Environmental Report September 2025

Glashaboy Flood Relief Scheme

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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).

Environmental Aspects – September 2025 included:

Area 1 – (Flood embankments, JKW storage)

- Ongoing storage of JKW and other invasive plant material in the Sallybrook Temporary Holding Cell.
- Flood Embankment – JKW spraying.

Area 2 – Hazelwood (Bridge Construction Works, Flood Defences Walls)

- Dewatering of excavations requires silt management.
- In-stream works at this location require ongoing monitoring and management of water quality.
- Riverbank clearance and excavations require:
    - Silt run-off management, biosecurity measures.

Area 2 – Cois na Gleann

- Vegetation clearance – Bat roost potential.
- Riverbed widening and bank grading -silt management.

Area 3 – New Line & Brooklodge (Rock armour installation and step pool construction)

- Works require supervision, monitoring, and management to control water quality and minimise impacts to the aquatic environment.
- Silt control measures during both over pumping and digging within the riverbed.
- Tree removal – requires checks for possible bat roosts.

Area 4 – Ongoing Works (Flood Defence Walls, Pump Station, Roads & Footpaths)

- Prevalent ecological concern: widespread Japanese Knotweed.
- Extensive excavation works require supervision and management to ensure containment and correct handling of invasive plant material if encountered.
- Pumping activities required periodic inspection
- Stone masonry works may require mitigation when working above water.
- Vegetation clearance requires checks for bat roost potential.

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

Item number		Comment	Image	ECoW Action/Recommendation	Sorensens's Action response
9.1	01/09/2025	Over pumping of the Glenmore River is currently in place to facilitate works upstream of Brooklodge Culvert, including the installation of wing walls, rock armour, and step pools. Fish and debris netting has been installed above the pump to prevent the entrainment of fishery species. Regular maintenance of the fish guards will be required throughout the month to ensure the continued effectiveness of the netting.		Periodic checks were carried out throughout the month to ensure that the fish guards remained fully effective.	The fish guards were maintained to good extent throughout the month while over pumping was in operation.
9.2	01/09/2025	Sheet piling continued at Sallybrook. Biosecurity measures in place as Japanese knotweed was in the area.		Supervised and inspected area to ensure biosecurity measures were adhered too.	The sheet piling works were carried out in line with all biosecurity measures. No additional material was added to the holding cell associated with these works.

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9.3	01/09/2025	Machine tracking instream at Hazelwood Shopping Centre Bridge to complete rock armouring along western flood defence wall.		Monitoring of water monitor's parameters to ensure controls were having an effect.	The majority of the rock armour works were completed under semi-dry conditions by establishing a shallow bund between the excavation area and the main river flow. This approach significantly reduced siltation and proved more effective than initially anticipated.
9.4	02/09/2025	Small track machine tracking instream just downstream of John O Callaghan bridge, to complete erosion matting on lefthand bank downstream of bridge. The main concern here is the visible presence Japanese knotweed.	 	Surveyed area prior to works to establish up to date ground conditions and evaluate biosecurity measures required. Monitored progression of works and reviewed biosecurity measures implemented.	Biosecurity measures were successfully implemented for these works. Silt curtains lined with Terram were installed to capture any fragments of Japanese Knotweed that might enter the waterway during excavation. A boot-wash station was also provided. All works were supervised and directed by the site ecologist accordingly. All contaminated material was left in place and was added to the 2025 spraying

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					programme as per the Biosecurity Plan and Work Requirements.
9.5	03/09/2025	Glenmore overpumping: A lay-flat hose burst and discharged water into the dry works area and into the secondary pump located in a sump, in operation to pump out ground water. The dry works area contained lean-mix concrete. This incident caused a temporary spike in pH alkalinity that narrowly exceeded the threshold. However, the exceedance was short in duration. Given the heavy rainfall earlier in the day, additional natural dilution occurred, which further reduced any potential impact.		Inspected the location after the incident occurred. Spoke with grounds crew and head foreman regarding the incident.	The affected hose section was promptly replaced, with additional clamps installed to secure it. Going forward, maintenance checks of hoses will be conducted alongside routine inspections of the fish guards to prevent recurrence.

