



6 April 2026

Summary of Main document (also submitted today) with additional information to my 3 minute speech at the open floor meeting

My name is Bill Scurry and I live in Keysoe. I have a degree in Physics from Imperial College, so I have good scientific, logic and technical skills base.


I strongly oppose to the East Park Energy solar farm development for many reasons, as set out in my relevant representation (RR-1302).

In this written representation I focus on the flooding risk issue, which I also spoke about at the Open Floor Hearing. I am worried that if this development goes forward my property and that of my neighbours will have a significantly increased risk of flooding, both surface water and from the Keysoe Brook backing up.

My document will explain the current real-life flooding situation in our locality, which is not what the experts who don't live here tell us. I will then go on to explain the local topography, the clay soil type and current flood reduction strategies – specifically the use of mole draining. I end by stating my worry that if the fields around me are covered in solar panels the maintenance process of mole draining will not occur for the 40+ year-life-span of this development, increasing the risk of flooding. Also, by changing the ability of the fields to absorb rain, due to covering the land in non-permeable surfaces (glass solar panels) and the lack of regular cultivation, this will increase the surface flooding risk. These changes together will significantly increase the risk of flooding, particularly to the three houses [REDACTED] on the B660 in Brook End.

I have supporting evidence in my main submission with photographs, FaceBook posts on local groups, definitions of mole draining and surface flooding (the last two from UK Government agencies with source information) in the Appendices of my document.

Bill Scurry



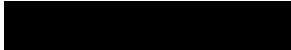
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1.0 Introduction



My name is Bill Scurry and I live in Keysoe. I have a degree in Physics from Imperial College, so I have good scientific, logic and technical skills base.

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2.0 The current situation

I moved to Keysoe  years ago because I wanted a quite rural life after been born and bred in London. However, if this massive development is allowed to go forward, when I leave my house in Brook End Keysoe and turn left onto the B660 I will see fields and fields of solar panels. As I turn right at Pertenhall and drive or cycle to Great Staughton for the local Doctors and Pharmacy, 

[REDACTED], I will see solar panels on the right for miles and miles. And sometimes on the left as well, notably around Kangaroo crossroads.

However, on some occasions I cannot go this way because the run-off surface water from the field opposite the small sewage works at Pertenhall and the Keysoe Brook has flooded the road. In a large 4x4 it may be passable, but in my Ford Focus or on my bike, not. (See Appendix 1, photos 1 and 2 below for the evidence).

The Keysoe Brook that runs past my house floods when we have heavy rain. The current flood plain is in the field (within Site B) to the northeast side [REDACTED] by the footpath that runs to the Great Staughton Road. The footpath is just passable after a big rain fall. Most of the area flooded is where B&K no. 36 footpath meets BK no.13 footpath. (Appendix 1 photos 3 and 4.)

The locals know about this flooding and often post on local Facebook sites. See Appendix 2 for copies of 4 historical posts below about roads unpassable.

Two of my neighbours' gardens also have flooded, luckily not their homes yet. (Appendix 1 photos 5 and 6).

So, historically, the Keysoe Brook and streams around Site A and B do flood. This is not referenced by the no doubt expensive experts paid by the developer to produce their many reports on flooding.

I have read the 6 documents submitted by the developer about drainage and flood risk. All 236 pages. The experts say that the flooding risk is small and mitigated by planting grass under the panels that will soak up any water and stop any flooding. Also, raising the height of panels where there may be surface water standing after rain will stop the panels getting wet! This low risk is not the real-life position as the locals know too well.

2.1 Topography

The topography of our local area is gentle rolling hills with watercourses feeding various tributaries of the river Kym.

Riseley Brook (which runs down beside Riseley High Street) becomes the Pertenhall Brook around Chadwell End, Pertenhall. This then joins the Keysoe Brook near the Great Staughton Road, Pertenhall, close to where photos 1 and 2 mentioned above were taken.

The source of the Keysoe Brook is not Brook End as the name suggests, [REDACTED], it is run-off from Thurleigh Airfield. The source of the Riseley Brook is first shown on the OS map by the A6 near Knotting Green. So, a large area is drained by these two brooks.

Keysoe Brook is 40m above sea level at Brook End Keysoe. After joining the Riseley/Pertenhall Brook and the River Kym it eventually flows into the River Great Ouse approximately 12Km (river length) away at St.Neots. It is 15m above sea level at this point at St.Neots. So, the average drop is 2m per Km, which not much when in flood and why these Brooks and Rivers often flood over their banks.

