Environmental Report March 2025

Glashaboy Flood Relief Scheme

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Date of issue: 04/2025
Document code: FFEC-GFRS-2025-003

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 2025 included:

- Area 1 – Pump Station at Sallybrook precast tank installed, sheet piles removed, and excavations backfilled.
- R639 –Ducting. Road works. Kerbing. Footpaths.
- Hazelwood overflow culvert downstream side – cofferdam installed, excavations, foundations and blinding added, rebar fixing for RC wall.
- Copper Valley Vue (CVV) – Ground works, bailey bridge removal.
- New Line – RC wall works continued upstream and downstream of structure.
- Reinstatement works in Areas 1, 2 and 3.

Table 1. Outstanding items to be addressed by Sorensen Civil Engineers (SCE)

Item No.	Issue	Action
7.48	Contaminated boulders temporarily stored at Sallybrook to undergo treatment with Bioversal HC.	**March 2025 Update:** No change this month. The reuse of boulders on site has yet to be decided.

General comments

March experienced notably dry weather conditions, which proved highly favourable for construction activities. The dry spell significantly reduced environmental risks and complications, particularly with regard to surface water management, dewatering of excavations, road resurfacing, and concrete pouring. Overall, the weather during March was highly amenable to progressing works on the flood relief scheme efficiently.

Environmental Tours No. 025 and No. 026 were conducted on 11/03/2025 and 27/03/2025, respectively, as joint inspections between the Employer's Clerk of Works (ECOW) and Sorensen's Site Ecologist. These tours form part of an ongoing collaborative arrangement designed to foster open communication, cooperation, and a positive working relationship between the Employer's representative (ER) team and the main contractor, Sorensen Civil Engineering (SCE).

Contamination at Sallybrook

Hydrocarbon contamination was encountered within a swale, also referred to Sallybrook stream, located near Sallybrook House, where a filter drain was being installed. The hydrocarbon material located within the swale is preexisting within the sediment layers within the swale, only becoming mobilised after excavation works within the swale commenced. The exact nature and origins of the hydrocarbon material will require further testing and investigation to determine its exact properties and origins.

However, when encountered immediate mitigation measures were implemented by the ground personnel and the site ecologist. The outflow of the swale where it connects to the Glashaboy river was bunded, and a bung was fixed to prevent further discharge. Oil booms and absorbent pads were deployed to contain and absorb the pollutant around the outfall. Bioversel HC was applied to the source and to the outfall. The Resident Engineer informed the downstream water treatment plant as a precautionary measure. The contaminated area received continued treatment and was subject to regular monitoring by the site ecologist and the environmental team throughout the month. Bioversal HC was regularly applied throughout the remainder of the month at key locations, including the pollution source, the outfall, and along the main channel where hydrocarbon residues had accumulated among the rock armour. The contractor responded effectively and promptly to the incident. At the beginning of the following month, the affected material is scheduled to undergo testing by Arup, with a subsequent review of the design based on the test results. Contamination measures will continue.

Otters at Meadowbrook

Sheet piling works at Meadowbrook Estate were carried out under an NPWS issued derogation, following an otter survey that confirmed the presence of nearby holts. To assess their activity and potential breeding status, camera monitoring was undertaken. SCE implemented several mitigation measures, including the installation of a sound barrier, clear ecological signage, and the use of a soft-start procedure for piling to minimise disturbance to otters.

Kingfisher at Meadowbrook

No additional mitigation measures were required for kingfisher in relation to the sheet piling works at Meadowbrook. In consultation with NPWS, a precautionary deadline of March 15th was agreed for completing works to avoid potential disturbance during the kingfisher breeding season. However, all sheet piling works were completed by the agreed date without further need to survey or mitigate for possible breeding kingfisher in the immediate area.