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9.6	03/09/2025	The discharge location of the over pumping at Glenmore river has scoured out a gravel section previously installed to improve river ecology.		Discussed situation with site ecologist who informed plans are for remedial works when pumping ceases.	Scouring occurred despite attempts to prevent this through the use of the heavy steel cage. Plans are in place to regrade the gravels at this location post pumping.
9.7	03/09/2025	Coir mesh was originally to be installed here following riverbank works. Upon inspected no such action had been carried out yet.		Installed erosion protection cover.	Temporary mesh was installed temporarily as this bank is due to be regrading later in the month. No significant rain occurred during the interim period.
9.8	03/09/2025	A minor amount of gravel remains in the green area aside the basketball court. This was part for a former set up to manage silty water from excavation works at Hazelwood. There appears to be no ecological negative impact from leaving the gravel in place and appears that it contributes positively by supporting floral diversity at this location.		Recommended leaving small amount of gravel in place for biodiversity reasons.	Long term, it's not clear what plans are for this area, if any, in the meantime the marginal amount of gravel has been left in place.

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9.9	04/09/2025	Sheet piles were removed from around the eastern abutment at Hazelwood. This generated silt, causing a series of turbidity spikes downstream. However, turbidity levels were not sustained and quickly returned to normal after each spike. Such highly intrusive instream works are unavoidable. While additional silt curtains might have slowed the silt release, it is very much a case of weighing trade-offs regarding the best approach, as silt generation is inevitable. Whether it is better to release the silt over a shorter or longer timeframe remains open to debate. Fisheries species have moved away from the area in response to the disturbance.	 	Monitored works and water sondes. Liaised with site ecologist and site foreman.	The works proceeded despite visual conditions appearing severe, at least from a casual observation perspective. Silt curtains were in place at several locations downstream of the works area to control suspended solids which received a control release at the end of the end. Water quality sondes were regularly monitored. Construction waste and debris contained within the sheet-piled area were removed prior to the removal of the sheet piles. The river substrate remains silted and will require heavy rainfall to flush them before conditions return to normal.

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		The water cleared itself once piling works were completed.			
9.10	05/09/2025	During works at Hazelwood Shopping Centre Bridge, a machine operating within the river to remove sheet piles encountered a deep pool in the riverbed. To stabilise its position and manoeuvre safely, the operator was required to disturb and infill the affected area using available riverbed material. This activity resulted in a temporary but significant increase in turbidity levels. However, the turbidity spike was short-lived.		Monitored sondes remotely and liaised with the site ecologist regarding the observed turbidity spikes. Recommended a temporary cessation of works to allow turbidity levels to stabilise before resuming operations.	Once elevated turbidity levels were detected, site personnel liaised with the site ecologist to assess the situation. The contractor implemented a temporary suspension of in-stream movements to allow turbidity levels to reduce.
9.11					

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9.12	08/09/2025	Works are progressing along the riverbank at the Credit Union to facilitate the installation of the new sheet pile wall design. Biosecurity protocols were implemented to prevent the spread of invasive species JKW. Vegetation clearance was undertaken as part of the works, with the relevant Permit to Clear Vegetation in place.	 	Site inspection to check mitigations are in place.	All activities were conducted under ecological supervision and were carried out to a high standard of environmental management overall.

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9.13	09/09/2025	Digging toe for rock armour at Hazelwood.		Supervised works and liaised with site ecologist and grounds crew periodically throughout the day.	Following the initial excavation, works were relocated from the river channel to a dry, flat area. This helped reduce the potential for river siltation and allowed easier containment of the excavation area using a silt curtain arrangement. River gravels excavated from the channel were inspected for the presence of fish species.
9.14	09/09/2025	Fencing at Brooklodge required maintenance when inspected.		Liaised with site ecologist who directed site personnel to carry out urgent maintenance.	Maintenance was carried out that day. Additional measures have been placed above the fish guards to address increasing leaf fall.

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9.15	09/09/2025	Sheet piling has commenced in the dry at the Credit Union. Biosecurity protocols are in place.	 	Monitor water levels and take steps to protect works area if required.	Conditions for September were very dry which really assisted works in the area and removed the need for certain mitigation measures.
9.16	10/09/2025	Hydrocarbon sheen at Hazelwood Shopping Centre Bridge was observed today above one of the silt curtains in place.		Treat with bioversal before releasing silt curtain at end of day.	Bioversal was applied to address hydrocarbon sheen at Hazelwood Shopping Centre Bridge. Plant working in the river were checked for leaks with none found.

