Friarton Bridge: Ecological walkover and INNS survey

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Introduction

BEAR Scotland are proposing to carry out a project around the piers on LHB of River Tay near Perth at NGR 313028 721527. Erosion on bankside below piers has been ongoing and works are proposed to install rock armour along the riverbank to stabilise the embankment.

A field visit was carried out in May 2018 by a Field Ecologists from HED ltd to assess the extents of the scheme and assess the area in terms of protected species that are likely to be present. The presence of Giant Hogweed (*Heracleum mantegazzianum*) has been recorded on site. The extent of the contamination of the ground was assessed in order to provide a Method Statement to undertake the work whilst avoiding the spread of this Invasive Non-Native Species (INNS) and in compliance with current legislation.

This report summarises the findings to allow any mitigation and constraints to be identified prior to works and final design and layout (NB In the following Tables 1-5, those species and habitats identified as either present or potentially present on site and likely to be impacted by the works have been highlighted in red)

Fig 1 The Friarton Bridge viewed from the east with the eroding pier just out of shot

Protected Habitats

The area is dominated by Giant Hogweed with smaller areas of gorse, broom and immature trees including; ash, sycamore and willow. The area is partly fenced off from a minor road that runs alongside the River Tay. An agricultural field under a grass ley lies to the south and the road widens around the piers of the bridge with a layby on both sides of the tarred road.

Table 1: Protected Habitats

Habitat	Present (Yes/No) or potential	Will the development impact adversely on this habitat? (Yes/No/Unknown)	Risk based on current info	Surveys Outcome
Ancient woodland	No	n/a	n/a	n/a
Woodland (broadleaved)	No	No	n/a	n/a
Woodland (coniferous)	No	No	n/a	n/a
Individual Mature Trees	Yes	Unknown	Low	No evidence of dreys, dens or bat roost potential in trees. Potential for breeding birds during bird breeding season.
Hedges/ scrub	Yes	Yes	Low	Potential for breeding birds in gorse, groom and vegetation
Running water fresh (including ditches)	Yes	Yes	low	The river appears to be tidal at this point and rock armour will be placed within the water column and at the edge.
Standing water	No	No	n/a	n/a
Wetland or bog	No	No	n/a	n/a
Rough grassland and moorland	Yes	Yes	n/a	No evidence of protected species within footprint. Potential for breeding birds during breeding season.
Buildings/ dykes/ walls	No	n/a	Low	n/a
Brownfield/ site	No	No	n/a	n/a
Coastal/ marine	Yes	Yes	low	The river appears to be tidal at this point and rock armour will be placed within the water column and at the edge.

European Protected Species

There are no specific records of protected species being present on the site (See Table 2). The presence of otter and beaver within 200m was confirmed with field signs and resting place identified.

Table 2: Protected Species

Species	Present (Yes/No) or suitable habitat to support these species	Risk based on current info	Surveys Outcome
Vertebrates			
Dolphins, Porpoises and Whales	n/a	n/a	n/a
All Bat species	Potential foraging habitat	n/a	n/a
Otter	Yes	Yes	Active Otter couch within 200m of works
Wildcat	No	n/a	n/a
Great Crested Newt	n/a	n/a	n/a
Five Marine Turtles	n/a	n/a	n/a

Figure 2 Development Area – viewed from layby opposite bridge piers

Table 3: Protected Species field survey records

Ref	Species	Sign	Eastings	Northings	Comments
170	Otter	Potential Otter Couch	312997	721578	Resurvey ahead of works
171	Beaver	Beaver feeding signs	313068	721585	No evidence of lodge
172	Beaver	Beaver feeding signs - willow debarking and attempt at felling.	313151	721580	No evidence of lodge
173	Otter	Active Otter couch with fresh spraint.	313279	721576	No licensable issue as >200m from proposed works

Other Protected Species

The trees, shrubs and vegetation present on site have the potential to support breeding birds during the breeding season. Depending on the season of the proposed works, additional surveys may be required to ensure no disturbance or impact is caused to bird species from the works. Clearance works are best undertaken during the non-breeding season ie during the period August to March.

