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Bedrock at or close to the surface, was also mapped.

Till (commonly 'Boulder Clay') is sediment deposited by or from glacier ice, which is the principal depositional agent, but gravity and, in some cases, water, also play a part. Tills are often overconsolidated, or tightly packed, unsorted, unbedded, include many different particle and clast (stone) sizes, and commonly have sharp, angular clasts. On the GSI's 1:25,000 maps tills are categorised according to their dominant lithological component, e.g. Lower Carboniferous limestone till or Lower Palaeozoic shale till. The texture of the till must be taken into account, as this determines its permeability. Thus tills may be described as gravelly, sandy, silty or clayey till.

Within different till types, a wide variety of permeabilities are possible. In this project, generalisations were made to classify the tills as stony, bouldery, gravelly, sandy, silty, clayey, etc. On the maps fourteen different till textures have been recorded. Those examined in the field only, *i.e.* that were not sampled and sieved, were classified according to the dominant particle size observed (surrounding drainage was also taken into account). Most were recorded as stony, gravelly, sandy, silty or clayey, and only in cases where a bi-modal particle size distribution was extremely obvious were they given a dual label *i.e.* stony sandy till, gravelly clayey till. Where exposure was exceptionally poor the till was classified as 'undifferentiated'. Those labelled in the field and those that were sampled and sieved were classified thus:

- Undifferentiated: Applied to deposits observed only in the field, as sieving always resulted in a particle size classification.
- Clayey: >30% silt/clay **or** >20% silt/clay and <30% sand (clasts <50%); in both cases where field observations recorded the till as **clayey**.
- Silty: >30% silt/clay **or** >20% silt/clay and <30% sand (clasts <50%); in both cases where field observations recorded the till as **silty**.
- Sandy: >40% sand **or** >30% sand and <20% silt/clay; in both cases where field observations recorded the till as **sandy**.
- Gravelly/Stony >55% clasts **and** <45% sand, silt and clay (with none dominant), where field observations recorded the till as gravelly/stony. (In the case of gravelly and stony tills, field observations are very important.)
- Sandy Gravelly: >50% clasts **and** >30% sand. (Field observations again important.)
- Silty Gravelly: >50% clasts **and** >30% silt/clay, where the matrix was recorded in the field as silt.
- Sandy Silty: >30% sand **and** >30% silt/clay, where the matrix was recorded in the field as very silty.
- Gravelly Clayey: >50% clasts **and** >25% silt/clay, where the matrix was recorded in the field as clayey and the till 'gravelly'.
- Stony Sandy: >50% clasts **and** >30% sand, where the till was recorded in the field as 'stony'.
- Clayey Stony: >50% clasts **and** >25% silt/clay, where the matrix was recorded in the field as clayey and the till 'stony'.
- Stony Silty: >50% clasts **and** >25% silt/clay, where the matrix was recorded in the field as silty and the till 'stony'.
- Bouldery: >55% clasts **and** where the till was recorded in the field as 'bouldery'.

Till is the most extensive Quaternary deposit occurring within the county. Seven till types occur:

Till derived from Lower Palaeozoic rocks is found in two major areas in the county: (i) to the north of Navan, (i) in the Bellewstown/Gormanston area. This till is generally orange/brown in colour, matrix-dominated and clayey, resulting in relatively poor drainage characteristics.

Till derived from Lower Carboniferous limestone is the most dominant till type found within the county, cropping out over the majority of the area south of Navan, and in a southwest-northeast trending strip northeast of Kells. The till is usually matrix dominated, but may be very stony in the