KNOTWEED ERADICATION

Specialist Weed Control & Consultants

Invasive Plant Species Management Plan

Glossop Land Ltd

Woodsmill Phase 2

Mill Street

Glossop

Revision B – 15/08/16

Signature……

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PROJECT

The Woodsmill Phase 2 site is located close to the centre of Glossop town centre on site split by Glossop Brook. The southern half of the site comprises of open yard areas and areas of self-seeded overgrowth with a walled compound with the northern side consisting of derelict buildings, loading areas and open yard space. Areas beyond the site boundary consist of residential properties, commercial and industrial buildings, retail areas and areas of open space and agricultural land.

It has been proposed that the site be remediated and turned over for re-development of residential housing.

The site was inspected on the 1st August 2016 during the main growing season by Danny Nightingale from Knotweed Eradication to establish the extent of invasive species on the site as determined in the Weeds Act 1959 and the Wildlife and Countryside Act 1981 section 14(2) (as amended) the main species being the presence of Japanese Knotweed (*fallopia Japonica*)

During the inspection two areas of knotweed were identified within the site. The first area is emerging within a pile of material to the north western corner of the site (Area 1) with a second area of knotweed being identified on the northern bank of the brook adjacent to where the current bridge crossing is located (Area 2).

No Giant Hogweed has been identified within the site

A small area of Himalayan Balsam was identified at the western end of the site. It is expected that this will be dealt with via herbicide application or on site mechanical destruction prior to flowering

This report provides background information relating to the main invasive plant species and sets out some options for control and eradication prior to and during development of the site.

Ongoing inspections for additional areas of invasive species growth should be carried out throughout the development period with any additional areas of invasive species being marked on site plans and identified to personnel on site

Japanese knotweed, giant hogweed and other invasive plants
Identifying invasive plants (extracted from Netregs website)

Identifying invasive plants on a site early lets developers assess and cost options for destroying, disposing of and managing them.

Managing land infested by invasive plants in a timely and appropriate way can avoid:

- excessive cost
- potential prosecution and compensation claims
- physical damage to buildings and hard surfaces
- harm to the environment

Identifying Japanese knotweed

Japanese knotweed begins to grow in early spring and can grow in any type of soil, no matter how poor. It can grow as much as 20 centimetres per day, and can reach a height of 1.5 metres by May and 3 metres by June. It does not produce viable seeds in the UK, but instead spreads through rhizome (underground root-like stem) fragments and cut stems. Japanese knotweed:

- produces fleshy red tinged shoots when it first breaks through the ground
- has large, heart or spade-shaped green leaves
- has leaves arranged in a zig-zag pattern along the stem
- has a hollow stem, like bamboo
- can form dense clumps that can be several metres deep
- produces clusters of cream flowers towards the end of July
- dies back between September and November, leaving brown stems

Identifying giant hogweed

You should take great care when identifying giant hogweed. Contact with the plant, particularly the sap, can lead to severe blistering and scarring.

Giant hogweed closely resembles native cow parsley or hogweed. It can take four years to reach its full height of 3-5 metres and flower. Giant hogweed:

- has a reddish purple stem with fine spines that make it appear furry - like a stinging nettle
- has hollow stems
- has spotted leaf stalks
- has leaves up to 1.5 metres wide
- flowers in June and July
- has flower heads that are usually 50 centimetres wide - each flower head is capable of producing 50,000 seeds every year
- has seeds that can stay in the soil for several years before they develop

Identifying Himalayan balsam

Himalayan balsam is often found on river banks, growing up to 2 metres in height. Each plant lasts for one year and dies at the end of the growing season. Himalayan balsam:

- has reddish coloured stems
- has dark green, lance-shaped leaves with jagged edges
- flowers from June to October
- has large, brightly coloured flowers that are usually in variable shades from purple to pale pink
- can produce around 2,500 seeds per plant each year
- has explosive seed pods that can throw seeds over 6 metres away from the plant