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9.17	11/09/2025	The attenuation area at the basketball court was inspected, with the setup demonstrating success in retaining and allowing water to attenuate.		Carry out periodic checks and maintenance.	The setup proved effective in managing silt generated from excavations throughout the pumping operation.
9.18	12/09/2025	Rock armouring being installed upstream of Hazelwood Bridge on righthand bank.		Carry out works implementation all silt mitigations.	Works were carried out from the dry, which allowed the excavation area along the river margin to be isolated, creating a clearly defined, working area and clean flowing area within the river. The silt curtains were opened at the end of each day, allowing gradual dispersal of silt into the river.

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9.19	12/09/2025	Additional river gravels were placed in the step pools at New Line. These works were carried out as part of ongoing adjustments to the steps at New Line, which currently do not provide adequate fish passage during low flow levels. The addition of river gravel is intended to raise water levels and fill gaps in the steps.		Install gravels and reassess the situation if further measures are required to boost fish passage in low flows.	Works were carried out professionally with regard to the environment. Short term siltation inevitable occurred but were short in duration.
9.20	12/09/2025	The dam at Brooklodge Culvert was removed following the completion of flood defence works, which included the installation of step weirs designed to moderate flow levels over a gradient drop and provide fish passage.		Liaised with site ecologist while monitoring sondes remotely.	The works created unavoidable siltation downstream as dry work areas were rewetted. The siltation was relatively low and brief in duration, and once cleared, conditions returned to normal levels.

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			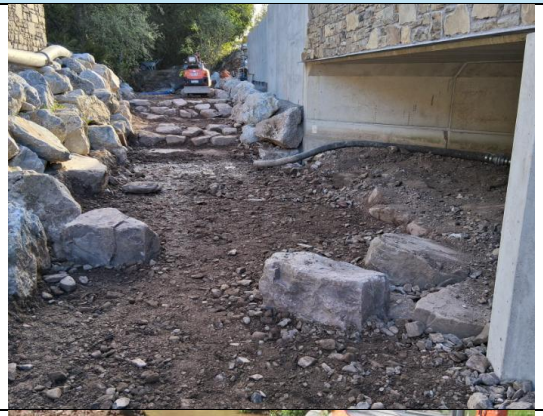		
9.21	15/09/2025	Riverbank downstream of Copper Vally Vue bridge involved bank regrading and tracking the river.		Liaised with site ecologist and conducted periodic inspections while monitoring the water sondes for NTU levels.	The works were supervised periodically by the site ecologist. Start-stop procedures and silt curtains were in place to manage silt levels. High spikes in silt were followed by periods of rest to allow conditions to stabilise.

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9.22	15/09/2025	Hazelwood: Rock armouring commenced along the Credit Union side. These works also included the levelling of ground and installation of geocell erosion matting which forms the outlet to the new overflow culvert constructed at the hazelwood road bridge.	 	Held discussions with the site ecologist regarding the planned works.	The works were carried out professionally under ecological guidance. Weather conditions were monitored on an ongoing basis, as a rise in water levels could affect the works area. Works were carried out during the dry weather window which persisted for the majority on the month.

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9.23	16/09/2025	Excavations and vegetation clearance for storm water outfall within JKW area in Area 4.		Examined area and confirmed JKW extent with site ecologist.	The operations were carried out to ensuring that works were undertaken in accordance with the Biosecurity Plan and general best environmental practice.
9.24	16/09/2025	Regrading of riverbank at Copper Vally Vue bridge and adjusting riverbed to design levels. Trees and debris fallen across the river were also removed.		Liaised with site ecologist and conducted periodic inspections while monitoring the water sondes for NTU levels.	The works were supervised periodically by a site ecologist. Start-stop procedures and silt curtains were in place to manage silt levels. High spikes in silt were followed by periods of rest to allow conditions to stabilise.
9.25	16/09/2025	Rock armour works continue at Credit Union side at Hazelwood.		Held discussions with the site ecologist regarding the planned works.	Silt management measures included carrying out works primarily from dry areas and minimising movement within the riverbed.

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9.26	16/09/2025	Additional material added to holding cell at Sallybrook, from excavations at Credit Union.		Checks were carried out to ensure that works were undertaken in accordance with the SCE Biosecurity Plan.	Implementation of Biosecurity plan.
9.27	17/09/2025	Cement pouring on deck of new bridge. All wet cement contained within the deck steelwork by shuttering.		Conducted site inspections.	Cement was applied carefully and gradually ensuring no wet cement entered the watercourse.

