Burton Washlands Restoration - Outline Method Statement

Project name: Burton Washlands Restoration									
Project location: Burton Washlands, Burton on Trent									
Client: Staffordshire Wildlife Trust									
	Initial	Rev1	Rev2	Rev3	Rev4	Rev5	Rev6	Rev7	**Rev8**
Date	23-07-2021								
By	RW								
Checked	RW								
Approved	**RW**								

Summary of key works and works order

1. Excavation of wetlands, scrapes, inside bend lowering and inset floodplains
2. Creation of berms

Pre-construction & construction procedure

Construction of site compounds, lay-down areas, delivery of machinery and any other initial preparatory works to be undertaken in-line with specific site work activity. All works on site will be carried out in accordance with the appropriate British Standards and industry Codes of Practice. A qualified and experienced Geomorphologist is recommended to attend the site to advise on construction procedure at certain points during the works.

Biosecurity measures outlined in the following two documents should be followed by all personnel and machinery on site:

https://secure.fera.defra.gov.uk/nonnativespecies/checkcleandry/documents/check-clean-dry-england.pdf

http://www.nonnativespecies.org/checkcleandry/

Construction period

The construction period is expected to take ~3-4 weeks, ensuring cost effective delivery and minimal environmental disturbance as a result of the work on site. However, it is possible that adverse weather conditions such as periods of high rainfall (and associated river level rise), will lead to temporary cessation of some construction. Liaison should be undertaken by the client and contractor with the Environment Agency to determine an appropriate time of year for the contractor to deliver the works as some wet working may be required to construct the scheme.

Public Access during the works

During the construction period, public access to the site should be restricted and fenced off. Impacted footpaths will need to be re-diverted or alternative routes signposted.

The contractor will ensure appropriate signage and fencing off of the construction compound area and work area, and it is the responsibility of the contractor to ensure safe access for the workforce and appropriate restriction of access to the public.

Historic sites within the work zone should be fenced off to ensure no damage is caused by machinery access etc (where relevant).

Species surveys

No ecological surveys or protected species surveys have been assigned or undertaken as part of the design works.

Timing of vegetation clearance and temporary disturbance to river bed as part of works

It is unlikely significant ground vegetation will require clearing as part of the works, but this should be decided by the contractor. Only those areas specifically identified for site clearance (to be marked out by the client and contractor prior to commencement of construction, with supervision from AquaUoS) shall be cleared of existing tree and vegetation cover. Contractor to use tracking mats for river banks when entering and exiting the channel.

Removal, pollarding and pruning of trees and clearance of ground vegetation may be required during the bird nesting season. These works will only be undertaken immediately after the trees and vegetation have been inspected and deemed free of nesting birds, red squirrel and bats by an ecologist.

Nesting bird season and other ecologically sensitive seasons are summarised below:

- Bird nesting - March to August
- Bat roosting - April to September
- Spring salmonid run (migration) – approx. March to May (depending on local run timing)
- Salmon spawning season – 1st October to 15th June
- Crayfish rescue should avoid late May and June when females may be carrying newly hatched young

Note: There may be some changes to the outlined method statement as more knowledge of site conditions are gained in the pre-construction and construction phases of the project to be determined by the contractor.

Note: This outline method statement does not constitute formal construction advice, safe constructability of the proposed design is the responsibility of the contractor.

Activity: Excavation of wetlands, scrapes, inside bend lowering and inset floodplains	Method Statement 1

Risks: Overturning of plant machinery, crush injuries, collapse of earth banks, falling trees and branches, collision with other plant machines, pollution to watercourse, machine strike to persons, machine strike of services, insect bites and allergic reactions, snake bites, leptospirosis, manual handling, drowning.

Proposed working method overview:

- Machinery to access site as agreed by the landowner and client. Track mats should be used as appropriate dependent on landowner requests and ground conditions at time of construction. Fence removal and replacement may be required to facilitate / access the works areas, alongside pollarding and vegetation clearance.
- Temporary watercourse / ditch crossings may be required dependent on track routes and plant, this is to be agreed with the landowner, contractor and the client.
- Silt control measures to be in place downstream during works and inspected daily (replace / repair as necessary).
- Wet working approvals may be required from the Environment Agency to undertake the works.
- Banks to be monitored during the works. No personnel to be in the channel or excavated area during works.
- The wetlands, scrapes, inside bend lowering and inset floodplains should be surveyed in on site prior to excavation commencing using coordinates provided with the design drawings, this should also be undertaken with supervision from AquaUoS.
- Excavate the wetlands, scrapes, inside bend lowering and inset floodplains following levels / excavation depth and width information provided within the design drawings and under supervision of the geomorphologist. Create level variability across the wetlands, scrapes, inside bend lowering and inset floodplains to provide micro-habitat. Side slopes for these features can vary within a range as shown in the design drawings. Over-excavate features initially, to allow for filling with excavated clay material layer to finished levels.
- Excavated material (not clay) should be taken to the nearest spreading locations and spread to the appropriate depth as outlined in the design drawings. Re-use any excavated gravel material as directed on site by the client.
- Remove any tracks into watercourse and across the working area and make good any damage. Utilise bog mats along track routes if ground becomes wet.
- Seed exposed floodplain, excavated areas and top of bank areas (if seeding is proposed) with suitable seed mix at 5g/m^2 spreading rate, do not re-turf.