SURVEY

General description of site area and findings

- Site consists of a former mill building with associated outbuildings and yard areas due for demolition and re-development
- No demolition works have been carried out on site though proposed works are due to commence over the coming weeks, these works fall outside of the expected growing season of knotweed.
- Ground makeup of the site is unknown to Knotweed Eradication at this time
- Japanese Knotweed was identified in three areas of the site (marked green on attached plan) along the southern boundary which will be dealt with as part of this management plan
- Further knotweed growth was identified immediately beyond the boundary of the site but within 7m of the boundary (marked yellow on attached plan) These areas are expected to be dealt with as part of this management plan
- Japanese Knotweed was also identified beyond the boundary of the site in excess of 7m of the property (marked blue on attached plan) Treatment of these areas have not been included within this management plan
- Ongoing inspections for additional areas of invasive species growth are being carried out by site personnel. Any additional areas of invasive species are to be marked on these site plans and identified on site by means of fencing and signage

Proposed management of Japanese Knotweed

It is expected that as knotweed material, in area 1, is present within the footprint of the proposed works that material would be excavated under controlled conditions and removed from site to a licensed landfill facility

Where areas of knotweed are found to be present adjacent to the brook these areas will be dealt with via means of herbicide application as part of an ongoing monitoring and treatment programme under an Aquaherb agreement with the Environment Agency

A written record to be kept of actions carried out to be included in site file.

On-going monitoring JK within site and 7m buffer	Growing season April - October 2016
Excavation and removal of JK material to landfill as part of main construction works	Client to confirm programme
On-going monitoring JK within site and 7m buffer	Growing season April - October 2017
On-going monitoring JK within site and 7m buffer	Growing season April - October 2018

