



Tyddyn Fletcher Caernarfon

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Water Conservation Statement

Development: Tyddyn Fletcher

Address: Ffordd Llanberis, Caernarfon, LL55 2BS.

Developer: Adra (Tai) Cyfyngedig.

Document Title: DEV0132- Water Conservation Statement

Prepared by: *G W Owen*

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Date: *May 2025*

Full Planning Application for 36 Affordable Dwellings on land at Tyddyn Fletcher, Ffordd Llanberis, Caernarfon.

The water conservation statement has been prepared in support of the proposed application for full planning permission for the erection of 36 affordable dwellings with associated access, parking and infrastructure on land at Tyddyn Fletcher, Ffordd Llanberis, Caernarfon in accordance with policy PCYFF6 of the Anglesey and Gwynedd Joint Local Development Plan.

Policy PCYFF6 of the Anglesey and Gwynedd Joint Local Development Plan (JLDP) deals with water conservation and states that:

"Proposals should incorporate water conservation measures where practicable including Sustainable Urban Drainage Systems (SuDS). All proposals should implement flood minimalization or mitigation measures where possible, to reduce surface water runoff and minimise its contribution to flood risks elsewhere."

Proposals greater than 1,000 m² or 10 dwellings should be accompanied by a Water Conservation Statement.

The planning application is accompanied by a drainage strategy report.

Surface Water

As part of the Welsh Government Standards the management of surface water [SW] runoff 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.

Rainwater butts will be included to provide some rainwater re-use for garden maintenance and a rain garden has been included within the communal garden of one block of flats.

The second priority is to consider infiltration of the SW runoff into the ground. The site generally falls gradually from Southeast to Northwest across the site. Trial pits have been excavated across the site and percolation tests carried out in the lower sections of the site.

Infiltration was found to be suitable at a number of the trial pits close to the western site boundary and this will form an integral part of the SW drainage design for the scheme. The SW drainage scheme will include permeable paving of parking

areas, a rain garden, an infiltration basin and a cellular soakaway system to manage the excess surface water that cannot be managed within the infiltration basin's volume.

Any overspill from the basin not accommodated within the cellular soakaway will flow into the existing ditch on the adjoining field and which will only be utilised during exceedance events i.e. in excess of 1 in 100 + 30% CC design event.

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

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

Private car parking areas throughout the scheme will be constructed using permeable paving which will promote filtration before entering the proposed SW network.

The network then connects to the infiltration basin which will act as above ground storage for the site. As all flows cannot be accommodated by the basin, a cellular soakaway system is in place to manage the excess water. The discharge from the infiltration basin will also include an overspill to allow excess water into the existing ditch/watercourse on the adjoining field.

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 gullies will also prevent any site run-off from entering the existing highway SW network.

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 Ffordd Llanberis some 300m 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.