



## **Environmental Report March 2024**

### **Glashaboy Flood Relief Scheme**

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## Introduction

The following is the clients Ecological Clerk of Works (ECoW) 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 work areas for March 2024 included:**

- Pat O Donnell's (POD) – Surface water chamber and associated works.
- Funeral home – RC wall construction and associated works.
- Meadowbrook – Drainage line and Pump Station RC works.
- Hazelwood Rd. – Drainage line works.
- Circus Field – Mason wall building and temporary stockpiling.
- Copper Valley Vue – Enabling works involving site clearance, bailey bridge installation and service diversion works.
- New line – Enabling works involving site clearance and service diversion works.

## General comments

General site conditions are mostly good with housekeeping at a satisfactory level.

The biodiversity officer for Cork city, Usna Keating visited the site on March 15<sup>th</sup>. Discussions took place regarding potential biodiversity enhancements on site during a site drive around.

King fisher monitoring commenced at the Beginning of March as per the instruction of Sam Bayley at the NPWS. No sightings were observed throughout the month of March.

Correlation testing has been ongoing in the preceding months. The site ecologist has been taking regular turbidity tests of the Glashaboy river in advance of the 2024 instream works period. The result of this testing is to be issued to the ER early in April 2024. The results are then to be reviewed by Arup.

A yellow and orange weather warning for rainfall was issued for Cork for March 12<sup>th</sup> and 13<sup>th</sup>. No flooding was reported or observed across the work sites, and the temporary sheet piles at Sallybrook were not at risk of being overtopped.



Two environmental tours took place this month (ET008 and ET009), with Sorcha Dale and Lisa Dolan in attendance. The tours remain valuable, fostering collaboration between the contractors and the client's ecologists.



Contamination at Eurofins: Excavated material was removed for temporary storage at Sallybrook. It continues to be stored here with environmental protocols in place to contain run off. Testing by Arup was carried out this month. Results expected in April with classification of waste material. Removal from site to waste facility to be actioned when results are issued.




Derogation licence - DER – OTTER – 2024 – 47 – actions have commenced on site in March in line with Ross Macklin's Glashaboy Flood Relief Scheme otter breeding and resting area activity report 2024, pgs.24-27. A licence to film and photograph wild animals was received from NPWS on 21/03/24. Holts N6C/D and N2 to be monitored with trail cameras in addition to couch C2.

**Table 1. Outstanding items by the main contractor as raised in the ECOW's February's 2024 environmental audit.**




Item No.	Issue	Main contractor's action
2.9	Erect otter signage at Funeral home for couch C2.	This was carried out in March.
2.15	Sorensen to revert with plans to deal with mulched material in northern part of the JKW at Sallybrook requires special attention as material is unsuitable for the proposed JKW burial at Circus Field.	Sorensen's site ecologist has responded with the following that the mulched timber will be maintained in a segregated area within the temporary storage.
2.31	Welfare facilities positioned in Circus field within the zone of flooding to be removed.	This was removed in March.
2.33	Housing keeping at green area near the Springmount stream along the R639, where waste materials from works are present.	This was rectified in March.
2.37	Regarding the proposal to install a temporary diversion of the Glenmore River at O Connell's transport on New Line. Sorensen to consult with Ross Macklin.	This action has not been implemented yet and is planned for a later date.
2.42	Contaminated material exposed.	This was recovered in March.
2.44	Lack of demarcation and gap in fencing at the JKW area at Sallybrook where the temporary storage area is connected to the north of the JKW zone.	This was rectified in March.
2.45	Erosion mesh to be extended at Funeral home following excavations on February 29 <sup>th</sup> and March 1 <sup>st</sup> .	This was rectified in March.
2.46	Conditions of Otter Derogation licence received from NPWS such as sound barrier to be placed prior to works occurring in proximity to N2 and N6C & D. Sign to be displayed at couch C2.	This was rectified in March. Hoarding yet to be completed at N6C&D.
2.47	Issues with silt mitigation setup concerning the use of the manifold system at drainage works in Meadowbrook housing estate. Mitigation system currently in review – Fittings 6" & 4" pumps to manifold system. Report on findings of review.	Results issued stated that fittings for the manifold system are only available for the 6-inch pumps. Therefore, pumping set up to ensure 6inch pump is available when the manifold system is in operation.
2.48	Improper washing out of concrete at funeral home. Concrete wash out to be set up.	Concrete wash out installed at Circus Field in March.
2.49	Housekeeping at Sallybrook house/industrial estate, Copper Valley Vue and along R639.	These areas were tidied in March.