2.2 Soil type

We have semi-permeable Oxford clay which as the name suggests is a soil with a high content clay base. Not as clayey as South Bedfordshire, where most of the bricks that built London came from, but still clayey. This soil is very good quality for farming but doesn't drain well and holds water becoming water-logged after heavy rain and causes run-off/standing water as discussed above and observed locally.

2.3 Current flood reduction strategies

To try and overcome flooded fields and increase the yield for the crops and reduce the risk of immature plants/seeds rotting, the local farmers use a technique called mole draining.

Please see Appendix 3 for the sources of the following summary:

Mole drainage is a cost-effective, temporary method for improving drainage in heavy clay soils (35%+ clay) by creating unlined, underground channels to reduce waterlogging. A tractor-mounted "mole" (bullet-shaped plug) creates these tunnels at 450–500 mm depth, usually in autumn.

The channels are spaced between 1.5 and 2.75m apart, so the tractor is driven up and down each field many times.

I have seen this technique used in many of the local fields. This temporary solution is typically done sometimes every 3-5 years sometimes 10 years apart depending on local conditions.

3.0 Worries about this solar development

My concern is that when this Bedfordshire countryside is covered with so many solar panels the ground directly under them will be shaded from the rain, so in the gaps between the panels, the water will saturate the land and water landing on the panels will surge flow to the waterways and across the roads at a higher rate than currently, vastly increasing the chance of flooding.

Solar panels should be considered as acting like tarmac for surface flooding they are not permeable. Surface flooding is described by The Environmental Agency below:

Surface water flooding is sometimes known as flash flooding. It happens when rainwater cannot drain away through normal drainage systems.

Surface water flooding is a problem because:

- *it often happens in places you don't expect, like up hills*
- *it's hard to predict, as heavy rain sometimes only affects a small part of an area*
- *where there's lots of tarmac and concrete the water has nowhere to go*

Please see Appendix 4 below for the source of this.

This field, and the ones next to it and the other side of the Keysoe Brook, will be covered in solar panels if this development is allowed.

I am concerned that there will be a significantly increased risk of flooding of Keysoe Brook due to:

- Lack of mole draining
- Lack of cultivation of the soil, leading to compaction and less ability to absorb rain
- Run off from the panels onto ground that is saturated

This increased risk could well lead to flooding my home and that of my neighbours adjacent to the B660 in Brook End. I illustrate the layout with reference to the attached photos in Appendix 1 Map 1.

This may also happen in other tributaries of the river Kym affected by this development, affecting many other homes.

This development is in the wrong place and far too large for our rural location and should be refused.

Bill Scurry

4.0 Supporting evidence

Appendix 1 Photos

The map below shows the location of the photos shown below and the three houses specifically effected if the Keysoe Brook is backed-up when flooding.

