

HANOVER HARPS PITCH UPGRADE.

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Date: May 2025

DRAINAGE REPORT.

1. Introduction.

The existing community green field site which comprises the existing pitch and training pitch has been in use as a soccer pitch for over 40 years.

The soil is well drained and records show that the use of the pitch as a junior soccer venue for Carlow & District league matches for adults and underage teams has been in place for many years. During the soccer league season which runs from Mid August to Mid May each year there has never been a match called off for waterlogging of pitch during the past 25 years.

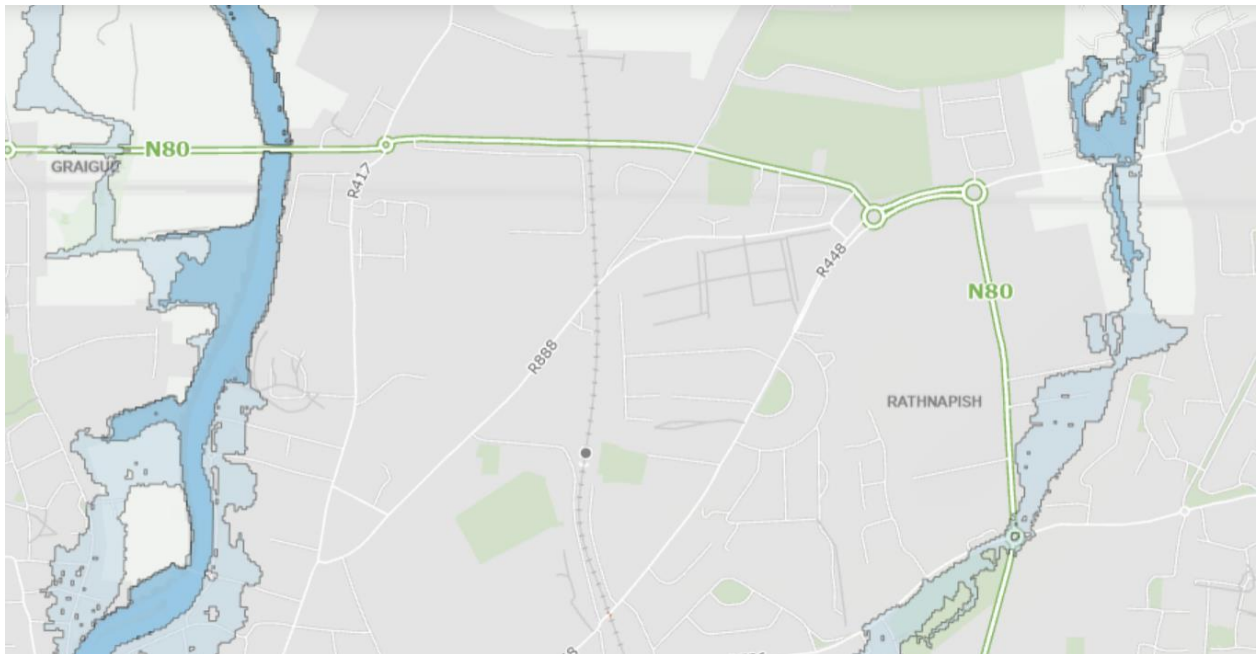
It is located outside the Barrow Flood Plain.

It has not been possible to carry out detailed tests for BRE365 as the existing pitch is presently in use throughout the soccer season. We there will provide details in this report to support the natural drainage in this location. In this urban area SUDS is also a factor and no run off from the new pitch construction on completion will be discharged into the existing storm water system.

2. Background Details

The Groundwater Flood Maps available on this website were developed and produced by Geological Survey Ireland (GSI) as part of the 2016-2019 Groundwater Flood Project in collaboration with Trinity College Dublin (TCD) and the Institute of Technology Carlow (IT Carlow).

The pitch is located in the Rathnapish district between the Barrow Flood Plain and the Burrin Flood Plain but outside of both.



Extract from www.floodinfo.ie

Quaternary landforms create the many changes and processes it has undergone during the Ice Ages. Eskers form the main ancient ice age deposits with contact between granite bedrock and overlying glacial deposits. In these deposits in the Carlow Town area are gravels and sands.

