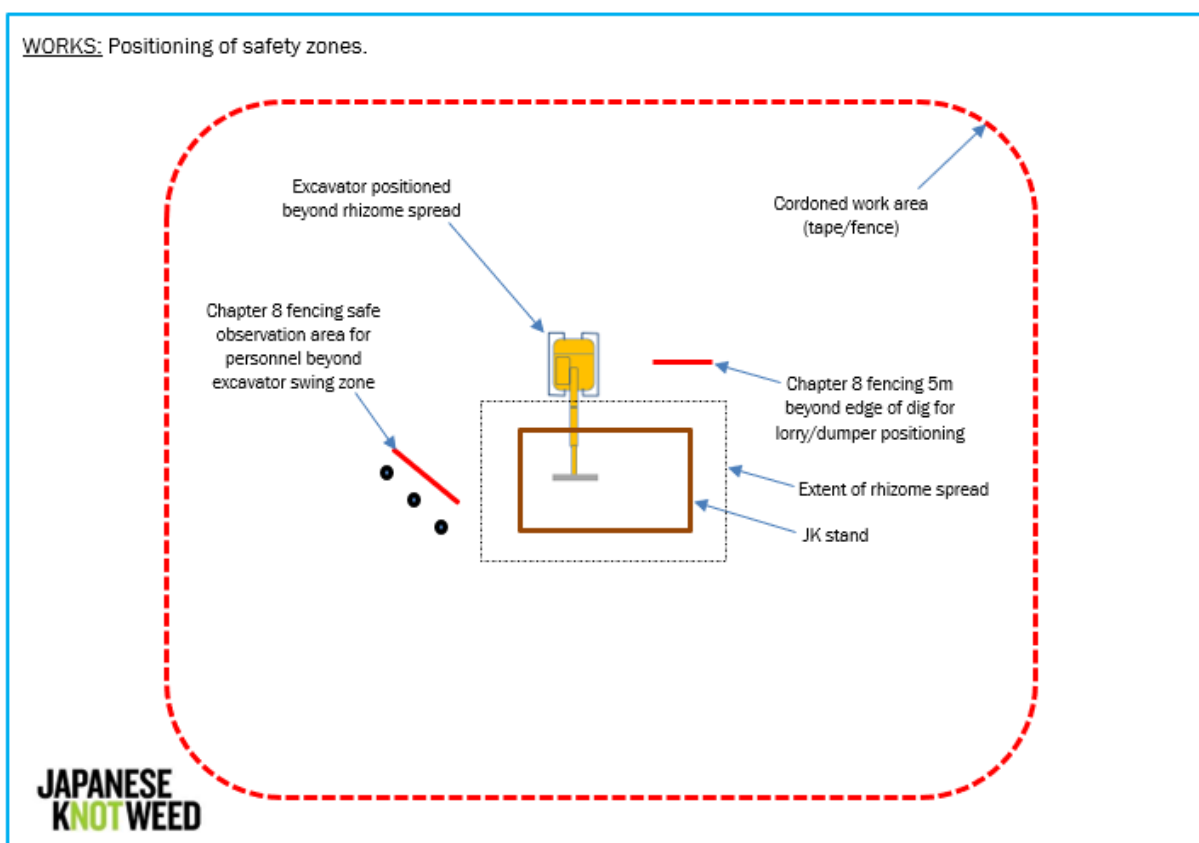
Once the blade is in the ground step back with one foot.

Now engage your core muscles, bend your knees and squat down with your legs apart, but remember to keep you back straight while doing so.