No.	Date	Comment	Image	ECoW Action/ Recommendation	Sorensen's action response
3.1	1/3/2024	Bare ground next to Glenmore River from enabling works.	 A photograph showing a riverbank with exposed bare ground and construction equipment in the background. The river is flowing, and there are some trees and a fence in the distance. A timestamp in the bottom left corner reads 'ARUP RE 01 March 2024 14:43'.	Cover ground to prevent surface run off.	Exposed area received coir mesh a few days later. No heavy rain occurred within this time.
3.2	1/3/2024	Concrete wash out installed at Circus field.	 A photograph of a concrete washout area. In the foreground, there is a pile of gravel covered with a white geotextile. Behind it is a green fence with a yellow stripe and the word 'SORENSEN' on it. There are also some signs and a blue sky in the background.	Requested procedure.	Site ecologist responded with the following: Plant and equipment requiring washing is brought to the concrete wash. It is power washed until clean, ensuring all wash water is caught in the basin. Wash water is allowed to percolate through the geotextile and gravel layers. Photos to follow.




No.	Date	Comment	Image	ECoW Action/ Recommendation	Sorensen's action response
3.3	4/3/2024	Trees felled at Main Compound surveyed for nested birds.		Recorded.	Good practice as bird season is currently active. These trees were part of the originally site clearance designs but were overlooked during the clearance phase.
3.4	4/3/2024	Additional coir mesh added at Bleach hill as part of measures to manage surface runoff.		Documented.	Grass seeding is yet to be carried out.




No.	Date	Comment	Image	ECoW Action/ Recommendation	Sorensen's action response
3.5	4/3/2024	Contaminated material exposed following strongwinds.		Recover material with plastic sheeting.	Material was recovered the following day.
3.6	4/3/2024	The JKW exclusion area adjacent to the stockpiling at Sallybrook Compound requires maintenance and/or improvement to prevent encroachment by plant, personnel, and stockpile materials.		Address fencing issues at northern end of JKW exclusion zone.	Fencing was reestablished and received additional JKW signage.
3.7	4/3/2024	Signage installed in proximity to Holt N2.		Documented.	Good practice following recommendations by the otter specialist.






No.	Date	Comment	Image	ECOW Action/ Recommendation	Sorensen's action response
3.8	4/3/2024	Housekeeping at Sallybrook industrial estate.		Tidy up area and dispose of material accordingly.	This was rectified this month.
3.9	4/3/2024	Water from the attenuation channel discoloured today. However, the water in the main channel was rich brown in colour from the day's heavy rain.		Continue to monitor and test accordingly.	Attenuation area discharge point was monitored by the site ecologist for turbidity.
3.10	4/3/2024	Pump being refueled within proximity to open surface drain in Area 1 in association with works at POD.		Discussed with site ecologist.	Refueled with hose from mobile tanker in addition to using spill tray and absorbent matting in case of a spill. Regularly inspected by personnel when refueling and the site ecologist.









No.	Date	Comment	Image	ECOW Action/ Recommendation	Sorensen's action response
3.11	4/3/2024	Additional clearance at New Line as part of enabling works. This was granted approval by the EMG and will receive compensatory planting following completion of works.		Ensure replacement planting is carried out upon completion of works.	No further action required at this time.
3.12	4/3/2024	Silt fencing positively installed in associated with CopperValley Vue enabling works.		Maintain silt fencing for the duration of works in this area.	Fencing maintained throughout March.
3.13	4/3/2024	Monitoring for kingfisher ongoing throughout March by site ecologist.		Report any sightings of king fisher to ER.	Weekly reports submitted detailing daily morning time monitoring.




No.	Date	Comment	Image	ECOW Action/ Recommendation	Sorensen's action response
3.14	4/3/2024	Pumping from the funeral home works area into Glashaboy occurred without the silt bag attached, contrary to the Method Statement. However, it was observed that the water was clean.		Discussed with site ecologist.	Silt bag was fixed to the end of the hose the next day as the works site was closed due to a funeral. Water was pumped out overnight however discharge was clean as no excavations were carry out during this timeframe.
3.15	4/3/2024	Silt fencing is place along funeral home maintained throughout March as a precautionary measure.		Good practice of erosion control.	Erosion mesh in place throughout March.
3.16	5/3/2024	An inspection by the ECOW was conducted at the Meadowbrook bank along the Glashaboy river to assess the potential kingfisher burrow for signs of nesting. No positive indicators of nesting were confirmed during the inspection.		Continue to monitor for king fisher as agreed with NPWS.	Monitoring forkingfisher conducted by the site ecologist throughout March and reported weekly.