Map 1

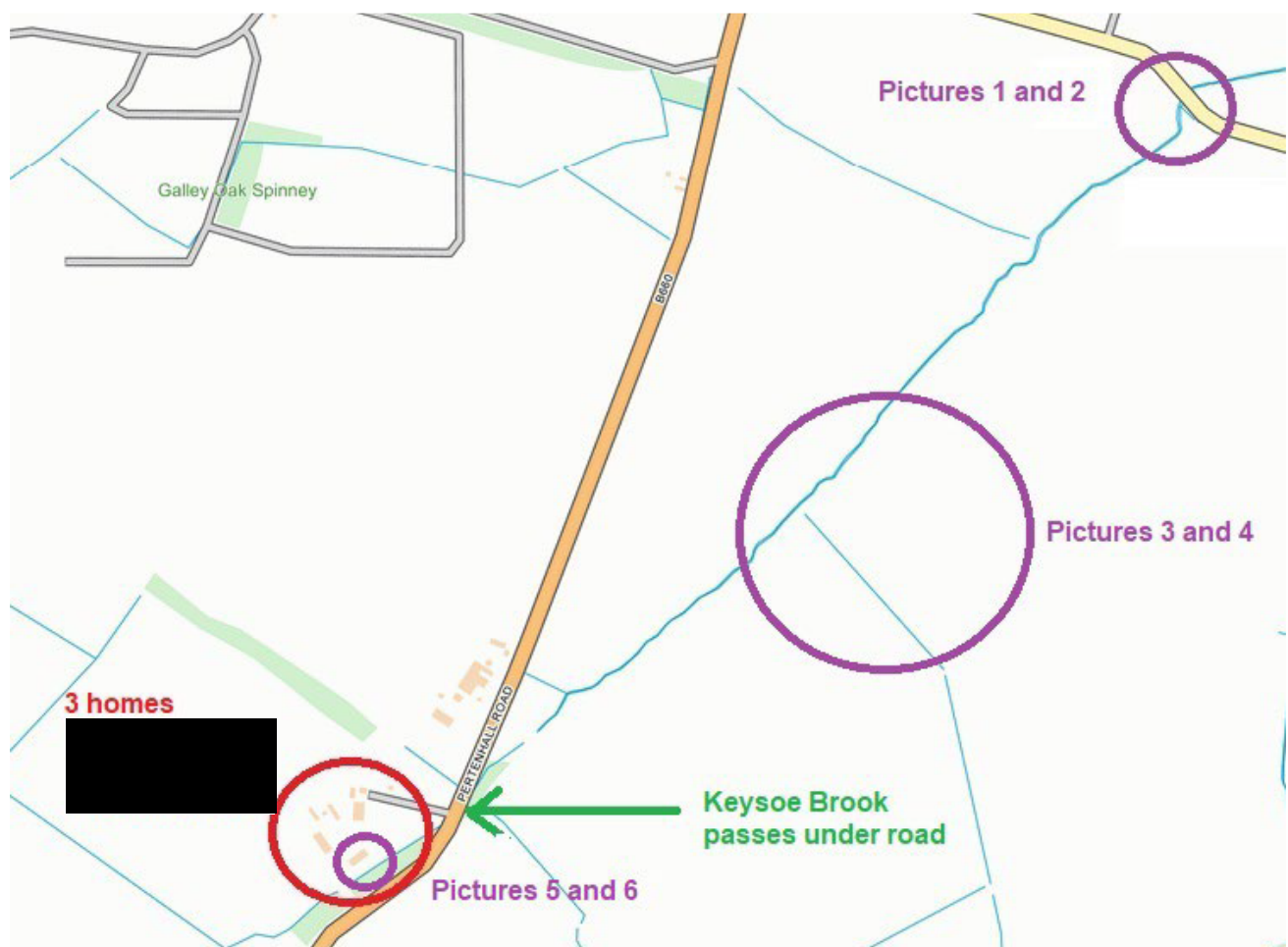


Photo 1



Taken on 27th September 2024 of the flooded Great Staughton road by the small sewage works in Pertenhall.

Photo 2



Also taken on 27th September 2024 from the Great Staughton road by the small sewage works in Pertenhall. This shows the flooded field to the north of the road. The run-off from the surface flooding on this field is the main contributor to the water flooding the road.

Photo 3



Also taken on 27th September 2024 from the footpath FP B&K no. 36, LS no. 26 showing the flooding on the field. I'm looking NE and have my back to the brook with FP B&K no. 13 to my left.

Photo 4



Taken on 27th September 2024 from footpath B&K no. 36, LS no. 26 showing water running off the field. I'm looking NE and have my back to the brook with FP B&K no. 13 to my right.

Photo 5



View from the bridge over the drive of the Manor looking down-stream at the very high Keysoe Brook.

Photo 6



View showing the garden of The Manor flooding , taken from the garden of Manor looking down-stream.


Appendix 2 Facebook Posts

18:51 📶 📶 100

< Steven's post ...

Pertenhall & Swineshead Village Group
[Redacted] · 1 Oct 2024 ·
★ Rising contributor

Great Staughton Road is flooded in the usual place. The flooding does, however, seem to extend further than normal. It is not really passable in a standard car.



[Redacted] Write a co... 🗨️ 📷 GIF 😊

18:52 📶 📶 100

< Pertenhall & Swine... 🔍 ...