Table 5: Other Protected Species

Species	Present (Yes/No) or suitable habitat to support these species	Risk based on current info	Survey outcome
Vertebrates			
Badgers	No	n/a	N/a
Birds (breeding)	Yes	High	Avoid site clearance works during the bird breeding season (April – July/August) if practical. Otherwise undertake a breeding bird survey prior to any works being undertaken.
Pine Marten	n/a	n/a	n/a
Red Squirrel	n/a	n/a	n/a
Water Vole	No	No	No evidence found
Slow Worm	Potential	Low	No evidence found. Care to be taken when clearing site.
Adder	Potential	Low	No evidence found. Care to be taken when clearing site.
Viviparous Lizard	Potential	Low	No evidence found. Care to be taken when clearing site.

Invasive non-native species

There was evidence of extensive colonisation by Giant Hogweed plants throughout the area with evidence of the plant flowering and seeding in previous years.

Table 4: Invasive Species

Species	Present (Yes/ No/potential)	Risk based on current info	Survey Outcome
Giant Hogweed	**Yes**	**High**	**Extensive area of Giant Hogweed throughout site**
Rhododendron	No	Low	
Japanese Knotweed	No	Low	
Himalayan Balsam	No	Low	
Mink	No	Low	

Figure 3 Area of land to south of site.

Summary

In summary (see Appendix 1 - 3):

1. **Otter** – otters are using the River Tay within the work area for commuting and there is one resting place just over 200m downstream. There are no licensable issues associated with the presence of otters in the vicinity of the works. A check should be made of the area ahead of works by an experienced ecologist prior to earth movement or placement of rip-rap armour.
2. **Beaver** – there was no evidence of lodges or resting places associated with beaver within 100m of the site. At present beavers are not given any special protection in Scotland however this may change in 2018. SNH statement on Beavers – '*Legal situation. Laws protecting beavers are expected in 2018 but currently beavers are not protected in Scotland. It remains an offence to allow beavers to escape from captivity or to release a beaver without a licence from SNH. Possession of a beaver, alive or dead, which has been taken from the wild in a European Union Member State, is also an offence without a licence'.* As with otters a check should be made of the area ahead of works by an experienced ecologist prior to earth movement or placement of rip-rap.
3. **Breeding birds**
   There is potential for a wide range of breeding birds to be found on site particularly during the breeding season April-July inclusive. Due to the dense vegetation and presence of trees on site any significant site clearance works should be undertaken outwith the bird breeding season. If this is not practical then a pre-construction breeding bird survey should be undertaken 24 hours ahead of site clearance.
4. **Other protected species** - no evidence was found for other protected species on site
5. **INNS - Giant Hogweed** (*Heracleum mantegazzianum*) – the presence of this Invasive Non-Native plant throughout the site and on adjacent verges presents a challenge when undertaking the works. The legislation aims to prevent its spread onto areas where it has previously not been present and the movement and placement of welfare, machinery and materials requires careful consideration. A detailed method statement with regard to this species should be prepared in advance of the works. This should outline in detail the method of work and mechanisms for containment of contaminated plant material and soil. It should also provide guidance on the storage of rock armour as well as plant movements within the site and onto adjacent land. *NB All soil on site will contain significant volumes of viable Giant Hogweed seeds.* See Appendix 3 for guidance on the production of a Method Statement ahead of construction.

