



Environmental Report August 28th to September 28th, 2023

Glashaboy Flood Relief Scheme

Prepared by: Rory O Connor
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The following is the Clients Ecological Clerk of Works' (EcCOW) monthly review of the Glashaboy River (Glanmire/Sallybrook) Drainage Scheme. It details observations made on site regarding environmental and ecological factors involved in the scheme. This formulates a monthly review to be submitted to the Environmental Monitoring Group (EMG).

- The main contractors monthly report is commented on in the appendices.
- The main contractor has included a general look ahead for the next month (October 2023) in section 10.0 of their Environmental Audit.
- VEPs/COs in the previous month included only one Change Order which was a request from the Client to the main contractor to remove a number of fallen trees from the main channel in advance of winter to prevent any downstream blockages.

The main works areas for September 2023 included:


- Bleach Hill (Cuil Chluthair) - Culvert Works
- Springmount - Culvert Works, Tree removal
- Sallybrook - Sheet piling, Tree removal, JKW (Japanese knotweed) excavations and transport.

General site conditions are good with housekeeping at a satisfactory level. The main contractor has employed the services of Knotweed Solutions for works around recorded Third Schedule Invasive Alien Plant Species. The main contractor has also employed the services of Brain Keeley of Wildlife Surveys Ireland for bat survey work in advance of tree felling in Areas 1 – 4. Consultations with Ross Macklin have taken place regarding works near the recorded Otter Holt in Sallybrook where monitoring has continued. The turbidity of the main channel is being monitored by four in-situ meters upstream and downstream of works installed and maintained by Capital Water Systems Ltd. These are set to trigger alarms and notify the main contractor when levels rise above accepted levels. Questions persist regarding suspended solids, and the concentration should not exceed 25mg/l, as outlined in clause 1 of appendix 1/28, although the details have not been fully resolved. Michael McPartland (Inland Fisheries Ireland) provided electrofishing services, in Sallybrook, to defish the areas behind the temporary sheet piles. Species recorded included salmonids and lamprey.

Date	Comment	Image	ECoW Action/Recommendation	Sorensens's Action Response
28/8/23	Two trees removed at Grandons		Memo generated	Trees ecologically surveyed prior to felling
29/8/23	Vegetation removal at Grandons. Third schedule invasive plants not demarcated prior to works		Informed contractor's site ecologist	Signage installed the following day

<p>30/8/23</p>	<p>Excavation of JKW stand at corner of Sallybrook house. Knotweed Solutions on site to supervise</p>		<p>Documented</p>	<p>Good practise followed</p>
<p>31/8/23</p>	<p>Burst waterpipe at Bleach hill. Siltation event</p>		<p>Informed contractor's site ecologist</p>	<p>Pipe was repaired and water stopped within 30mins</p>

<p>31/8/23</p>	<p>Excavation of vegetated bund at Sallybrook in JKW area. Knoweed Solutions on site to supervise. Silt mitigation in place</p>		<p>Documented</p>	<p>Good practise followed</p>
<p>1/9/23</p>	<p>Over pumping at Bleach hill – no fish protection on pumps</p>		<p>Informed contractor's site ecologist</p>	<p>Sorensen's looking into getting better fish protection attachments for their hoses</p>



<p>1/9/23</p>	<p>Frog translocated from works area at ramp installation at Sallybrook adjacent to N2 otter holt. No ecological supervision</p>		<p>Informed contractor's site ecologist</p>	<p>Site ecologist to survey for frogs and supervise future vegetation clearance in this area</p>
<p>5/9/23</p>	<p>Storing of rebar in the JKW exclusion zone at Sallybrook. This long-term action was not detailed in Sorensen's biosecurity plan. No signage present. Terram shows sign of wear and tear</p>		<p>Informed contractor's site ecologist</p>	<p>Fence to be fixed. Sorensen's exploring ways to improve JKW exclusion zone such as additional signage and possible Heras panels</p>

<p>9/9/23</p>	<p>Two instream water quality sondes installed in the main channel above and below in stream works areas</p>		<p>Documented</p>	<p>Good practice</p>
<p>9/9/23</p>	<p>Removal of silver birch tree at Bleach hill</p>		<p>Memo generated</p>	<p>Tree ecologically surveyed prior to felling</p>
<p>13/9/23</p>	<p>Limbs removed from trees on opposite bank at Sallybrook where piling rig is tracking</p>	<p>No image available</p>	<p>Informed contractor's site ecologist</p>	<p>Sorensen to report on all tree cutting and tree removal from outside the works area.</p> <p>Permit to Clear Vegetation now in place</p>