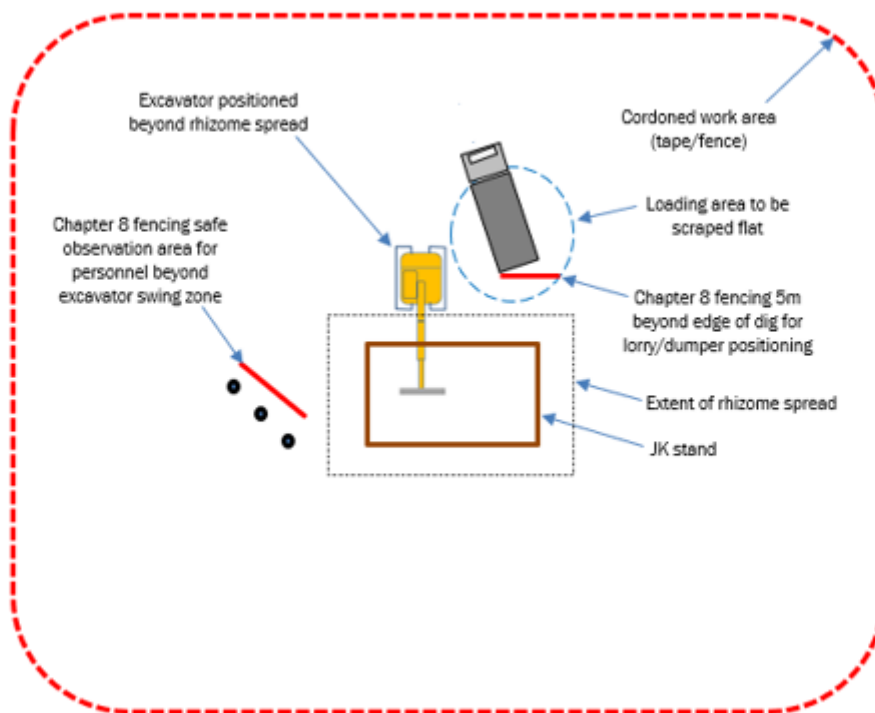
Use the momentum of this movement to lift the head of the spade out of the ground with your load.

Keeping your back straight, lift from the legs until you are in a standing position.

If you need to throw the load off to the side, turn your body to face that way first rather than twisting.



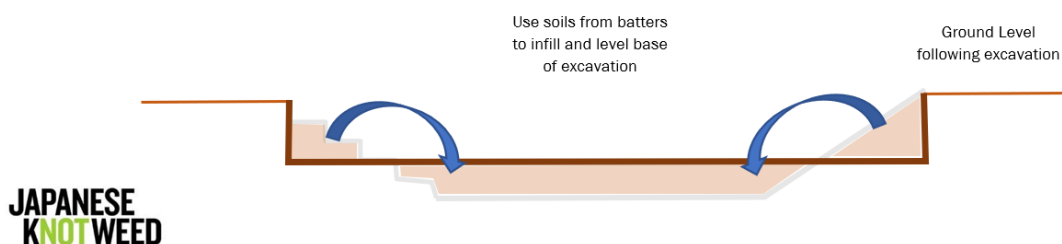
WORKS: Loading spoils to lorry/dumper at Japanese knotweed stands/stockpile location.

