



Llanrwst Road, Gyffin, Conwy

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Water Conservation Strategy

Development: Llanrwst Road, Gyffin

Address: Llanrwst Road, Gyffin, Conwy, LL32 8HZ.

Developer: Adra (Tai) Cyfyngedig.

Document Title: DEV0141- Water Conservation Strategy

Prepared by: *G W Owen* Date: *December 2025*

Checked by: *G W Owen* Date: *December 2025*

Full Planning Application for 95 Affordable Dwellings on land off Llanrwst Road, Gyffin, Conwy.

The water conservation strategy has been prepared in support of the proposed application for full planning permission for the erection of 95 affordable dwellings with associated access, parking and infrastructure on land at Llanrwst Road, Gyffin in accordance with Policy NTE/10 of the Conwy County Borough Council's Local Development Plan.

Policy NTE/10 of the Conwy County Borough Council's Local Development Plan deals with water conservation and states that:

"All developments should incorporate water conservation measures where practicable and conform to BREEAM standards promoting water conservation, efficiency measures and utilize Sustainable Urban Drainage Systems (SuDS) techniques. Development proposals greater than 1,000 m² or 10 dwellings should be accompanied by a Water Conservation Strategy.

There are a number of ways water conservation can be achieved, such as water saving devices, rainwater harvesting and grey-water recycling and the policy offers a degree of flexibility on the exact methods used."

The planning application is also accompanied by a drainage strategy report.

Surface Water

As part of the Welsh Government Standards the management of surface water [SW] run-off from developments should be prioritised as to the choice of discharge destination. The priority hierarchy is as follows: -

1. Collect for re-use.
2. Infiltrate to ground.
3. Discharge to surface water body.
4. Discharge to a surface water sewer/highway drain.
5. Discharge to a combined sewer.

The proposed development is for individual residential dwellings.

Whilst the first priority is to collect rainwater for re-use, rainwater harvesting was considered and deemed not suitable for this scheme. From a cost benefit approach individual single property systems are considered to be unsuitable, a shared communal system was also considered but deemed inappropriate with regard to long term management and maintenance.

In order to partly satisfy Priority level 1 however rainwater butts will be included to provide some rainwater re-use for garden maintenance.

The second priority is to consider infiltration of the SW runoff into the ground. The site generally has falls across the site from Southeast to Northwest and towards the watercourse along the western boundary. Trial pits have been excavated to assess soakaway potential and percolation tests carried out across the site.

Ground investigation across the site found the ground to be not suitable for infiltration and that soakaways will not work.

The scheme has therefore been designed to follow the Third Priority, which is to have on-site storage with flow-controlled discharge to the water course located within the western site boundary.

The SW drainage scheme will comprise above ground swales and detention basin, below ground cellular storage tanks, crates and piped storage network. The system is designed in three sections with the southern section having an attenuated discharge into the water course in the vicinity of the new access into the site. The remainder of the SW drainage system and Highway drainage will be retained within the storage pipes and cells across the site and will flow via numerous flow control chambers and discharge via an attenuation basin into the existing watercourse within the site boundary.

Surface water run-off from the highway is directed to road gullies with catchpits to ensure any debris is removed from the surface water system at source. Run-off from these areas will be directed through suitable SuDS features to ensure adequate pollution prevention treatment is provided. The road gullies will also prevent any site run-off from entering the existing highway SW network

The SW drainage scheme will also include permeable paving of private resident parking and communal parking areas with cellular storage system and flow controlled discharge to the main system.

Roof areas will drain via water butts; excess flows will drain into the SW network system.

Discharge into surface water sewers / highway drains [Priority 4] or combined sewers [Priority 5] has not been considered.

It is therefore considered that adequate water quality can be provided via the SuDS components.

Foul Water

The foul water generated from the proposed development will connect to the existing foul sewer on the Isgoed Estate some 25m from the site entrance area.

The on-site drainage system will be designed in accordance with the requirements of Part H of the Building Regulations and Sewers for Adoption for adoption by DCWW.

Potable Water

in order to reduce potable water usage, consideration will be given to the possibility of collecting grey water for use in flushing toilets at detail design stage.

Additional measures to reduce potable water usage will include the fitting of flow reducing shower heads and basin/kitchen taps together with regular maintenance of taps to prevent leakage.