No.	Date	Comment	Image	ECow Action/ Recommendation	Sorensen's action response
3.17	5/3/2024	Pumping of water from works area at funeral home into main channel using a large silt bag.		Good practice. Continue to maintain silt bag to ensure optimal efficiency.	Silt bags regularly inspected and emptied as needed.
3.18	5/3/2024	Works along Hazelwood road carried out successfully without harm to trees adjacent to works.		Documented.	No further action required.
3.19	6/3/2024	Over pumping continues from the works area at the funeral home. Good use of sumps and silt bags.		Good practice.	Maintained silt control standards throughout the month of March.








No.	Date	Comment	Image	ECoW Action/ Recommendation	Sorensen's action response
3.20	7/3/2024	A surface gully located on Hazelwood Rd, in front of cafe Bean & Leaf, which connects to the nearby Glashaboy river, received sediment-laden water from the works area earlier in the week during heavy rainfall.		Create a protocol to safeguard gullies against potential surface water runoff originating from the works prior to commencing works.	Procedure to be developed and deployed as needed.
3.21	7/3/2024	Otter holts N6 C/D located opposite Meadowbrook estate have been provided with signage as recommended in Ross Macklin's latest report. Additionally, the area is scheduled to receive hoarding, as also per the recommendations. See Item 3.25.		Implemented best practices as advised by the otter specialist.	Signs were maintained throughout the month of March.
3.22	7/3/2024	The manifold system in operation at the pump station works area in Meadowbrook estate was observed to be discharging clean water into the nearby surface gully.		Positive condition at the time of inspection	Continued to monitor pumping throughout March.




No.	Date	Comment	Image	ECow Action/ Recommendation	Sorensen's action response
3.23	7/3/2024	A generator in operation on New Line has been positioned on absorbent matting as a precautionary measure in case of any leaks.		This is good practice as there are surface drains nearby.	No action required.
3.24	7/3/2024	Excavations on New Line Rd. are being pumped out, with the water heavily silted and directed into the foul system. A silt sock has been installed at the outlet of the hoses. Inquiries were made regarding alternative options explored, the duration of pumping works, the long-term plan for pumping and the current effectiveness of silt control measures.		Discussed with site ecologist.	Pumping was halted by the end of the day. Subsequent works in the area did not necessitate pumping, as there was no further groundwater ingress into the excavation works for the remainder of the month.
3.25	8/3/2024	Works commence on the installation of hoarding in proximity to other hols N6 C/D.		Complete hoarding works prior to permanent works in the area.	Hoarding was not completed before the end of March. However, no works were carried out in the area. Hoarding to be completed next month.

No.	Date	Comment	Image	ECow Action/ Recommendation	Sorensen's action response
3.26	11/3/2024	Silt fencing installed at Copper Valley Vue enabling works.		Good silt control measures.	Fencing was maintained throughout the month.
3.27	13/3/2024	Works along New Line were carried out without the need for additional pumping of ground water.		No action required.	Excavations were monitored daily for signs of ground water ingress for the duration of March.
3.28	13/3/2024	Erosion mesh was installed on exposed ground at Copper Valley Vue however the entire area exposed was not entirely covered with the mesh.		Extend mesh accordingly.	Mesh yet to be extended.







No.	Date	Comment	Image	ECoW Action/ Recommendation	Sorensen's action response
3.29	13/3/2024	Trees pruned at Copper Valley Vue as part of enabling works. Trees were surveyed for nesting birds by the site ecologist prior to pruning.		Good practice followed.	No further action required.
3.30	13/3/2024	Overpumping at Meadowbrook pump station is observed to be clean upon time of inspection.		Continue to monitor pumping to ensure clean water enters the surface gullies.	Checks carried out throughout the month of March.




No.	Date	Comment	Image	ECow Action/ Recommendation	Sorensen's action response
3.31	14/3/2024	Monitoring for Kingfisher continued throughout March.	 14/03/2024 14:04	Report any sightings of kingfisher.	Monitoring for KF carried out throughout the month and reported weekly.
3.32	14/3/2024	The green area adjacent to the Springmount stream along the R639, which held value for pollinators, was covered with materials utilised by the masons for constructing the wall along the R639.	 14/03/2024 14:15	Discussed with site ecologist.	Greenspace to be reinstated following the completion of works in the area.
3.33	20/3/2024	Hoarding works at Meadowbrook halted for the remainder of the month.	 20/03/2024 11:21	Complete hoarding works prior to permanent works in the area.	Hoarding was not completed before the end of March. However, no works were carried out in the area either. Hoarding to be completed next month.