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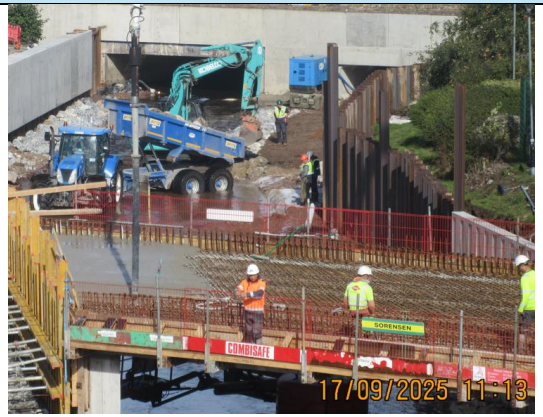
9.28	17/09/2025	Rock armour works are continuing along the Credit Union side at Hazelwood. Some unavoidable tracking occurred as the dry working area narrowed while excavations were carried out to install the permanent works. Downstream monitoring remains ongoing.		Conducted site inspections and discussions with site personnel regularly through the work operations.	NTU levels were monitored throughout the works via the downstream sondes. Siltation during this phase was minor, as excavations were carried out in semi-dry conditions. Compaction of riverbed substrate was unavoidable from successive heavy plant tracking on riverbed.
9.29	17/09/2025	Erosion control coir mesh was installed to prevent potential runoff. The area has been seeded with grass, and the coir mesh will help prevent the washout of soil material while the grass and other vegetation establish. This product can be left in place and will naturally degrade over time as it's made from natural fibres.		Advised and encouraged on the use of coir mesh in this situation especially since the grass seed is being applied late in the growing season.	The coir mesh was deployed progressively as each section of ground was installed with geogrid, stone fill and layer of topsoil and grass seed as per the design.

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9.30	17/09/2025	Knotweed recovery works at Area 4 yesterday along route of storm water outfall.	 	Discussed biosecurity measures with site ecologist during Environmental Tour.	The clearance of vegetation and earth works to construct the drainage line for the pump station was conducted in line with the biosecurity measures outlined in the Biosecurity Plan.
9.31	17/09/2025	Pumping of ground water was required for the western sheet pile wall tie in with the Hazelwood Road bridge which required a small excavation supported by temporary sheet piles to conduct form work and concrete pour for Bean and Leaf stitch. A pump was		Reviewed permit to pump and pump set up for environmental compliance.	A series of silt curtains and gravels were in position at the discharge point which added to the vegetation already present to attenuate and filter any silty water that may be present being pumped from the excavations.

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		positioned on the opposite bank on Kelly blocks with the discharge hose running through the dry Overflow culvert to the basketball court green area.			The temporary sheet pile was electro fished prior to dewatering.
9.32	17&18th 09/2025	Area 4 rock armour works required the removal of a number of mature trees.		Documented and advised trees to be retained if possible.	Unfortunately, the footprint of the rock armour works was extensive with most trees and vegetation requiring removal. One alder was retained along the riverbank.

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9.33	19/09/2025	Excavations for Area 4 pumpstation headwall: Silt curtain deployed as part of silt mitigation. Riverbed material spread on bank and checked for fish species. A single stickleback was recovered and returned to the river.		Supervised works and discussed measures to protect watercourse with site ecologist for lean mix to be used.	Works were carried out implementing mitigations to protect water quality and protect aquatic species.

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9.34	18/09/2025	Temporary sheet piles were installed around the gabion baskets downstream of the new Hazelwood Shopping Centre bridge.		Liaised with site ecologist regrading planned works and ecological mitigations to be implemented.	The area was electro fished prior to being sealed off. E-fishing was undertaken by Triturus Environmental Ltd.