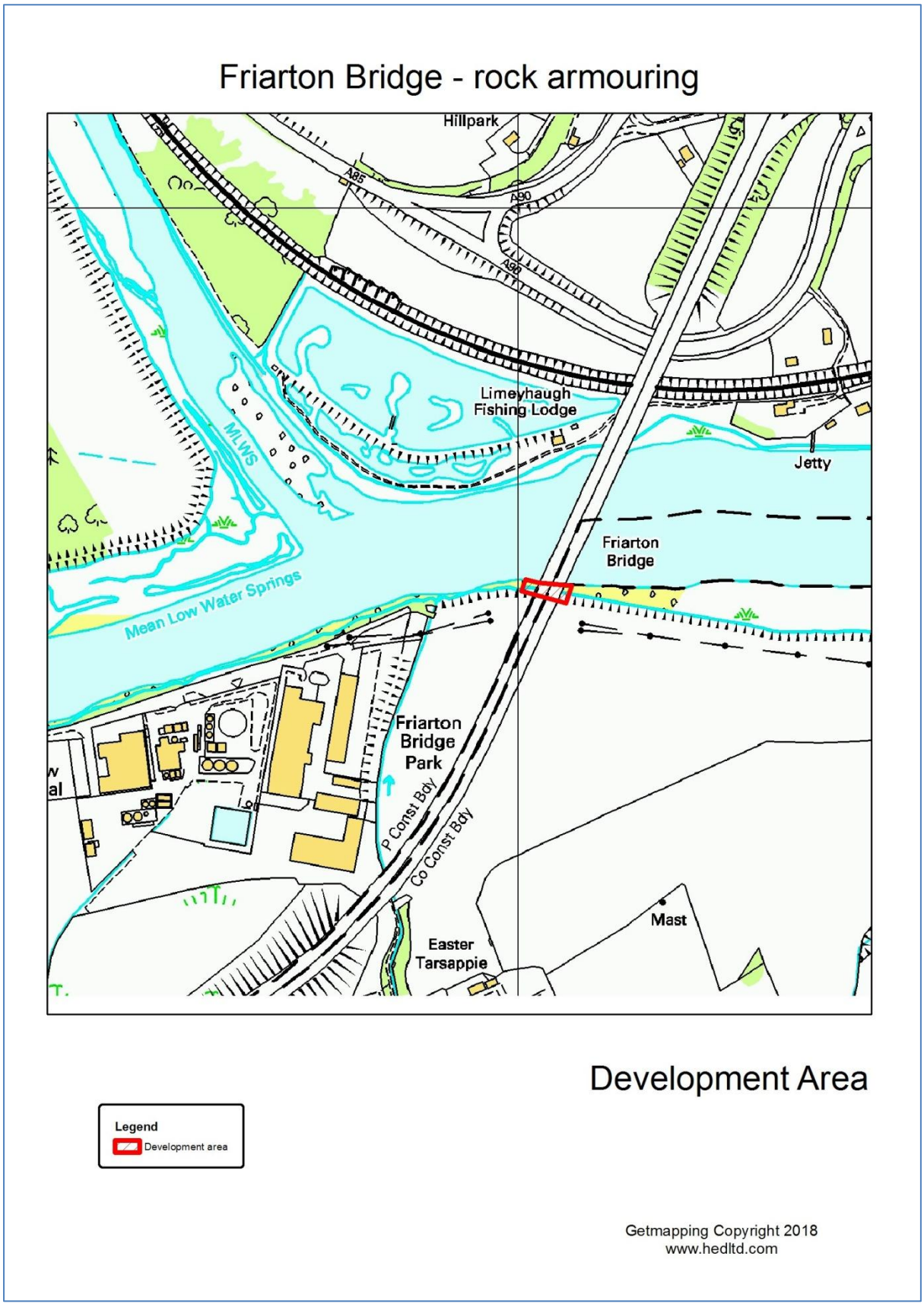
Recommendations

The appointed contractor should produce a detailed Method Statement that takes cognisance of the presence of Giant Hogweed contaminated land throughout the site. This will require consideration of the timing of the works as well as mechanisms for avoiding the spread of Giant Hogweed outwith the site.