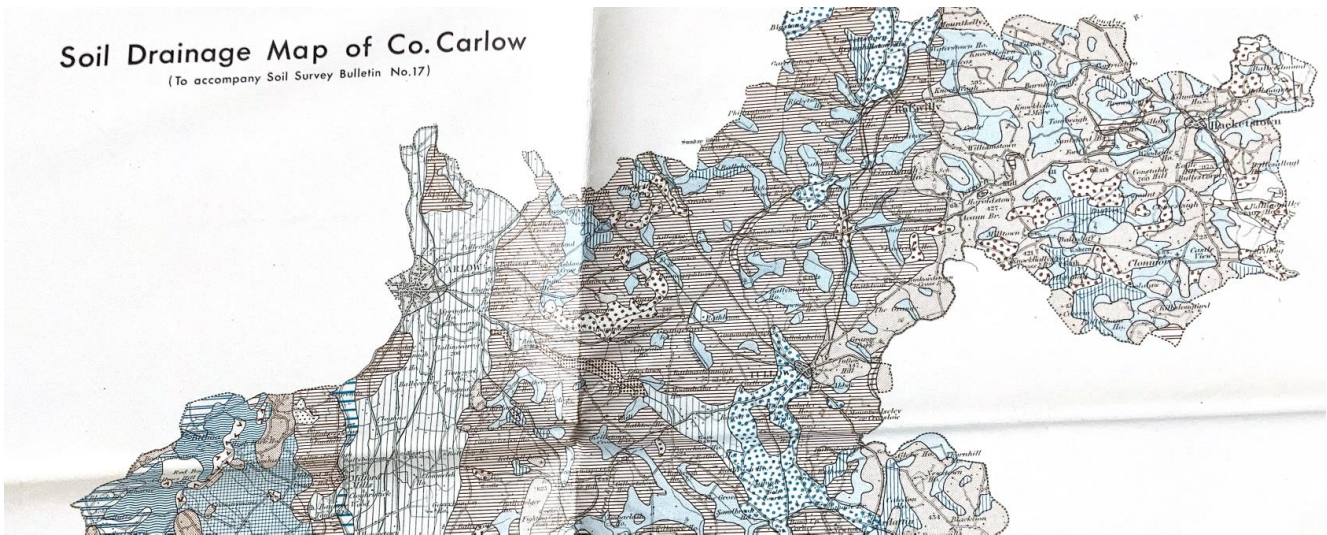
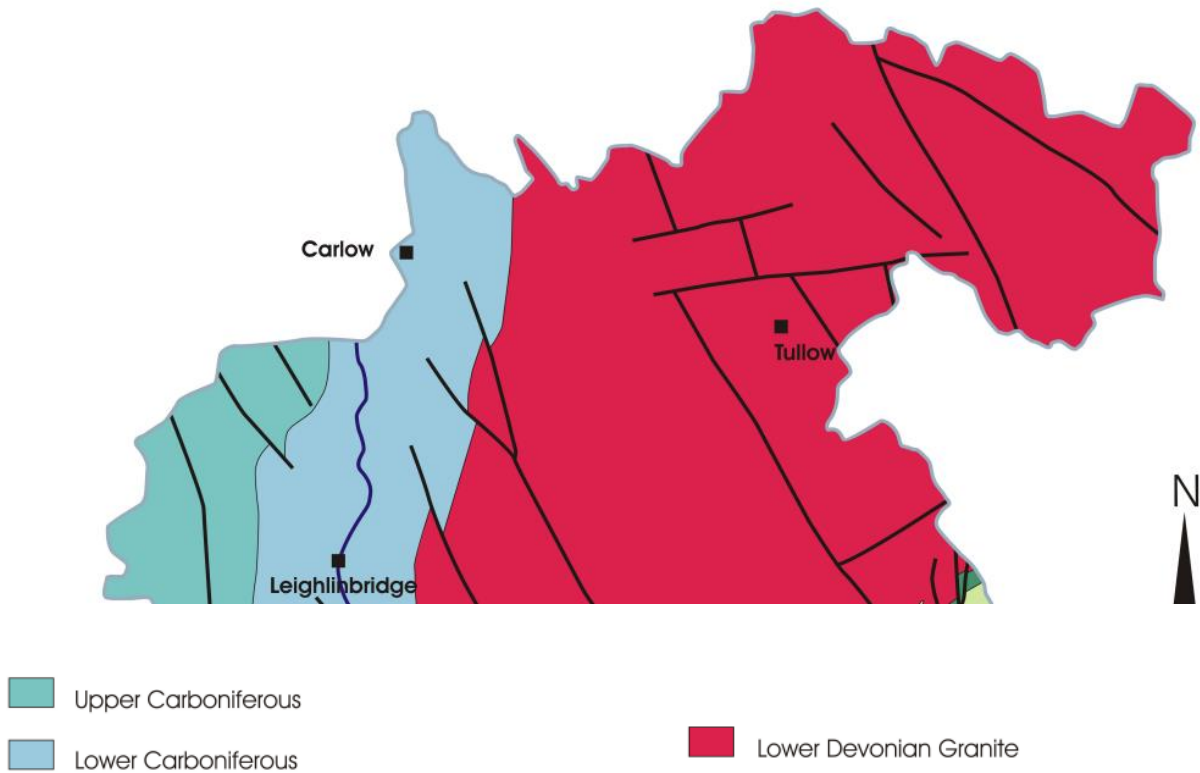
Sedimentary rocks also form part of the overall deposition in the area, then hardened by compaction and lithification into sandstones, siltstones, mudstones and limestones.