Anonymous post 🗨️ Feeling 😊

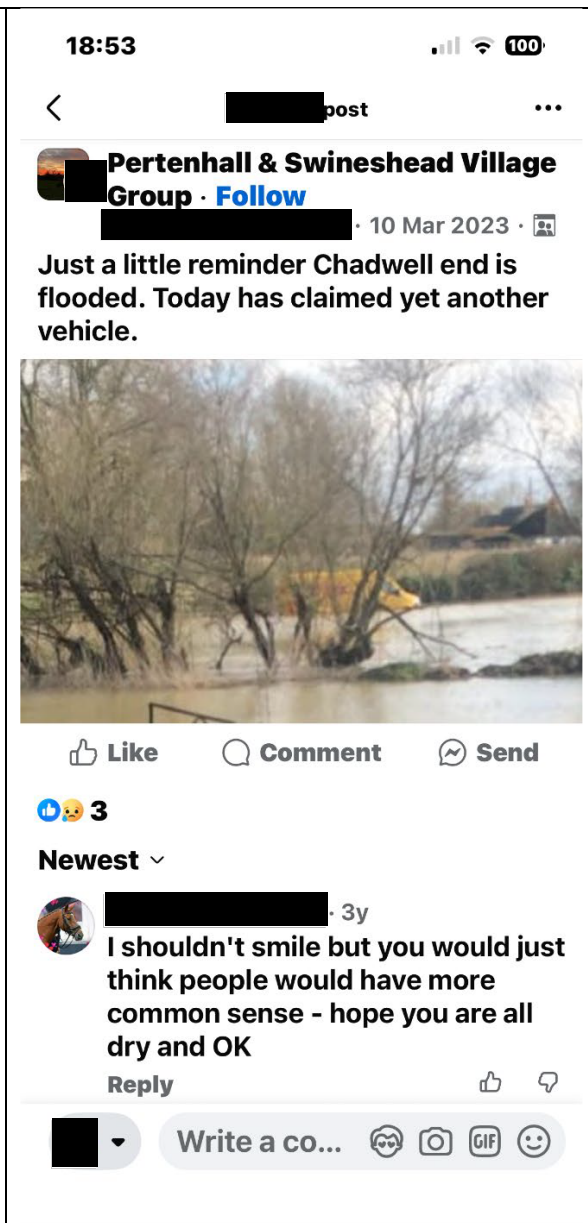
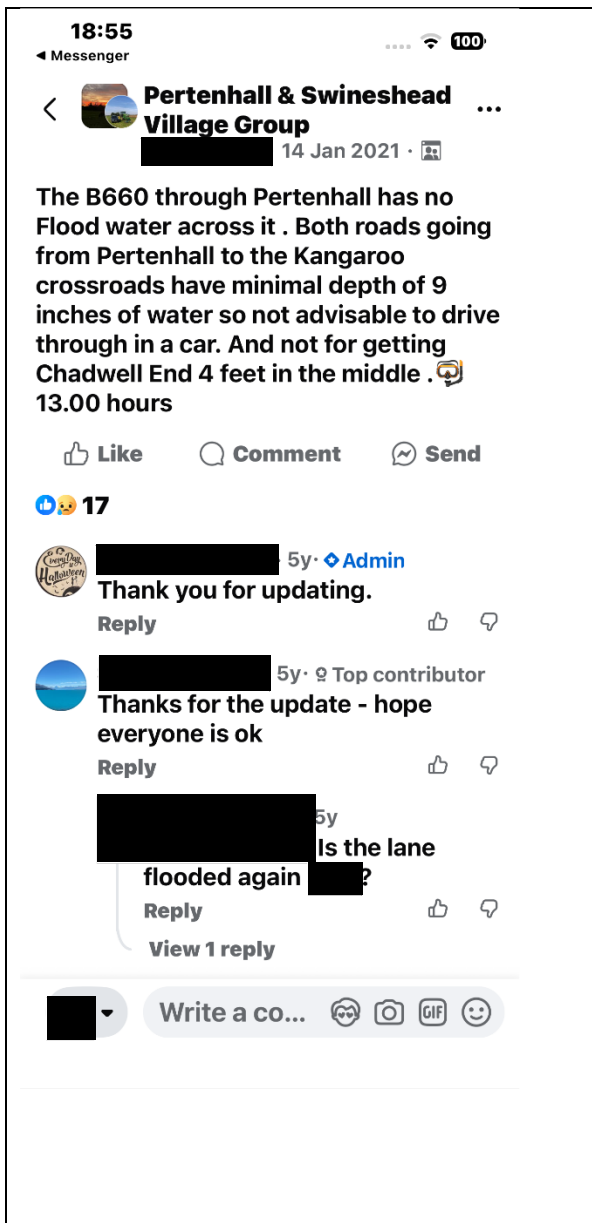
Recent activity ⚙️

[Redacted] 20 Oct 2023 · 🗨️

Road between Pertenhall and Great Staughton from the southern cross roads is flooded. 4x4 got through but we bottled in our family salon. Ok via the other road to Kangaroo

👍 1 1 comment

👍 Like 🗨️ Comment 📧 Send



Appendix 3 Mole Draining

Mole Draining Description and Definitions from 2 UK sources:

A3.1 Google description of mole draining (search for [defra department of environment mole drainage definition](#))

Mole draining, within the context of UK agricultural and environmental management, is a form of **subsurface drainage** utilized primarily in heavy, clay-rich soils (minimum 30-35% clay) to reduce waterlogging.