General Method of Work:

- Client and Principal Contractor to reconfirm area of works and mark up extent of site works.
- Check line of works for any trees to be removed, branches to be cut back, vegetation clearance etc. to ensure safe passage for machinery. Where mature trees are encountered during excavation, avoid where possible and adjust line of excavated features if this is possible with agreement with the geomorphologist.
- Erect temporary fencing to restrict public access to the site and to fence off historic sites (where necessary).
- Mark location of and install temporary protection measures to utilities, e.g. excavator mats to buried services at crossing points, goal posts for overhead cables where access routes require it.
- Install appropriate fine sediment control measures downstream of works area e.g. straw bales, fine sediment control mats or silt curtains when in-channel features are being created, floodplain features are being excavated etc and when machinery accesses the bank top or channel to prevent silt/fine sediment-run off from exposed banksides and from disturbed fine sediment when working in the channel.

Control Measures or Modifications

- No smoking in works area.
- No works to be undertaken during the hours of darkness.
- Ensure staff are aware of risk of drowning associated with working in or near water and the health and safety requirements (as detailed in the site risk assessment by the contractor).
- If any tree felling/vegetation clearance is required, site manager to contact ordnance contractor.
- All re-fuelling will take place at least 20m away from the watercourse, next to the fuel bowser.
- Be vigilant for members of public / pets / stock / wild animals entering works area.

- Be aware of the risk of Leptospirosis in and around the watercourse.
- Ensure bucket is lowered to the ground when machine is not in use.
- When visitors are on site, stop work & lower bucket to ground if they enter the works safety area.
- If working with a Banksman, ensure that they are in a position where you can see them.
- Beware of machine blind spots when slewing and turning, especially with regard to tree branches.
- Be aware of any taped off areas/sites that will be of conservation, archaeological or other special interest. Do not enter these areas with any machinery.
- As a minimum use heather bale dams / silt curtains at strategic intervals in the watercourse and across impacted floodplain areas to filter coarse sediments. Pollution booms and silt reduction measures booms to be erected at the downstream end of the works.
- All operators to be competent and certificated on the machines they operate.
- All incidents relating to safety or pollution of any kind are to be reported as soon as it is safe to do so.
- All staff and visitors to undertake induction and wear the appropriate PPE for the site conditions they encounter.

Activity: Creation of berms	Method Statement 2

Risks: Overturning of plant machinery, crush injuries, collapse of earth banks, falling trees and branches, collision with other plant machines, pollution to watercourse, machine strike to persons, machine strike of services, insect bites and allergic reactions, snake bites, leptospirosis, manual handling, drowning.

Proposed working method overview:

- Machinery to access site as agreed by the landowner and client. Track mats should be used as appropriate dependent on landowner requests and ground conditions at time of construction. Fence removal and replacement may be required to facilitate / access the works areas, alongside pollarding and vegetation clearance.
- Temporary watercourse / ditch crossings may be required dependent on track routes and plant, this is to be agreed with the landowner, contractor and the client.
- Silt control measures to be in place downstream during works and inspected daily (replace / repair as necessary).
- Wet working approvals may be required from the Environment Agency to undertake the works.
- Banks to be monitored during the works. No personnel to be in the channel or excavated area during works.
- The berms along the Silverway should be surveyed in on site prior to them being created using coordinates provided with the design drawings, this should also be undertaken with supervision from AquaUoS. These are to be located along the toe of the inset floodplain areas created.
- Using excavated cohesive material from the inset floodplain areas or other works across the suite, create the berms so that they extend no more than half the width into the channel and are finished at the same height as the inset floodplain area. Ensure suitable compaction of the placed material with the back of the digger bucket. Placement of the proposed coir matting along the berm edge should be undertaken as per manufacturers guidance.
- Remove any tracks into watercourse and across the working area and make good any damage. Utilise bog mats along track routes if ground becomes wet.
- Seed exposed floodplain, excavated areas and top of bank areas (if seeding is proposed) with suitable seed mix at 5g/m^2 spreading rate, do not re-turf.

General Method of Work:

- Client and Principal Contractor to reconfirm area of works and mark up extent of site works.
- Check line of works for any trees to be removed, branches to be cut back, vegetation clearance etc. to ensure safe passage for machinery. Where mature trees are encountered during excavation, avoid where possible and adjust line of excavated features if this is possible with agreement with the geomorphologist.
- Erect temporary fencing to restrict public access to the site and to fence off historic sites (where necessary).
- Mark location of and install temporary protection measures to utilities, e.g. excavator mats to buried services at crossing points, goal posts for overhead cables where access routes require it.
- Install appropriate fine sediment control measures downstream of works area e.g. straw bales, fine sediment control mats or silt curtains when in-channel features are being created, floodplain features are being excavated etc and when machinery accesses the bank top or channel to prevent silt/fine sediment-run off from exposed banksides and from disturbed fine sediment when working in the channel.

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- All operators to be competent and certificated on the machines they operate.
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- All staff and visitors to undertake induction and wear the appropriate PPE for the site conditions they encounter.

General mitigation of construction impacts on habitats / species

A site Operational Management plan shall be developed by the contractor with reference to the following elements:

Element	Suggested action	Required
Water quality	Control of silt run-off and potential for machinery pollution source	YES
River crossing	Control of disturbance, contamination, silt release, noise, vibration, debris, flooding	YES
Site waste recycling plan	Re-use on site where possible	YES
Noise and dust	Timing of works; selection of plant	YES
Protected species Protection Plans	Follow species protection plans if applicable	TBD
Invasive plant species, pests & diseases	Fence giant hogweed, remove other invasives during site preparation where necessary – balsam is present within some proposed excavation areas	TBD