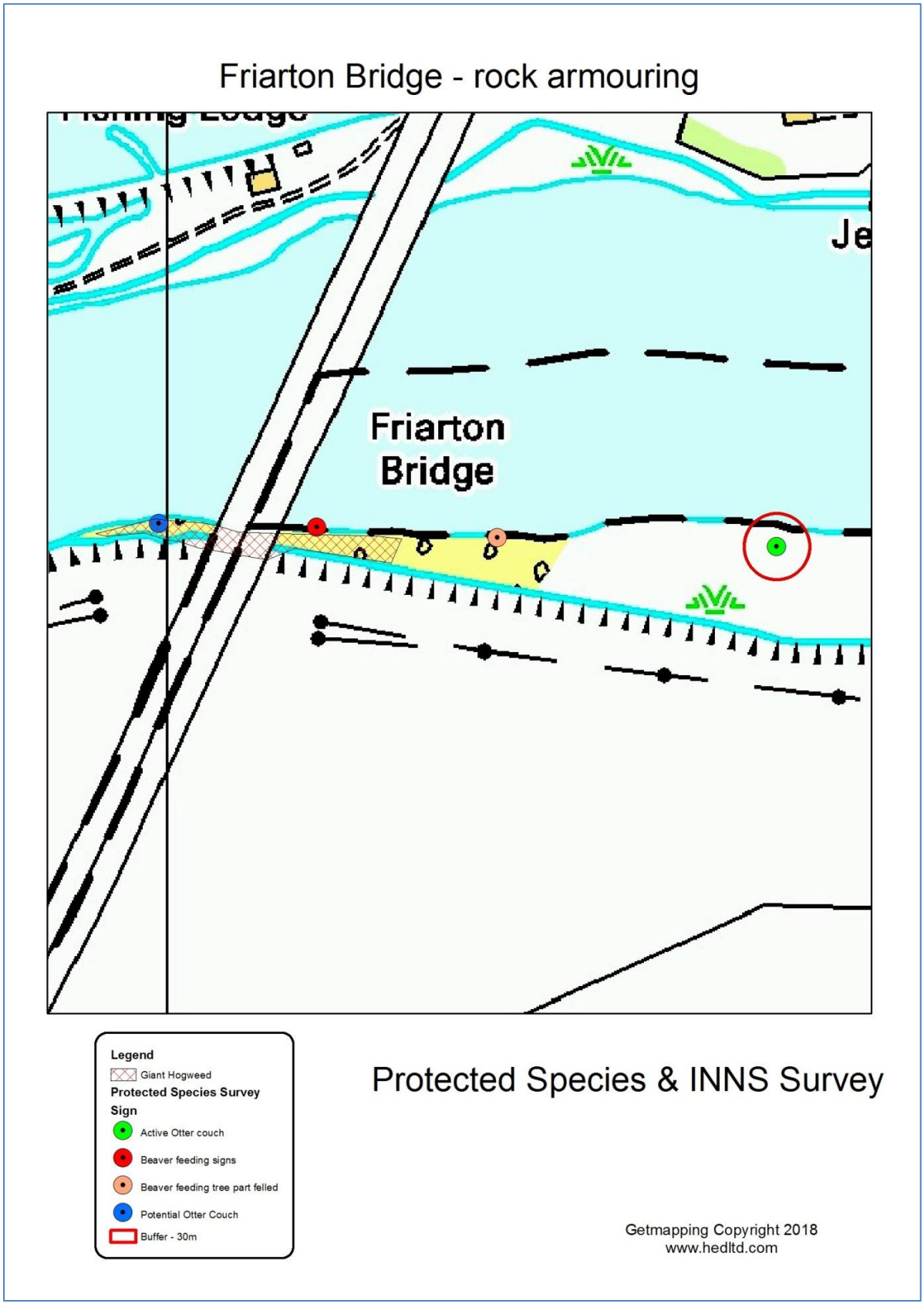
If works are significantly delayed (> 18months) then the site should be resurveyed prior to development for protected species. With adequate mitigation (including timing and method of site clearance works) it is not anticipated that there will be any significant impact from the works on species of conservation value on the site or the spread of Giant Hogweed.