Lower Namurian deposits are absent in the Carlow area reflecting a period of non-deposition. The Namurian succession here begins with the black/dark grey shales of the Luggacurren formation.

The Quinagh Formation rests unconformably over the Leinster Granite with no sign of any intervening Devonian deposits. This suggests a period of nondeposition and implies that the granite was in fact above sea level at this time. Further evidence to support this comes in the form of weathered granite clasts found throughout the Quinagh Formation and in overlying limestone formations (Tietzsch Tyler *et al* 1994a).

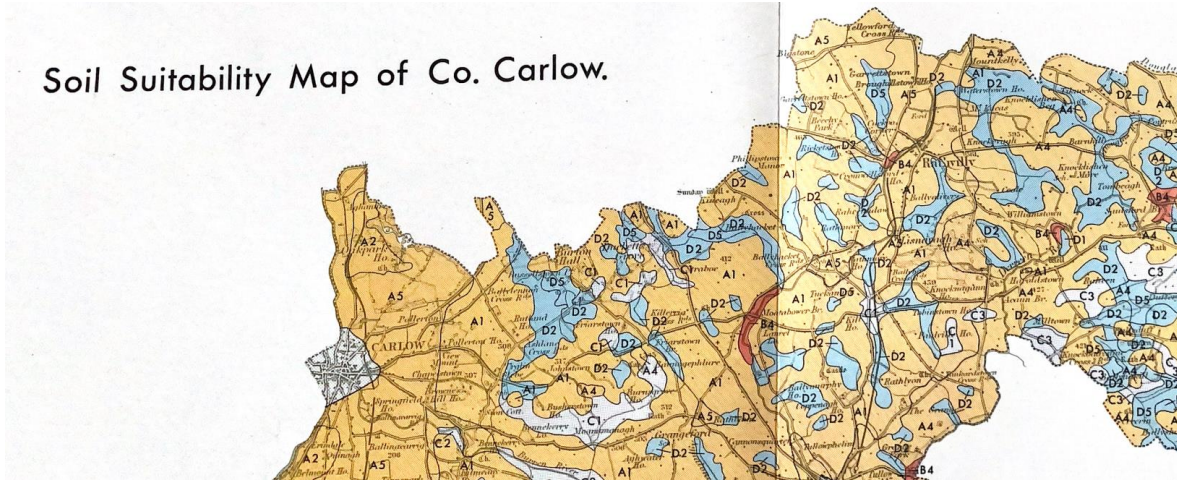
In summary the ancient deposition creates a natural underlying drainage for this area, we have included extracts of maps and their legends showing the suitability of drainage systems.

Summary geological map of Carlow



= variable drainage; moderate to rapid permeability, deep water table.

Soil Suitability Map of Co. Carlow.



MAP SYMBOL	SUITABILITY CLASS *	Use-Range	Type of Limitations **
A1	SUITABLE FOR TILLAGE, PASTURE, MEADOW AND FORESTRY.	Wide use-range	Local anomalies in soil molybdenum levels.
A2			Pastures somewhat liable to poaching.
A3			Moisture deficit in very dry periods.
A4			Moisture deficit in very dry periods, cobalt deficiency.
A5			Moisture deficit in places in dry periods, crops mature unevenly.

The final two part maps are from the National Soil Surveys of Ireland published by TEAGASC.

3. Drainage Details.

The grid drainage system shown on the attached maps with this application will be at its final discharge to constructed soakaways comprising the sectional details shown on drawings which will include constructed sumps before discharge to the main soakaways to protect blockages.

The soakaways will be formed by excavation of material under supervision and an interlocking cage system constructed to house the selected gravel/clinker sizes in place.

This will be covered by geotextile cloth (terram).

Soakaway Crate





geotextile membrane

Gravel = 20 – 50 mm size filled in to crates and covered with geotextile on top and sides.

Then small sump constructed inside crate near top to take inlet pipe.

End.