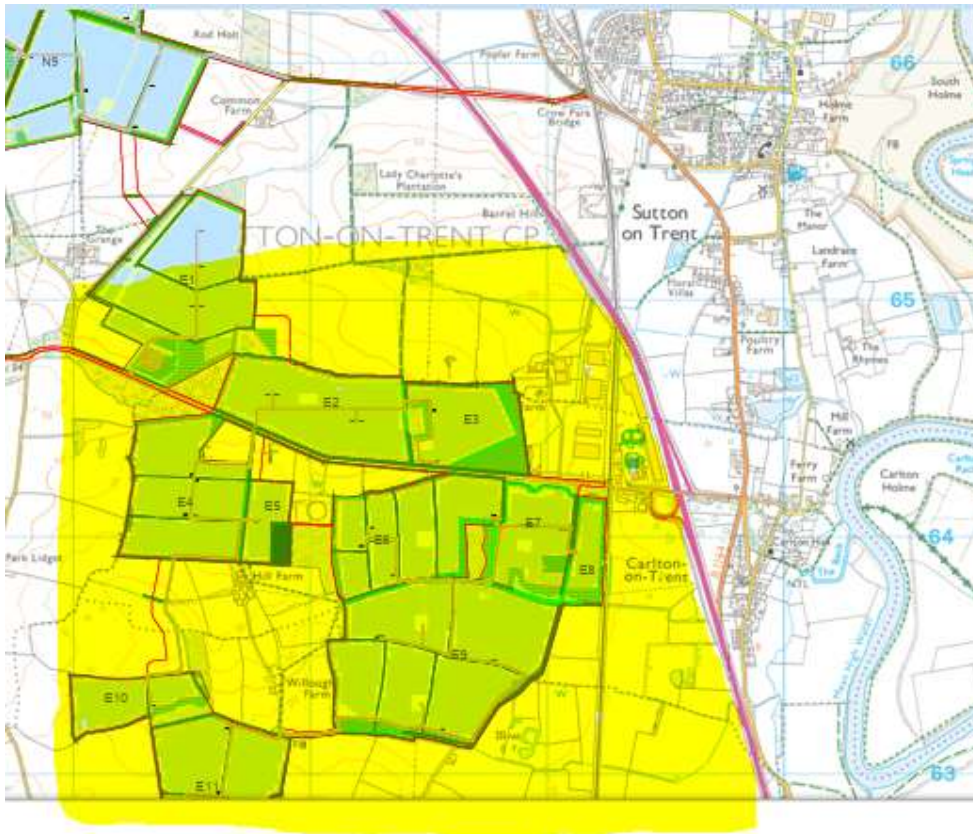


I wish to add to my written statement.

Insufficient consideration has been given to the history of flooding in Sutton on Trent and Carlton on Trent, and no consideration at all of studies into the impact of solar panels on surface water run-off, particularly the difference between cross-slope and along-slope panel orientation (e.g. <https://onlinelibrary.wiley.com/doi/full/10.1002/hyp.15053>).

I raised flooding concerns for the following reasons.

The fields immediately west of Carlton on Trent (highlighted below) drain directly towards the River Trent via Carlton and Sutton villages. Any alteration to these fields **will** directly affect residents of both villages.



In October 2023, Storm Babet caused widespread flooding. The river level was normal for a winter tidal high, but heavy rainfall on already waterlogged ground overwhelmed ditches and dykes. Water had nowhere to go except onto the A1 (which closed) and into the villages. Numerous properties in Carlton and Sutton were flooded; residents were displaced for months while major repairs took place.

Only three months later, in January 2024, Storm Henk followed the same pattern. Although less severe, it caused further water ingress, delayed repairs, and pushed the target return date for displaced Carlton residents from April to late August.

I have lived in Carlton on Trent since 2007. Pluvial flooding has occurred regularly. My garden on Ossington Road (B1164) floods most years; when water reaches a certain level in

my garden, properties in downstream in Sutton are also affected. Fields west of Carlton feed dykes that run south of the village and directly affect Carlton properties. This is not only a winter issue; my garden has flooded in summer after prolonged dry weather when baked clay soil prevents rapid infiltration and heavy rain flattens crops, sending water straight into the ditches.

These fields have a clay subsoil layer (evidenced by the former brickworks at Castle Hill, Carlton). Clay dramatically reduces infiltration rates.

Dykes from several fields converge along Ossington Road. One passes under the road and enters a pipe at what3words scanty.smiled.civil, re-emerging at gears.edges.unionists. A clear erosion channel and transient stream are visible across the field on Google Maps satellite imagery, showing natural concentrated flow. The road regularly floods at scanty.smiled.civil because the pipe capacity is exceeded. Construction activity, heavy plant, and drilling risk damaging this pipe, permanently reducing capacity and increasing both frequency and depth of road flooding.



Despite this, the proposed solar farm places panels in west–east rows, directly across the slope. At every consultation I raised this issue, but was simply told panels do not increase flood risk, tussock grass will be sown, and bunds installed. The application itself gives the matter almost no attention.