Appendix 1 Maps and drawings

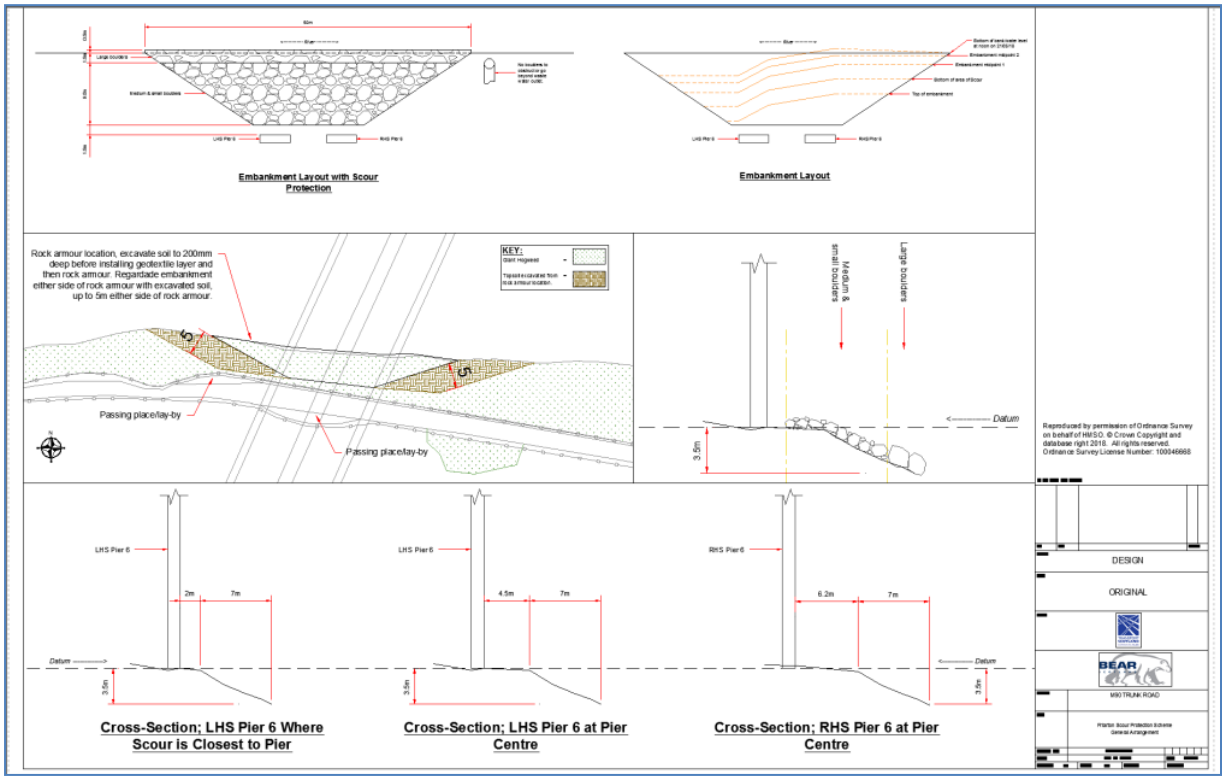
a. Location

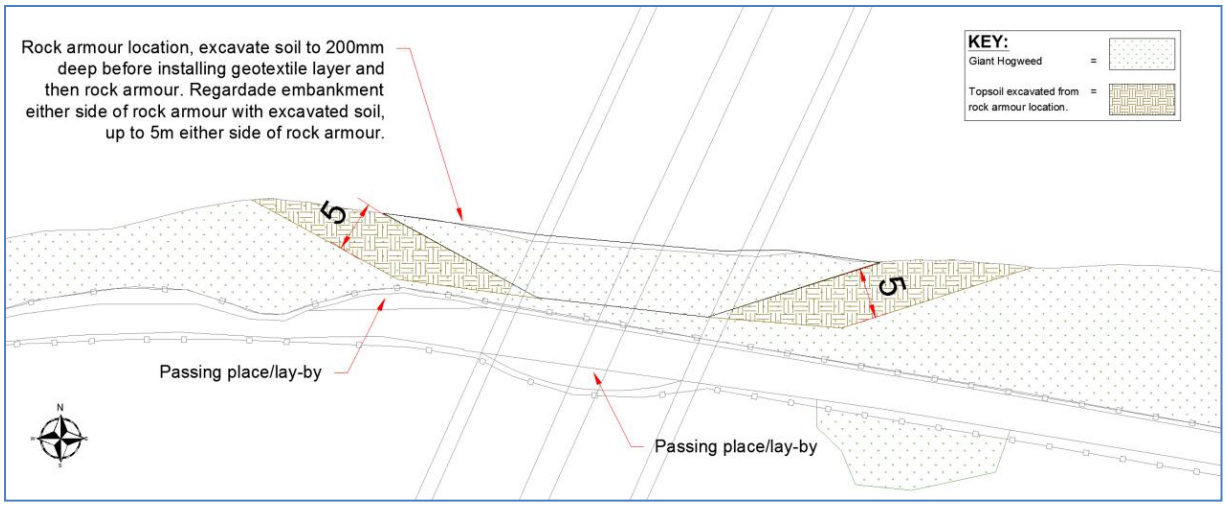


b. Protected species and INNS



c. Proposed armouring works



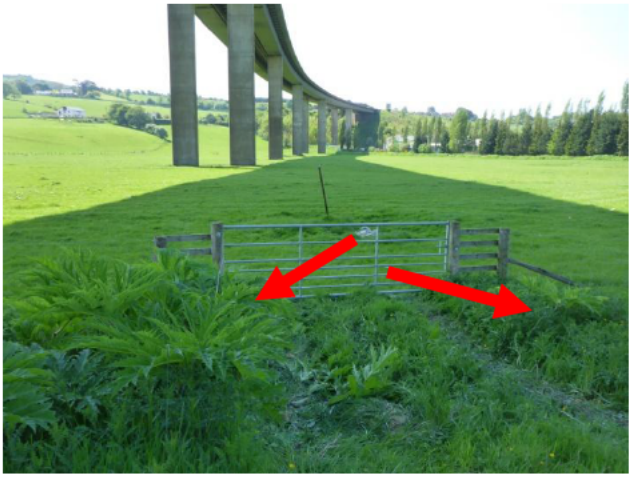


Appendix 2 Images from survey

Target Note	Description	Image
1	Piers on LHB of River Tay – erosion on bankside below piers has been ongoing and works are proposed to install rock armour along the riverbank to stabilise the bank.	
2	Giant Hogweed plants are present along the riverbank and around the lay-bys on either side of the road.	
3	As above	

4	As above. There are some open areas within the site but these are likely to be contaminated with seeds from adjacent plants.	
5	View looking east from below piers.	
6	Beaver activity with this tree partly felled and bark stripped.	

7	Evidence of beavers cutting and storing material along flood zone.	
8	Active otter couch under large boulder along bank (> 200m from site)	
9	As above with fresh otter spraint evident.	

10	The presence of Giant Hogweed plants on edge of road at gate and edge of field. If this area is to be used for storage of rock armour or access then the method statement should take account of the contaminated land around the gate and provide mitigation to prevent its spread.	

Appendix 3 Guidance for production of a site Method Statement for construction

Background

Giant Hogweed (*Heracleum mantegazzianum*) is a particularly invasive perennial plant which lives for up to 3-4 years. It flowers in June-July and sets seed in August and can produce 1000s of viable seeds, which can remain dormant in the soil for many years. The main concern is the plants ability to 'aggressively' create large stands which block out the light and so push out many other native plant species.

The plant also produces a sap which if it gets on to skin in the presence of sunlight can cause blistering. Therefore precautions need to be taken to avoid this when working in the vicinity of the plant.

Legal Considerations

Currently there is no legal requirement to control the plant but you are expected to take reasonable steps to prevent it from escaping or spreading into the wild or onto neighbouring land (*NB the land owner could take out a civil legal action against any company contaminating their land).*.

Chemical Treatment