Pumping Activities – March 2025

During the month, three major locations operated under the Permit to Pump system. The following is a summary of the works undertaken and associated environmental considerations:

1. Sallybrook Pump Station

Pumping was required at Sallybrook pump station to manage groundwater ingress into excavations. The discharge was directed into a nearby stream/drain adjacent to the Sallybrook site. Prior to works commencing, this watercourse was surveyed and assessed as having no potential fisheries value, with limited hydrological connectivity to the main channel.

The operation was managed effectively by the site ecologist and the environmental team throughout the month. Daily visual inspections and NTU readings were conducted and shared with the Environmental Clerk of Works (ECoW) via a WhatsApp group.

Unfortunately, an incident occurred during the backfilling phase when the sheet piles for the temporary cofferdam were being removed. The pump remained active, resulting in sediment-laden water being discharged into the attenuation drainage system, which became overwhelmed. As a consequence, heavily silted water entered the main channel. An Environmental Incident Report will be issued by SCE.

2. New Line

At the New Line site, dewatering was required for the construction of reinforced concrete (RC) walls upstream of the new structure. The contractor deployed a multi-stage silt filtration system that included:

- A siltation tank for initial settlement
- A manifold system feeding into multiple filtration bags
- Discharge onto adjacent terraced ground, well above the nearby watercourse

The system was supported by a vacuum tanker, which periodically emptied the siltation tank. Accumulated silt was also manually removed from the tank base as needed. Towards the end of the month, the discharge location was relocated to a nearby wooded area, resulting in a small amount of water pooling in an adjoining agricultural field. The landowner was notified and granted permission for this arrangement. Despite occasional high groundwater flows into the excavations, the setup was managed professionally, and no siltation events into the New Line River occurred throughout the month.

3. Hazelwood Overflow Culvert

Due to the site's proximity to the river, dewatering was necessary to manage river water ingress into the excavation zone. The main contractor initially discharged water into a nearby amenity grassland area, employing silt screens and gravel to enhance attenuation. However, due to pooling on a public walkway within the grassland, a secondary discharge point was established. This also used silt screens to ensure effective filtration. While effective, this discharge point was uphill from the excavation, placing additional demand on the pump. As a contingency, a stormwater drain located downstream at the local funeral home was utilised. Though it lacked attenuation, it was used only during non-intrusive periods, when no excavation, sheet piling, or ground disturbance was occurring which ensured clean water at discharge. This location was also periodically monitored. The system remained well-managed, and no incidents were recorded or reported during the month.

Table 2. Main table of the months ecological and environmental related activities

Item number	Date	Comment	Image	ECoW Action/Recommendation	Sorensens's Action response
3.1	01/03/2025	Environmental Incident at New line on March 1st- To facilitate tie-in of RC wall with bridge, boulder material was added to margins of Glanmore river channel at New Line.		Issue Environmental Incident report (EIR).	An Environmental Incident Report was issued by SCE. The report was subsequently reviewed and returned to SCE for additional commentary.

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3.2	5/3/2025	The dewatering activities at the Sallybrook Pump Station were inspected and found to be adequate. Silt mitigation measures in place included a silt sock, gravel check dam, and multiple silt screens.		Throughout the pumping operations at this location, ongoing communication was maintained with the site ecologist.	Daily inspections were carried out, and NTU readings were recorded and provided to the Environmental Clerk of Works (ECoW). Adjustments were made as necessary, and overall, the situation was managed effectively—aside from an unfortunate incident that occurred on the final day of pumping at this location.

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3.3	5/3/2025	A hydraulic hose burst on the 'Rubber Duck' at Sallybrook.		Follow emergency plan. Use spill kits. Treat with Bioversal HC.	Spill kit and Bioversal HC deployed by SCE's Environmental Unit promptly and effectively.
3.4	5/3/2025	Additional works were carried out to block the entrance of the pipework at Newline. The entrance had previously been exposed due to natural erosion from the Newline River. These pipes pose a threat to fish if left exposed as they are not open non the other side.		Discussed with site ecologist and inspected works.	The pipes were sufficiently blocked off and will undergo periodic inspections until they are removed later in the year during the instream works season commencing in July.