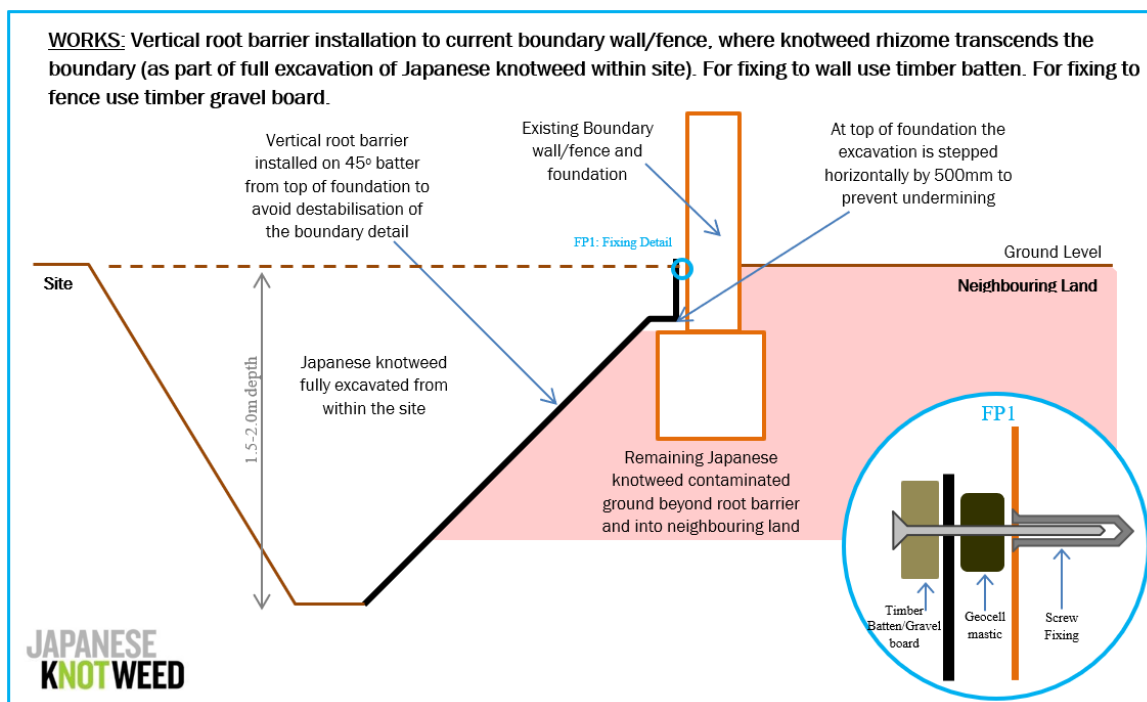


WORKS: Creating machine-cut stepped access to enter and exit the excavation to inspect for Japanese knotweed



WORKS: Following excavation of Japanese knotweed – square up the void and measure its volume





3.7 FULL EXCAVATION AND CART-AWAY - METHOD OF WORKS – EXCAVATION ACTIVITY (INNS)

Arrive on Site and report to site office.

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

Understand Method Statement and Risk Assessment by other contractors of excavation works that we are to supervise.

All personnel to read and sign up to the RAMS.

Give a toolbox talk to the team that we are to supervise.

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 and loading area for lorries.

Review site service plan and complete CAT scan of working area, including both excavation area and stockpile loading 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>)

Preparation of stockpile location: the agreed area for stockpile location to be scraped flat with the excavator.

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

Do not enter “swing zone” of excavator unless indicated by the Banksman that it is safe to do so.

The Banksman to position a section of chapter 8 fencing beyond the machine swing zone, beyond which all personnel associated with the works must stand.

Where there is a need to enter the swing zone the Banksman will clearly direct the machine operator to lower the bucket to the ground, the machine operator will switch the engine off and signal to the Banksman that the area is now safe to enter.

On leaving the swing zone the machine operator will not start the engine until directed by the Banksman that the area is clear.

Observation of change in colour within the dig is critical as this may be an unidentified service trench.

Where site services are encountered refer to methodology “Procedure for exposing underground services”

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 rhizomes/stolons/roots (underground parts of the plant) have been reached.

Extend excavation vertically to the full depth of rhizome/stolon/root.

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

Document in the site diary the different levels of soil strata that are penetrated (with explanation and photos). Record measurement of the deepest part of the excavation.

Where rhizomes/stolons/roots 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 – if route or stockpile location changes, record this onto the site plan.

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

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

Load excavated soils directly into 8-wheel tipper lorries. Prior to the last load leaving site:

Inspect excavator to ensure it is clean of contamination, place these contaminated soils into the final lorry.

Make final inspection of stockpile location area, and 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 INNS. Visual inspection by supervisor.

Receive / unload root barrier.

Install vertical root barrier where rhizomes/stolons/roots 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. Record root barrier dimensions and location onto a site plan, including distance and depth of the base of the root barrier from the site boundary.

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

Prior to completion of the work: Square up the excavation to give vertical sides and a level

base: Arisings produced from this activity to be placed and levelled into the base of the excavation. Then measure and record the length, width and depth, to give the m3 volume of the excavation.

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Advise client / site manager of works completion. Leave site.