5 year warranty period

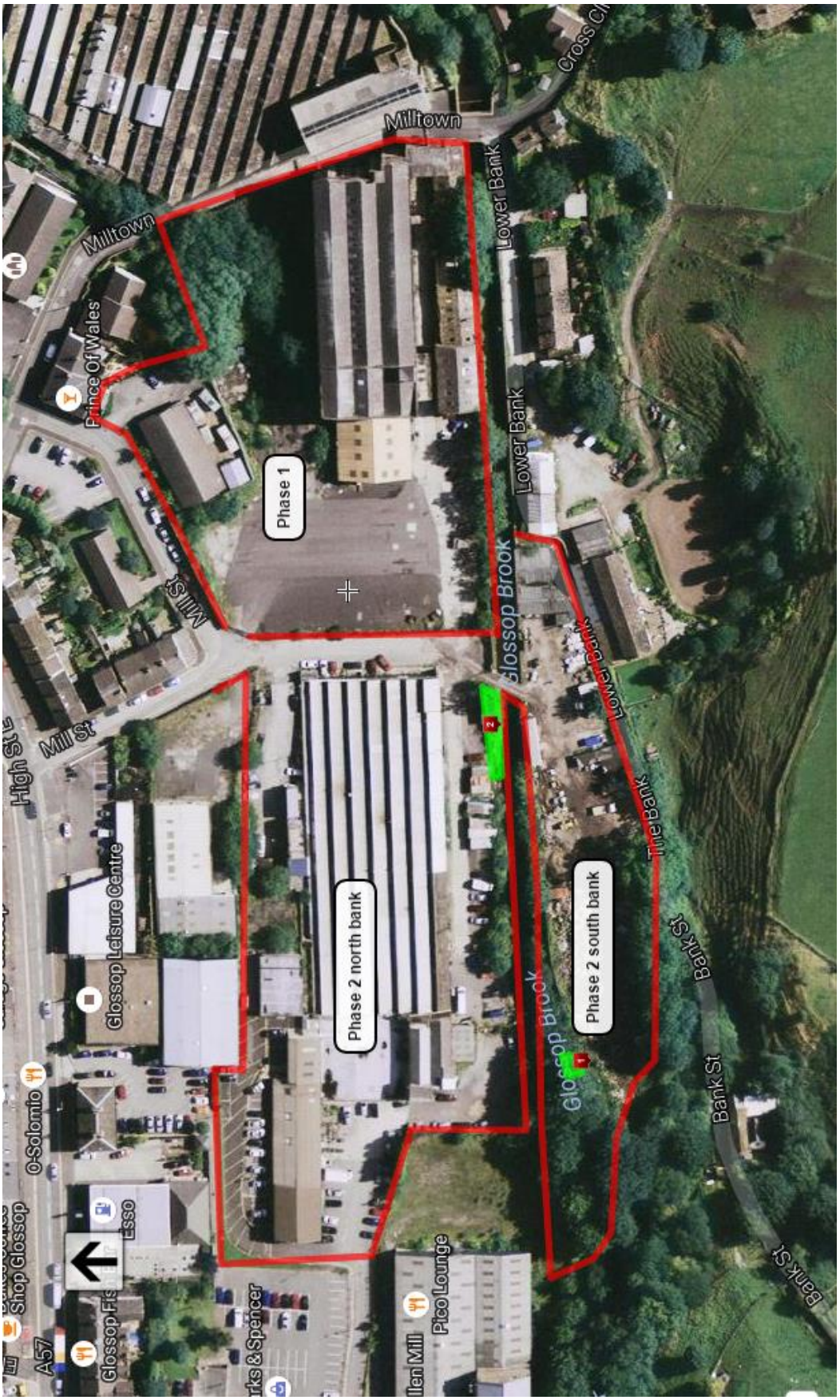

Fig 1. Site plan indicating location of Japanese Knotweed areas 1 & 2 on site (green)

Fig 2. Proposed site layout

HEALTH AND SAFETY

Relevant health and safety legislation must be observed in the UK. The relevant regulations are outlined in *The UK Pesticide Guide* produced annually.

The legislation relevant to the use of herbicides is: -

- The *Control of Substances Hazardous to Health Regulations* (COSHH) 2001. All operatives must comply with the regulations and wear protective clothing and observe a strict code of hygiene of washing hands before drinking and eating.
- The *Control of Pesticides Regulations 1986* under the *Food and Environment Protection Act* (FEPA) 1995.
- *Pesticides: Code of Practice* 1990 (Published by MAFF/HSE).

Health and Safety Guidelines

- All operatives must hold a Certificate of Competence for herbicide application (NPTC) or be under the direct supervision of qualified operative prior to commencing a spraying programme.
- All operatives must act responsibly in the storage and handling of the herbicide. The disposal of the herbicide and empty containers must be carried out by operatives in a responsible way. Any spillage must be guarded against and if occurring shall be dealt with and cleaned up. All operatives must carry a basic first aid kit.
- The area of work should be protected from the general public during the treatment and use of the herbicide.
- The use of herbicides should be carried out in compliance with the product label instructions.
- Advice on herbicide application should be sought for a BASIS registered advisor

Other legislation relevant to the control of non-native invasive weeds includes the following.

- *Town and Country Planning Act 1990.*
- *Highways Act 1980.*
- *Water Resources Act 1991.*
- *The Waste Management and Licensing Regulations 1994.*
- *The Landfill (England and Wales) Regulations 2002.*
- *The Control of Pesticides Regulations 1986 (under the Food and Environment Protection Act 1985).*
- *The Control of Substances Hazardous to Health Regulations 2001 (COSHH)*

HERBICIDES

Glyphosate

Non-selective, non-residual, trans-located herbicide

Not suitable to use where other vegetation is to be retained.

Use with a proprietary wetting agent.

New planting can be placed into ground following its application as it is not persistent in the ground.

Use in sensitive habitats, under trees and adjacent/near water bodies.

Other herbicides

- Triclopyr
- Imazapyr
- Aminopyralid

All contractors must be able to supply the following in relation to herbicide treatment or excavation of knotweed.

- Specific method statement for treatment including risk assessments.
- Supervision of species removal.
- Certification of disposal facilities
- COSHH for herbicides used.
- Certificates for operatives using and handling herbicides.
- Personal protective equipment for operatives of herbicides.
- Third party insurance for all works.

REFERENCES

Renals, T. and Rene, P. (May 2001) *Code of Practice for the Management, Destruction and Disposal of Japanese knotweed, Version 1.*
The Environment Agency.

Available to download: www.environment-agency.gov.uk

Child, L. and Wade, M. (2000) *The Japanese knotweed Manual*
Packard Publishing Limited, Chichester.

Web Sites

Nature Conservation
www.nationaltrust.org.uk/enviroronment/htm/nat_con/_fspapers/fs_plant01

Japanese Knotweed Control Forum
www.ex.ac.uk/knotweed

Netregs
www.netregs.gov.uk