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3.5	5/3/2025	In line with conditions of the otter derogation license issued by the NPWS, a sound barrier was installed at Meadowbrook. Additional cameras were installed at the two potential holts for ongoing monitoring while works continue at this location.		Reviewed derogation licenses and discussed implementation details with site ecologist.	All mitigation measures were strictly adhered to. An additional potential holt was identified by the site ecologist, who informed the NPWS. As a result, an addendum was added to the licence.
3.6	10/3/2025	NewLine: Settlement Tank overflowing this morning.		The water currently appears to be clean; however, it is advisable to route it through the existing filtration system as a precautionary measure, in the event of any fluctuations in sediment levels.	An additional hose and filtration bag were promptly installed as a precautionary measure, despite the water quality appearing to be relatively clear at the time.

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3.7	11/03/2025	Clearance works commenced today on the grounds of the Credit Union to facilitate the construction of the downstream section of the Hazelwood Overflow Culvert. During the process, three trees outside the original design were considered for removal to accommodate temporary works. In particular, a birch tree located in close proximity to the excavation area is at risk, as root damage may be unavoidable due to its proximity to the works.	 	Every effort should be made to retain the trees in question. If retention is not possible, clear justification must be provided, along with proposed compensatory planting options.	To minimise potential damage to the birch tree, immediate efforts were made by switching from the digging bucket to the grading bucket to reduce root disturbance while clearing surface vegetation and excavating around the tree. A birch tree, following checks for possible bird nesting by the site ecologist, was subsequently removed due to unavoidable root damage. This was carried out in consultation with the landowner, the Credit Union, who raised no objection to its

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					removal. A compensatory tree will be replanted at the same location upon completion of the works.
3.8	11/03/2025	The Credit Union grounds contain pre-existing Japanese Knotweed (JKW).		Implement biosecurity actions as appropriate.	During a pre-clearance survey, the site ecologist identified at least two visible JKW canes, which were subsequently marked out and communicated to the ground crew. Excavation in the affected areas will be carried out under planned supervision to ensure proper handling and mitigation.

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3.9	11/03/2025	The planned removal of ground vegetation at the Credit Union site along the riverbank will take place during the bird nesting season and should therefore be pre-surveyed before clearance begins. It was discussed that this section be cleared gradually, at a rate of c. 0.5m at a time, under the supervision of the site ecologist. This approach is necessary as the habitat is suitable for nesting mallards, which are ground-nesting birds and may not be easily identified using standard vantage point survey methods.		Riverside vegetation should be cleared under supervision as a precaution.	Vegetation clearance was carried out under the supervision of the site ecologist. The removal was conducted gradually, as previously agreed. No signs or indications of nesting birds were observed during the clearance process.

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3.10	11/03/2025	The removal of vegetation along the riverbank at the Credit Union grounds was discussed regarding erosion controls that will likely be required to prevent surface runoff and erosion, particularly in the event of heavy rain and rising river levels during rainfall events.		Implement erosion controls measures as appropriate.	Once the vegetation was removed, appropriate erosion control measures were implemented, primarily utilising coir mesh to prevent run off of newly exposed bare ground.
3.11	11/03/2025	Dewatering plans were discussed for the groundwater expected to be encountered during excavations for the downstream section of the Hazelwood Overflow Culvert. It was proposed that the area behind the basketball courts be used as an attenuation area, maximising the available ground and combining various methods to slow surface water flow.		Revert with finalised dewatering plans.	An updated Method Statement of Works was issued and subsequently reviewed by the Ecologist. The statement includes clear diagrams and addresses ecological considerations, including environmental mitigations required.

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3.12	11/03/2025	New Line: Inspection of dewatering from the excavations was observed to be clean and clear. Change to pumping arrangement at New Line occurred later in the month. Throughout the month daily NTU reading were undertaken and reported to the ECoW.	 	Continue to monitor pumping and provide NTU readings.	The dewatering set up was regularly monitored and tested for NTU. The entire month the pumping at this location was carried out professionally and to a high standard.