<p>14/9/23</p>	<p>Drying out of circa 10m stretch of downstream at Bleach hill was carried out without ecological supervision</p>		<p>Informed contractor's site ecologist</p>	<p>Site ecologist inspected the area shortly after being informed.</p>
<p>14/9/23</p>	<p>Vegetation clearance along riverbank at Sallybrook house to allow sheet piling rig to access river from the dry was carried out</p>		<p>Informed contractor's site ecologist</p>	<p>Bund maintained along riverbank to contain possible surface water runoff</p>



<p>15/9/23</p>	<p>Pumping of sediment rich water from works area to high ground above the downstream causing siltation of downstream due to inadequate silt management</p>		<p>Informed contractor's site ecologist</p>	<p>Silt mitigation methodology to be reviewed for future works</p>
<p>18/9/23</p>	<p>Pumping of sediment rich water from works area to high ground above the downstream causing siltation of downstream due to inadequate silt management</p>		<p>Informed contractor's site ecologist</p>	<p>Silt mitigation methodology to be reviewed for future works</p>

<p>18/9/23</p>	<p>Removal of vegetation from riverbank at Eurofins site. Concerns raised about silt and run off.</p>		<p>Discussed with contractor's site ecologist and site foreman</p>	<p>Silt mitigation methodology to be reviewed for future works</p>
<p>19/9/23</p>	<p>Permanent sheet piling occurring in proximity to N2 otter holt</p> <p>Ecological supervision not constant as per the conditions of the derogation license</p>		<p>Discussed with contractor's site ecologist</p>	<p>Ecological supervision in place periodically</p>

<p>19/9/23</p>	<p>Pumping at Bleach hill of sediment rich water from works area to high ground above the downstream causing siltation of downstream due to inadequate silt management silt sock in place torn and nonfunctioning</p>		<p>Informed contractor's site ecologist</p>	<p>Permit to pump has been put in place</p> <p>Lessons Learned Report issued</p>
<p>19/9/23</p>	<p>No fish protection on two pumps at Bleach hill</p>		<p>Informed contractor's site ecologist</p>	<p>Permit to pump has been put in place</p> <p>Lessons Learned Report issued</p>
<p>19/9/23</p>	<p>Otter rope fence at Circus field has partially fallen down</p>	<p>No image available</p>	<p>Informed contractor's site ecologist</p>	<p>Fence to be fixed</p>

<p>19/9/23</p>	<p>Rope fence at JKW exclusion zone at Sallybrook requires maintenance. Also, encroachment into area from adjacent haul road</p>		<p>Informed contractor's site ecologist</p>	<p>Fence to be repaired, additional signage and possible Heras panels to be installed</p>
<p>20/9/23</p>	<p>Vegetation removal including stumps from riverbank at Eurofins. No silt mitigation in place</p>		<p>Informed contractor's site ecologist</p>	<p>Silt mitigation methodology to be reviewed for future works</p>

<p>22/9/23</p>	<p>No fish protection on two pumps at Bleach hill</p>		<p>Informed contractor's site ecologist</p> <p>Main contractor to consider sourcing fish protection attachments for their hoses when over pumping</p>	<p>Permit to pump system now in place that includes control measures and checks on fish protection</p>
<p>22/9/23</p>	<p>Pumping of sediment rich water from works area to high ground above the downstream causing siltation of downstream due to inadequate silt management</p>		<p>Informed contractor's site ecologist</p> <p>Main contractor to source a more sophisticated silt sock</p>	<p>Permit to Pump has been put in place</p> <p>Lessons Learned Report issued</p>

<p>22/9/23</p>	<p>Vegetation clearance at Eurofins, no silt protection in place. No oil boom in stream present</p>		<p>Informed contractor's site ecologist</p> <p>Main contractor to consider the use of a silt curtain when such works are carried out in the future. Ensure oil boom is in place prior to entry of plant into in stream works areas</p>	<p>Silt mitigation methodology to be reviewed for future works</p>
<p>25/9/23</p>	<p>Working in stream at Sallybrook while downstream monitor not transmitting readings on this day</p>		<p>Informed contractor's site ecologist</p> <p>Suspend works from in stream or initiate alternatives such a frequent water monitoring with a handheld device</p>	<p>Capital Waters contacted immediately. Monitors were back transmitting data the following day</p> <p>Hand held water monitoring to be utilised going forward in a possible repeat event</p>

<p>25/9/23</p>	<p>Inland Fisheries Ireland electro-fish area behind temporary sheet piles at Sallybrook house. Trout and lamprey species translocated</p>		<p>Documented</p>	<p>Good practise</p>
<p>25/9/23</p>	<p>Tree felling at Sallybrook carried out with limited ecological supervision. Trees cleared without any regard to bat mitigation. Ivy covered trees shaken, broken and pounded. Also, ivy covered trees were piled instead of separated</p>		<p>Informed contractor's site ecologist</p> <p>Main contractor should consider increasing ecological capacity during busy work-periods when multiple work sites cannot be simultaneously supervised by a single ecologist</p>	<p>Toolbox talk reissued to sub-contractor</p> <p>Sorensen's to better manage sub-contractors in ecologically sensitive areas</p>