No.	Date	Comment	Image	ECoW Action/ Recommendation	Sorensen's action response
3.34	20/3/2024	A drainage system was installed within the funeral home works area to manage groundwater ingress. Water was directed via a drain and then channeled into the graveled sump area before being pumped out through silt bags into the main channel.		Documented.	Silt control measures successfully maintained throughout the month of March.
3.35	21/3/2024	There was a minor housekeeping issue observed at Copper Valley Vue where wire fencing and wooden posts were not properly removed.		Raised to site ecologist in Environmental Tour 009.	Issue has yet to be addressed.
3.36	21/3/2024	There was a minor housekeeping issue observed at Copper Valley Vue with steel mesh currently stored on the silt fencing, which could potentially interfere with its effectiveness.		Raised to site ecologist in Environmental Tour 009.	Issue has yet to be addressed.



No.	Date	Comment	Image	ECoW Action/ Recommendation	Sorensen's action response
3.37	21/3/2024	Good storage of deleterious materials in proximity to Glenmore watercourse.		Positive observation documented.	No action required.
3.38	21/3/2024	Commencing on March 15th, water from the drainage works at Copper Valley Vue was pumped into the foul line. Plans are underway to develop contingency measures for implementing an alternative solution once the water from the works area becomes less turbid.		Discussed with site ecologist in Environmental Tour 009.	Pumping changed to nearby vegetated area on 27 <sup>th</sup> of March.

No.	Date	Comment	Image	ECow Action/ Recommendation	Sorensen's action response
3.39	26/3/2024	Meadowbrook pump station and adjacent manhole works area show signs of sediment having been pumped for the works area.		Discussed with site ecologist who was aware of the incident.	The pumping associated with the event was brief in duration. An extra silt sock was installed before the pumping resumed which was satisfactory. On March 28th, an alternative pumping system was implemented, utilising a manhole located within the westernmost eye of the John O' Callaghan Bridge. This pumping was being monitored by the Site Ecologist.
3.40	26/3/2024	New season growth of JKW observed growing in the temporary cell at Sallybrook.		Documented.	Biosecurity measures in place at Sallybrook to contain and accidental spreading of JKW. The proposal for the permanent cell at Circus field is ongoing.

No.	Date	Comment	Image	ECOW Action/ Recommendation	Sorensen's action response
3.41	26/3/2024	Works continue along Hazelwood Road whilst avoiding harm to adjacent trees byroadside.		Documented.	Works regularly inspected by site ecologist.
3.42	26/3/2024	King fisher monitoring continued through March 2024, mainly by the site ecologist, and supplemented by the ECOW.		Details of monitoring was recorded.	Monitoring for KF carried out throughout March and reported weekly.
3.43	26/3/2024	A section of barriers at the Sallybrook JKW exclusion zone, that controls access into a stone covered storage area, was down upon inspection. No personnel were observed using the area at the time.		Discussed with site ecologist.	Fencing was reestablished the following day. Fencing safeguards are intentionally light as access is required frequently.



No.	Date	Comment	Image	ECow Action/ Recommendation	Sorensen's action response
3.44	27/3/2024	Pumping into the foul line at Copper Valley Vue has ceased. The pump discharge point has been relocated to a vegetated area adjacent to the river.		Discussed with site ecologist.	Monitoring of the discharge ongoing to ensure discharge is clean.

**Table 2. Outstanding items from March 2024 to be addressed by Sorensen.**

Item No.	Issue	Action to be carried out
3.2	Concrete washout at Circus field.	Photos of procedure to be provided.
3.4	Grass seeding at Bleach hill.	Grass seeding to be carried out.
3.20	A gully adjoining a works site on Hazelwood Road received sedimented runoff originating from the works following a heavy downpour.	Develop a protocol to safeguard gullies against potential sedimented surface water runoff originating from the works during rainfall.
3.25	Hoarding to be completed at Meadowbrook.	Complete hoarding.
3.28	Extend erosion matting at Copper Valley Vue.	Extend erosion mesh.
3.33	Hoarding works not completed before the end of March.	Hoarding works to be completed prior to Sheet piling works commencing along this section of Meadowbrook estate.
3.35	Housing keeping at Copper Valley Vue.	Removed and dispose of materials.
3.36	Steel mesh on silt fencing at Copper Valley Vue.	Removed steel mesh.
2.37	Regarding an Item from February's audit, the proposal to install temporary diversions on the Glenmore River occurring from bridge and culvert works at New Line and Copper Valley Vue, Sorensen to consult Ross Macklin regarding otter passage.	Consult with otter specialist.

**Appendix A.** Sorensen's Environmental Audit 04/03/24 To 27/03/24:

Attached separately.

Sorensen's environmental audit underwent a review by the ECOW. It was determined to be satisfactory and reflective of environmental activities throughout March 2024.