AHDB +2

According to guidelines and descriptions often cited by agencies like ADAS (which often acts on behalf of Defra) and the AHDB:

- **Definition:** Mole drains are unlined, cylindrical channels created in the subsoil by a specialized machine.
- **Method:** A tractor drags a "mole" (a round-nosed, cylindrical foot) through the soil, usually at a depth of 450-500mm, followed by an expander that forms and slightly compacts the channel wall.
- **Function:** These channels act as natural pipes that conduct water to permanent, conventional piped drainage systems or open ditches.
- **Soil Structure Impact:** The process creates fissures in the soil, which helps water move from the surface down to the mole channel, improving soil aeration and drainage without disrupting the surface.
- **Suitability:** It is highly effective in heavy clay soils but not suitable for sandy or rocky soils.



AHDB +3

Key Considerations

- **Lifespan:** Well-constructed mole drains typically last 5 to 10 years depending on soil stability.
- **Optimal Timing:** Best installed when the soil is dry enough for traction on top but moist enough to form a stable channel at the depth of the mole (often summer/autumn).
- **Environmental Regulation:** Mole draining should be done with consideration of local soil conditions, with warnings against doing it on land with historical or archaeological features.



GOV.UK +3

A3.2 From the Department of Agriculture, Environment and Rural Affairs website (source [https://www.daera-ni.gov.uk/news/drainage-it-working-you#:~:text=%E2%80%9CIn%20heavy%20clay%20soils%2C%20water,2%20inches\)%20pipe%20may%20suffi](https://www.daera-ni.gov.uk/news/drainage-it-working-you#:~:text=%E2%80%9CIn%20heavy%20clay%20soils%2C%20water,2%20inches)%20pipe%20may%20suffi) ce.)

Shallow drainage (mole and gravel tunnels)

“In heavy clay soils, water movement can be so slow that the conventional piped drains with wide spacing are not doing the job. Closer spaced shallower drains which loosen the subsoil are required. This method is called mole draining and is used in conjunction with conventional collector drains. The moles are drawn up the slope and over the conventional collector drains.

“Mole drains need the collector drains to draw off/take the water away quickly to the main open drain/sheugh. These collector drains should be 750-850 mm deep and 30-50 metres apart in a layout that allows the 450-500 mm deep mole drain to connect at an angle to avoid slowing down the water flow and thus sediment build up in the collector drain pipe.

“On fields with a poor fall, at the furthest point from the main drain the collector drain should still be at least 750mm deep, so an experienced digger driver is needed to achieve a fall in the drain which starts at a higher outlet point than the main drain but deep enough at its furthest point to still provide sufficient drainage. Collector drains need a minimum of a 100mm (4 inches) perforated drain pipe topped with 35-40mm clean stone up to plough depth. For drains less than 300m in length a cheaper 50mm (2 inches) pipe may suffice.

“Make sure that before pipe or stones go in that the bottom of the drain is level, firm and free from large stones or clods. If the drain is soft at the bottom or cannot be levelled up with a special four inch drain shovel - another key piece of machinery - then it is advisable to put 25-40 mm depth of drainage stone into the drain before the pipe is installed to help level the drain and lift the pipe up out of the wet muddy floor of the drain.

“Some have also questioned if we need to use expensive piping in the collector drain. Only in short drains of less than 30m should one even consider not using a pipe. In a stone only drain the water flow is greatly reduced thus drainage reduced considerably. What may block a pipe will block a stone-only drain much quicker. If the collector drain is installed without a pipe, water may fail to be drawn off/ be taken away quickly enough and the entire mole drainage system will eventually fail and prove costly in the long run.

Types of mole draining

There are two types of mole draining: Traditional mole plough and Gravel tunnelling

The mole plough has a torpedo-like foot which is dragged through the soil with a high powered tractor at 450-500 mm deep and normally 1.5m apart, to form a channel in which water can flow into the collector drains which then flows to the main drain. Gravel tunnelling uses a similar mole but with the added benefit of filling the channel with 15mm stone chips using a stone cart with a conveyor belt. The advantages with gravel tunnelling over mole plough are: It's a permanent system; It can cope with unstable soils; It can also cope with large stones in subsoil; It can be used on steep slopes; It can be drawn up and down hill (moling downhill carries the risk of sediment being washed down blocking the exit of the channel, adding gravel reduces this) and it can be drawn by a low ground pressure track machine so greater flexibility in variable ground conditions.

Appendix 4 Surface Flooding

UK Government definition of surface water flooding (source <https://check-long-term-flood-risk.service.gov.uk/risk#>)

What surface water is

Surface water flooding is sometimes known as flash flooding. It happens when rainwater cannot drain away through normal drainage systems.

Why surface water flooding is a problem

Surface water flooding is a problem because:

- it often happens in places you don't expect, like up hills
- it's hard to predict, as heavy rain sometimes only affects a small part of an area
- where there's lots of tarmac and concrete the water has nowhere to go

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