In EN010162-000197-GNR\_6.2.9\_ES\_Ch\_09 (Water Resources), paragraphs 52–53 describe the site as gently sloping overall, with approximately 80 % of Work Area 1 on slopes less than 6 %. Paragraph 287 claims that because the site is “generally flat-lying”, rain falling from panels will spread evenly and infiltration will be unchanged.

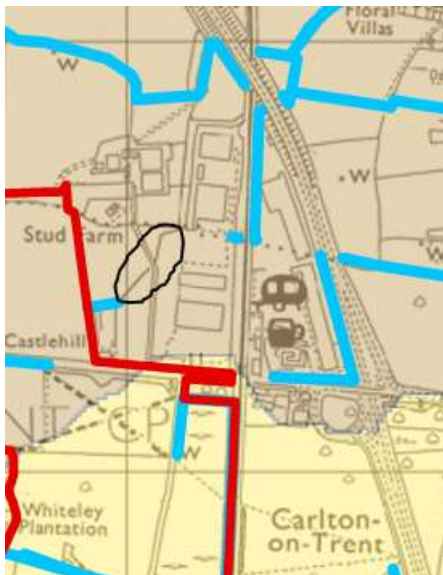
These assertions ignore:

- panel orientation perpendicular to slope,

- local clay soils,
- steeper slopes in the Carlton area,
- documented past flooding caused by run-off from these fields.

A blanket description of the site as “relatively flat” cannot justify covering the steepest fields with cross-slope panels. Each field must be assessed individually, using field observation, not just desktop studies.

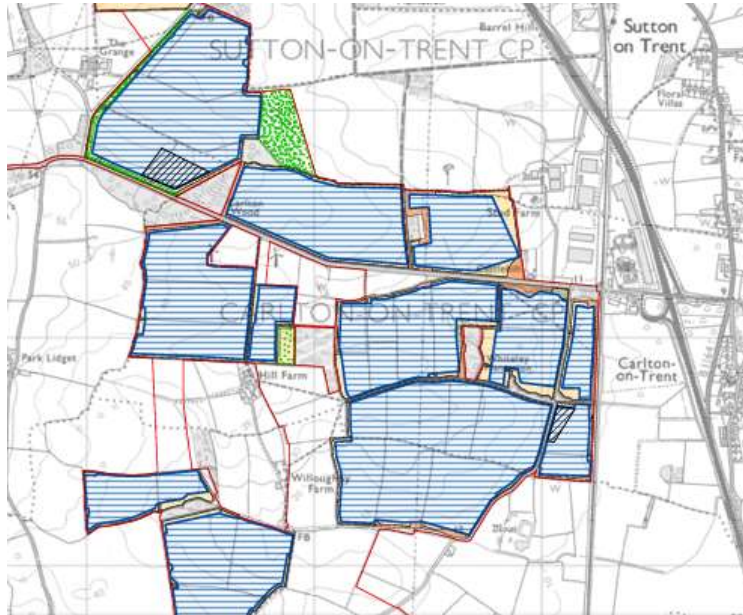
The watercourse mapping (EN010162-000068-GNR\_2.6\_Water Bodies) is incomplete. The dyke continuation identified below is identical in character and function but is not marked. Reliance on desk-top data has clearly led to inaccuracies that undermine the flood risk assessment.



On “relatively flat” ground, tussock grass and bunds might suffice. On sloping, clay-rich fields with cross-slope panels, these measures will be overwhelmed. Run-off velocity and volume will increase, raising flood risk in Carlton and Sutton for the scheme’s 40-year life. The construction phase itself—when ground is disturbed but grass not yet established—poses particular danger from heavy rain.

Published studies claiming solar panels have no impact on run-off were mostly conducted on flat sites or with panels aligned parallel to contours. Studies on steeper slopes with cross-slope orientation (like the one cited at the start) show **increased** run-off. Even a slight increase in the Carlton fields **will** cause more frequent and severe flooding downstream.

Drawing EN010162-000015-GNR\_5.6 (Design Approach, Part 2 of 4) confirms the vast majority of panels near Carlton are oriented perpendicular to contours. This is one of the most concentrated panel areas in the entire scheme with many adjacent fields covered, magnifying cumulative impact.



I suggested during consultation that the steepest fields be left panel-free, that some fields be excluded to reduce concentration, that row spacing be increased, and that a large retention basin be created. None of these measures appear in the application for the Carlton area.

Looking at EN010162-000068-GNR\_2.6\_Water Bodies: Carlton also lies at the downstream end of multiple dykes serving much of the wider development. During Storm Babet, emergency calls progressed sequentially: Maplebeck → Caunton → Norwell → Carlton, following the natural run-off path. The watercourse plans confirm Carlton and Sutton receive flow from a large proportion of the site. Proposed upstream “improvement” works risk accelerating flow to downstream villages, worsening flooding.

These are not hypothetical future risks driven by climate change. The events of 2023–2024 continue a pattern of regular pluvial flooding I have experienced for 18 years and which pre-dates my residence. **Residents of Carlton and Sutton should not be subjected to 40 years of demonstrably increased flooding for this scheme to proceed in its current form.**