Chemical treatment against giant hogweed has been shown to be very effective. Glyphosate and triclopyr. Glyphosate is considered the safest and best chemical treatment for giant hogweed where it is present close to watercourses. Timing of application is critical with treatment most effective with a first application in June with follow up treatment in July or August (Cafery 1994)

Guidelines for site set up and material handling

An outline Method Statement should be produced by the contractor undertaking the works for the proposed treatment of the Giant Hogweed plants and contaminated soils within the project area. The following should be undertaken as a minimum:

1. It is proposed to chemically treat the giant hogweed on site ahead of the works. This should be done under licence from SEPA. A treatment in June with a follow up in July or August is recommended (Glyphosate is the preferred chemical close to water and in the presence of native plants). All Giant Hogweed vegetation within 10m of working area should be treated.
2. Carefully consider the siting of accommodation and plant ahead of works. Set out the work area including material storage areas, welfare areas, walkways and access arrangements to and from the armouring site.
3. Excavator to stand on clean ground or layer of clean fill or trackway at all times to prevent contamination of tracks. Dumpers to avoid standing on or driving over contaminated soil or material. Place boulders under direct supervision of trained banksman and ensure any contaminate material is removed from site of armouring (this is to prevent seeds being washed downstream..
4. If any excavated material is to be removed from site this should be taken to a licensed landfill site in an enclosed wagon.
5. The area should be inspected by the site ECoW to ensure no contaminated material is spread onto adjacent land. Where this occurs then it should be removed including any soil underneath back to site or to a licensed facility.
6. All machinery, tools clothing and boots should be cleaned on site. All machinery should be cleaned on the site using a pressure washer before leaving site.

Appendix 4 References

Anon 1994: The Conservation (Natural Habitats, &c.) Regulations 1994: HMSO

Anon 2004: The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004: HMSO

Anon. 1981: Wildlife and Countryside Act: HMSO

https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/protected-species-z-guide/protected-species-beaver/interim-beaver

Comparison of Management Techniques for Heracleum mantegazzianum in North and Central Europe Mayer, LaRessa K.

The Management of Giant Hogweed in an Irish River Catchment JOSEPH M. CAFFREY