25/9/23	Tree cutting track machine leaves JKW exclusion zone to enter river to cut trees at Eurofins. No evidence that all biosecurity measures had been followed		Informed contractor's site ecologist Main contractor should ensure all biosecurity measures are followed by sub-contractors	Sorensen's to maintain wash-down records
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<p>25/9/23</p>	<p>Up to 6 trees removed at Eurofins on opposite side of the riverbank</p>	 <p>25/09/2023 17:2</p>	<p>Informed contractor's site ecologist</p>	<p>Ecologically surveyed prior to felling</p> <p>Permit to Clear Vegetation recording now in place</p>
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<p>26/9/23</p>	<p>Tree felling at Sallybrook carried with limited ecological supervision. Trees cleared without any regard to bat mitigation. Ivy covered trees shaken, broken and pounded. Also, ivy covered trees were piled instead of separated</p>		<p>Informed contractor's site ecologist</p> <p>Main contractor should consider increasing ecological capacity during busy work-periods when multiple work sites cannot be simultaneously supervised by a single ecologist</p>	<p>Sorensen's to better manage sub-contractors in ecologically sensitive areas</p>
<p>27/9/23</p>	<p>In-stream dam at Bleach hill that comprises a 1-ton sandbag bursts releasing contents</p>	<p>No image available</p>	<p>Contractor should consider inspection of any existing in-stream dams prior to forecasted flooding events</p>	<p>Recommendation acknowledged</p>
<p>28/9/23</p>	<p>Removal of tree roots from felled trees within the JKW area at Sallybrook to prevent possible spread of contaminated material occurring from relocation of cut trees off site</p>		<p>Documented</p>	<p>Good practise</p>

28/9/23	Temporary sheet pile wall at Sallybrook house over-topped and flooded from heavy rains from storm Agnes. Water trapped behind temporary sheet piles. Waters pumped out into main channel and then filled in with clay. IFI not consulted		Informed contractor's site ecologist	IFI have since been consulted. No issues raised
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Appendix A. Comments returned to Sorensen on their Environmental Audit 28/08/2023 to 27/09/23:

- Overstated functioning of Kelly blocks to control dispersal of sediment.
- The use of silt netting in stream is not an effective method for controlling sediment generated by in stream works regardless of the flow conditions. Insufficient control of sediment during instream works.
- "The flow of water was too great" – were other options explored? RAMS stated alternatives if turbidity got high, which it did, yet these were not deployed.
- "Ground water within the 'dry section' of culvert was pumped into a settlement chamber and a silt controlling measure before being removed for discharge over ground" – this is unclear and not entirely accurate.
- No mention of the downed fencing and encroachment at Sallybrook JKW exclusion zone.
- Oil booms were not always in place when working in the waterways. Oil booms was not removed from the water ways prior to storms Agnes.
- No mention of the camera monitoring of the N2 or its reporting or lack of.
- Picture with Caption 5 feature fish guards on pumps at Bleach hill – these were removed.
- Picture Caption 6 – this tanking out method at Bleach hill – this method was only partially used.
- Wash out of Grandon's contamination during storm Agnes not mentioned.
- No mention of instream works without water monitoring in place, on Monday 25/9.
- Question 1.1 – How can this be tick as no turbid water when suspended solids levels reached over 1200NTU? This is not a representative answer.
- No mention of piling works in the river.
- No mention of cutting down trees outside the works area.
- No mention if these trees had been assessed for birds and bats.
- No mention of cutting down a tree at Bleach Hill outside the works area.
- No mention if the tree in Bleach hill was assessed for birds and bats.
- No mention of issues recorded with tree surgeon and the way in which he was managing the ivy-covered trees and the way in which they were stored.
- No mention or response to how suspended solids are being monitored. Proposed formula is based on a different river system. No issuing of daily average calculations.
- No mention of piling works being undertaken with no mitigation measures in place. An oil boom is not a mitigation measure against silt control.

- No mention that SRE had to ask for a petrol container and oil container to be removed from within 1m of the watercourse.
- Section 5.0 – There have been a number of noise complaints and complaints of structural damage to buildings within the vicinity of the works that the contractor has been made aware of.
- Report should provide a list of current ecological derived licenses in place with commencement date and end date of the licences.
- The audit contains text and pictures for area's that are not in the site works area at present. The audit should be reflective of the current site and works areas.

Appendix B. Sorensen's Environmental Audit 28/08/2023 to 27/09/23:

Attached separately