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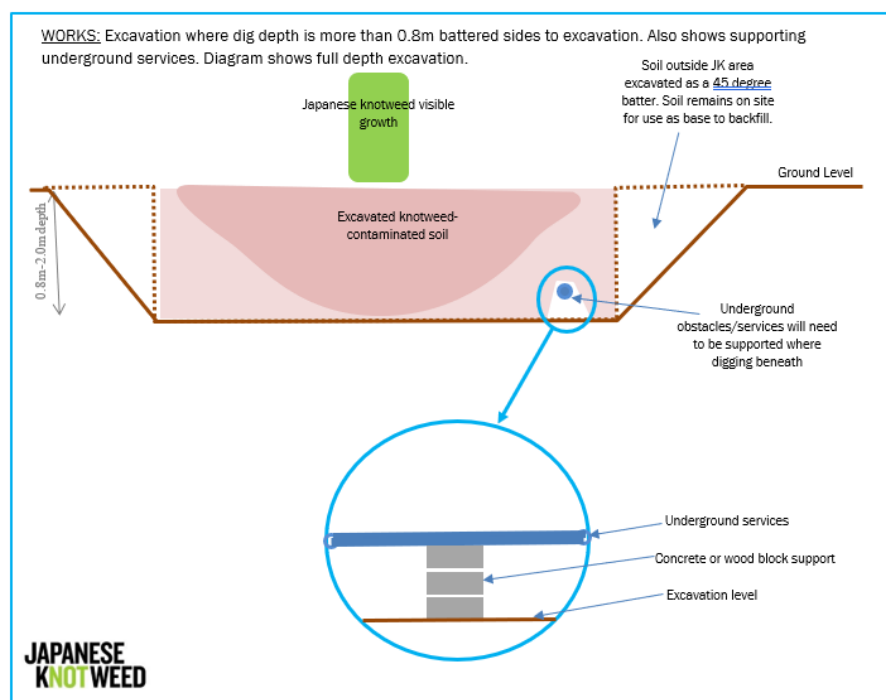
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Where gas pipes cross or run alongside excavations, changes in backfill etc may cause differential ground settlement and increased stress in the pipe. Wherever an excavation may

affect support for a gas pipe, consult the owner. In some cases, it may be necessary to divert the gas pipe before work begins.

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Shovelling and Digging

Generally

Consider stretching before attempting any physical exertion.

Keep your feet well separated for proper balance.

Bend your knees but not your back while shovelling.

Knees should be flexed so that your leg muscles take much of the load.

Work in a radius close to the body use the legs to support the weight, avoid stretching and reaching while shovelling and digging.

Move with the shovel, using the whole body to smoothly follow-through the shovelling motion.

Never twist your body, twisting will only increase the risk of an injury. For ease, step in the direction you are throwing the material, turn your body to face that direction first so that you are not twisting.

You can do this by moving your feet and turning your whole body in unison, rather than keeping your feet planted and only twisting at the waist.

Face toward the direction you will throw the shovelled load, reduce twisting and lessen the strain on joints and muscles.

Do not strain to pick up too much material one time.

Rest when needed and regularly rotate tasks.

Keep hydrated.

Using a shovel (Shovelling)

Stand with your feet shoulder width apart and have your shoulders and hips facing towards the load.

Keep your knees bent, back straight and push from the handle.

Shift your weight from your back leg to your front leg rather than bending at the waist.

Now engage your core muscles, bend your knees and squat down with your legs apart, but remember to keep your back straight while doing so.

Keeping your back straight, lift from the legs until you are in a standing position.

If you need to throw the load off to the side, turn your body to face that way first rather than twisting.

Don't overload the shovel.

If moving the load more than 1m consider using a wheelbarrow.

Using a spade/fork (Digging)

Stand with your feet shoulder width apart and have your shoulders and hips facing towards your spade.

Keep the head of the spade standing straight at a 90° angle from the ground with your feet close by and the handle in front of you.

Keeping your back straight use your body weight to push down with one foot centred on the blade.

Once the blade is in the ground step back with one foot.

Now engage your core muscles, bend your knees and squat down with your legs apart, but remember to keep your back straight while doing so.

Use the momentum of this movement to lift the head of the spade out of the ground with your load.

Keeping your back straight, lift from the legs until you are in a standing position.

If you need to throw the load off to the side, turn your body to face that way first rather than twisting.