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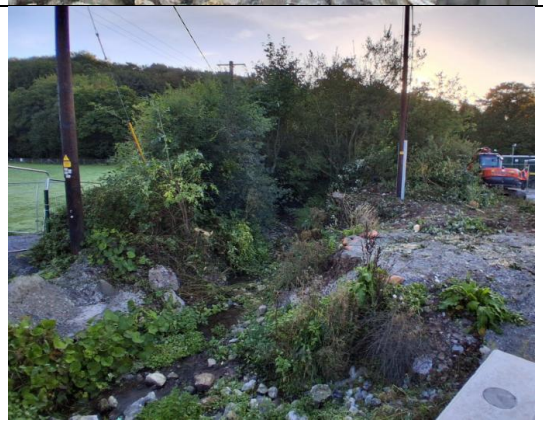
9.35	19/09/2025	Pumping out of coffer dam at Hazelwood for installation of gabion baskets conducted with silt curtains as part of silt mitigation. Cage was also used to prevent scour of riverbed. Permit to pump in place.		Continue to monitor pumping. Start / stop maybe required based on sondes NTU levels.	The pumping setup was largely effective in managing silt, although some siltation of the watercourse still occurred. NTU levels were monitored via downstream sondes, which indicated that levels remained within acceptable ranges throughout the operation.
9.36	22/09/2025	The downstream section of the Cois na Gleann stream culvert required local regrading, widening, and rock armouring, which will necessitate vegetation clearance.		Surveyed and discussed vegetation clearance with site ecologist. Efforts were made to retain trees where possible.	The works were, of course, disruptive to the natural environment, but they were essential to implement the full flood mitigation measures at this location. Trees were retained, as was in-stream aquatic vegetation, wherever possible. The Hazelwood Upstream sonde acted as the remote monitoring device for Cois na Gleann rock armouring works.

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			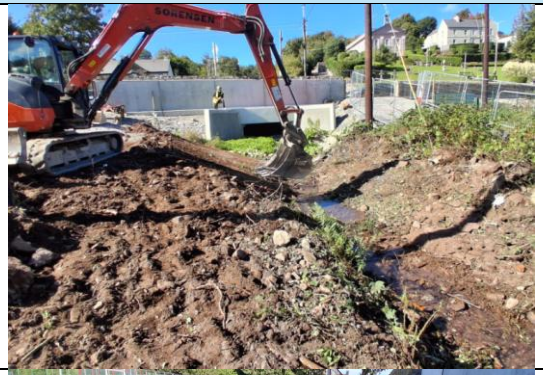		
9.37	22/09/2025	Rock armouring works were required as per the design within the channel just upstream of the Hazelwood Road Bridge. These works have potential to cause harm to fisheries species.		Such works should be supervised by an ecologist and inspected for fish species.	Excavation of riverbed material was supervised by the site ecologist who inspected all spoil for fish species. 3 no. Adult European eel were returned to channel.

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9.38	23/09/2025	Works commencing on adjustments to step pools at New Line. These were required to aid fish passage during low flow conditions. River gravel installed previously were not enough to address this issue.		Liaised with various parties to achieve compromise to provide fish passage and achieve flood relief objectives.	The steps were lowered at alternative sides. An additional step pool was also added. Overall, these measures created an ideal situation for fish species to migrate further upstream to possible spawning locations.

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9.39	23/09/2025	Tracks observed beneath the Copper Valley Vue culvert were later confirmed to be Otter tracks.		Discussed with site ecologist.	Tracks were inspected and confirmed to be otter tracks.
9.40	24/09/2025	Flagstones being installed in Cois na Gleann. Four boulders half buried alternating on stream bed approx. 3m apart.		Confirmed with site personnel.	Flagstones added to improve stream hydromorphology and provide resting points for river bird species such as the dipper who is active in the area.

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9.41	25&29/09/2025	Spraying of visible Japanese knotweed (JKW) within the scheme's boundaries was undertaken to control the spread of JKW in the area. Once the scheme is completed, these areas will be managed by the City Council.		Lised with site ecologist.	Spraying carried out to control spread of JKW. A report was submitted to the Employers Representative detailing locations and amounts sprayed.

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9.42	26/09/2025	River survey was conducted of the heavily disturbed Glashaboy river section between the Hazelwood Road and new shopping Centre bridge.		Liaised with various parties to implement improvement to watercourse.	It was decided that the best course of action would be to add a pair of deflectors on opposite sides of the river in a staggered arrangement. This configuration is intended to accelerate the natural scour and deposition processes, gradually increasing the channel complexity. The current channel is relatively uniform, which is not ideal for river ecology.

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9.43	29/09/2025	Fallen trees and large woody debris in the Glashaboy and Glanmore Rivers were removed for flood prevention purposes.	 	Checked locations prior to removals.	Trees and debris were removed to prevent potential snagging, blockage, and associated flooding risks.