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3.13	11/03/2025	The settlement tank currently in use at New Line has accumulated a certain amount of silt over the past few weeks since pumping began at this location. This accumulated silt is now acting as a source of silt for the pumped water, even though the water itself appears clean. The current tanking out of water is not effectively removing the silt build up.		Remove silt build up within the settlement tank to improve overall functioning of silt control system.	The site ecologist reported that suction was employed to remove the built-up silt, thereby improving the dewatering system.

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3.14	11/03/2025	At New line, several existing trees were found to have earth material placed too closely around the base of their trunks. This condition can negatively impact tree health.		Discussed the issue with the site ecologist and requested that the deposited material be drawn back from the base of the affected tree trunks.	Trees have yet to have material removed by end of the month.

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3.15	11/03/2025	Gravels added to the Sallybrook drain/stream was discussed and if they will be removed once pumping is completed as they may present capacity issues if left in place.		Revert with final plans for gravels.	It was agreed that gravel could be left in place as no capacity issues where present.
3.16	12/3/2025	Coir mesh was added to exposed ground at Meadowbrook estate where weather monitoring station will be installed.		Good preventive measure to mitigate against potential erosion and run off in a high flow event.	No further action required.

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3.17	12/3/2025	Release of silty water from the Sallybrook drain. This was being used for attenuation during pump station works.		Issue an environmental incident report.	EIR to be issued by SCE.
3.18		As part of temporary works Coir Mesh was placed on the banks of the Glashaboy River at the location of the oversized culvert at Hazelwood. The ground and the coir mesh are 'uneven' as SCE tried to keep as much vegetation as possible.		Inspected coir mesh.	This measure is part of temporary works and will be modified later when sheet pile wall works commence at this location.
3.19		Masonry material was accidentally added to	No image available.	Although this is a minor	EIR to be issued by SCE.

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		Glashaboy during works on the hazelwood bridge. The adjoining wall partially collapsed, and a small amount of rock material fell into the river.		occurrence with no perceived environmental damage having occurred an Environmental incident report should be issued.	

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3.20	20/3/2025	Works were carried out to connect the newly constructed drainage line at Pat O'Donnell, which had been designed to intercept the majority of flow from the Sallybrook drain and redirect it through the updated network. On the morning of the operation, a phased testing procedure was undertaken, involving the controlled release of potable water into the stormwater system. This was completed in advance of the planned diversion of the Sallybrook Stream, as a precautionary measures as contaminated water was an issue at this location previously. SCE's Environmental Unit remained on standby throughout the testing However, following two flushes of the system, no		Diversion and reconnected took place following discussion between the ECoW and site ecologist.	The operation was carried out in a highly professional and well-organised manner, particularly given the potential risk of contamination.

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		visual signs of hydrocarbons were observed. As no contamination was identified, the Sallybrook Stream was successfully diverted into the new storm line. Monitoring of the stream was carried out during and after the diversion for the unlikely presence of protected species, including European eel and lamprey. A single trout was observed and successfully relocated during the operation.			

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3.21	21/3/2025	Hydraulic hose burst at CCV. SCE Environmental Unit have put hydrocarbon control measures in place		Good response to incident.	The incident was promptly addressed through the deployment of absorbent pads and socks, which were available on hand. The affected area was subsequently treated with Bioversal HC to mitigate any potential environmental impact. Incidents of this nature are not uncommon on construction sites and cannot be entirely avoided. However, best practice involves maintaining spill kits within machinery and at each active work area to ensure a rapid response. In this case, such measures were in place and effectively implemented, resulting in a swift and controlled resolution.