4 RISK ASSESSMENTS

4.1 FULL DIG AND CART-AWAY - EXCAVATION ACTIVITY

Activity:		Excavating Japanese knotweed and other INNS species direct loading onto lorries for removal off-site		
Hazard Identification and Risk Evaluation				
	Hazards	Who is affected?	Risk Evaluation	Residual Risk
1.	Access/egress/familiarisation	Operatives/occupants	High/Medium	Low
2.	Use of Excavators	Operatives/site personnel	High	Medium
3.	Loading lorries	Operatives/site personnel	High/Medium	Low
4.	Asbestos	Operatives	High	Low
5.	Manual handling	All site personnel	Medium	Low
6.	Falls From Height	Operatives	High	Low
7.	Weils Disease	Operatives	Medium	Low
8.	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	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. 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. 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. 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 significance of signs and notices, safety critical areas and activities, safety restrictions and disciplinary procedures.			

	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. 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. 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. 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.
2	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: - 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 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. 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). Assess working area. Consider ground conditions and gradients and working space restrictions to keep a safe distance from excavations. 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.
3	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

4	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.
5	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.
6	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.
7	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.
8	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: 26/08/2022	
Personal Protective Equipment Required	
Hard Hat with Chinstrap, Safety Boots, Hi Vis Vest or Jacket, Protective Gloves, Impact Glasses	

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
	Holding loads away from the body?			x	Low	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.
	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			Root barriers: Full roll is 36.5m2. Barrier to be moved as close to final area by using vehicle/machines/wheel barrow.
Load	Heavy, bulky?		x		LOW	As the waste will be collected very near the hole and only shovel sized loads are being moved, the residual risk will be low. 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.
	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	All staff are trained on manual handling and the company also monitors employee's health.
	Do you have an existing back problem			x		
	Are you properly trained?			x		
Environment	Constraints on posture?		x		LOW	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.
	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		After the job feedback required for lessons learnt				
Load						
Person						
Environment						

4.2 RSZ FENCING – INSTALLATION OF RSZ FENCING ACTIVITY

Activity:		Installation of fencing around Japanese knotweed and Horsetail to create bio-security zones.		
Hazard Identification and Risk Evaluation				
	Hazards	Who is affected?	Risk Evaluation	Residual Risk
1	Access/egress/familiarisation	Operatives/occupants	High/Medium	Low
2	Manual handling	All site personnel	Medium	Low
3	Weils Disease	Operatives	Medium	Low
Control Measures				
The hazards (problems) above relate to the control measures (solutions) below. Implementing these measures will reduce the risk.				
1	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. 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. 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. 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. Adhere to vehicle routes where possible. Pedestrians should adhere to walkways, wear high viz and be aware of machinery close by.			
2	Manual handling will be reduced as far as is reasonably practicable by the use of mechanical means. Team lifting will be utilised when required.			
3	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.			

Completed By: Andy Hillier	Date: 26/08/2022
Personal Protective Equipment Required	
Hard Hat with Chinstrap, Safety Boots, Hi Vis Vest or Jacket, Protective Gloves, Impact Glasses	

Manual Handling Assessment		High	Medium	Low	Total	Control Measures
Task	Look at the hazards below and evaluate your risk as high, medium or low					
	Holding loads away from the body?					
	Twisting, bending, stooping, reaching up?					
	Is the load to be lifted above head height?					
	Large vertical movements?					
	Long carrying distances?					
	Repetitive handling?					
	Insufficient rest or recovery time?					
Load	Will the work last a long time?					
	Heavy, bulky?					
	Size, weight, shape?					
	Difficult to grasp?					
	Unstable or likely to move, unpredictable?					
Person	Harmful, e.g. sharp or hot?					
	Awkwardly stacked?					
	Do you require unusual capability, e.g. above-average strength or agility?					
Environment	Do you have an existing back problem?					
	Are you properly trained?					
	Constraints on posture?					
	Bumpy, obstructed or slippery floors?					
	Variations in levels?					
	Hot/cold/humid conditions?					
	Gusts of wind?					
	Poor lighting conditions?					
Residual Risks		Further Action Required?			Comments	
Task						

Load			
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	Southampton General Hospital Tremona Road Southampton SO16 6YD
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

01903 264 444

Southern Water Services
Ltd