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3.22	22/3/2025	An additional three temporary sheet piles were required at New Line to facilitate the connection of the reinforced concrete wall under construction to the new bridge structure. These piles were installed through the existing sandbags already in place at this location. No additional in-stream area was impacted as a result of this operation.	 	This operation was discussed and planned in advance with ecological input from both the Resident Engineer's ecologist and the contractor's ecologist.	The operation was carried out professionally.

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3.23	25/3/2025	The pumped water was directed to two separate locations with the attenuation field at the basketball court. One location, equipped with silt curtains and gravels, backed up due to heavy rains and total ground saturation, which obstructed an amenity walking route into the local woodland. As a result, the second location was used, which included silt screens and a heavily vegetated bank to control sediment levels before the water entered the Glashboy..		This planned pumping was discussed and planned in advance with ecological input from both the Resident Engineer's ecologist and the contractor's ecologist.	The pumping at this location was carried out professionally throughout the month with no incidents of siltation.

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3.24	27/3/2025	Hydrocarbon contamination was encountered during works at Sallybrook Stream. A swift and effective response was implemented to prevent pollution from entering the main channel, initially by bunding the outlet when contamination was first observed, followed by the installation of a bung at the outfall. Additional containment measures were promptly enacted, including the application of Bioversal at both the source and the outlet where contamination was detected in the main channel. Booms and absorbent pads were deployed around the outfall to further mitigate the spread of contamination.		A strong and proactive initial response was taken to contain the contamination. Ongoing monitoring and treatment should continue to ensure the protection of the Glashaboy River. Issue permit to pump when finalised.	SCE continued implementing mitigation measures throughout the remainder of the month and into the following one. These measures included the deployment and replenishment of absorbent pads and booms in the main channel around the outlet, as well as the repeated applications of Bioversal HC at outlet, on rock armour and in main channel.

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		The final design for the works in this area is currently under review by the ER. The permit to pump that was originally envisaged here will require updating to address the unforeseen contamination once the design is confirmed and pumping requirements are established.			
3.25	27/3/2025	The discharge of silty water from the settlement tank at New Line is being effectively managed. The attenuation area is functioning well.		Ongoing monitoring should continue of dewatering operations at New Line with adjustments implemented as the dynamic situation develops.	Newline pumping continued to be monitored throughout the month being adjusted as necessary.

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3.26	27/3/2025	Housekeeping: Approximately four sandbags were observed in the main channel.		Remove sandbag waste from river when safe to do so.	Sandbags to be removed.
3.27	27/3/2025	A birch tree was removed at the Credit Union grounds. Although the tree lay outside the original design boundary, it was ultimately required to be removed to facilitate essential temporary works associated with the construction of the overflow culvert. Despite efforts to retain the tree, removal was necessary. The landowner provided consent for its removal, and compensatory planting will be undertaken.		Provide details on tree removal and compensatory planting.	The tree was checked for bird nesting by the site ecologist prior to its removal. SCE to install compensatory tree when works are complete in this area.

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3.28	27/3/2025	During a site inspection at Hazelwood, concrete pouring was taking place, with fresh concrete deposited near a storm drain. This presents a risk to the main channel in the event of rainfall (conditions were dry at the time), as the runoff could potentially carry cementitious material into the drainage system and compromise the Glashaboy water quality.		Ensure storm drains are protected proactively, and concrete is manged	Concrete was promptly removed when observation was made. This was a small amount of concrete waste however more efforts will be made to control construe waste during pours. Protecting storm drains proactively taking on board.
3.29	27/3/2025	An area at Springmonut used for masonry waste was discussed.		Plans for the reinstatement was discussed included soil type, reseeded and ivy on adjacent trees.	This area to be reinstated next month.

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3.30	27/3/2025	Plans to install drainage in the garden of Springmount house will require consideration for invasive plant species.		Ensure biosecurity measures are implemented when ground works commence at this location.	The area was subject to an invasive species survey, which confirmed the presence of Spanish bluebell (*Hyacinthoides hispanica*), a First Schedule invasive species. Appropriate control measures will be implemented when drainage works commence, in line with invasive species management protocols.