# West Burton Solar Project

# Environmental Statement Appendix 11.2:

Geo-Environmental Risk Assessment West Burton 2 (part 2 of 2)

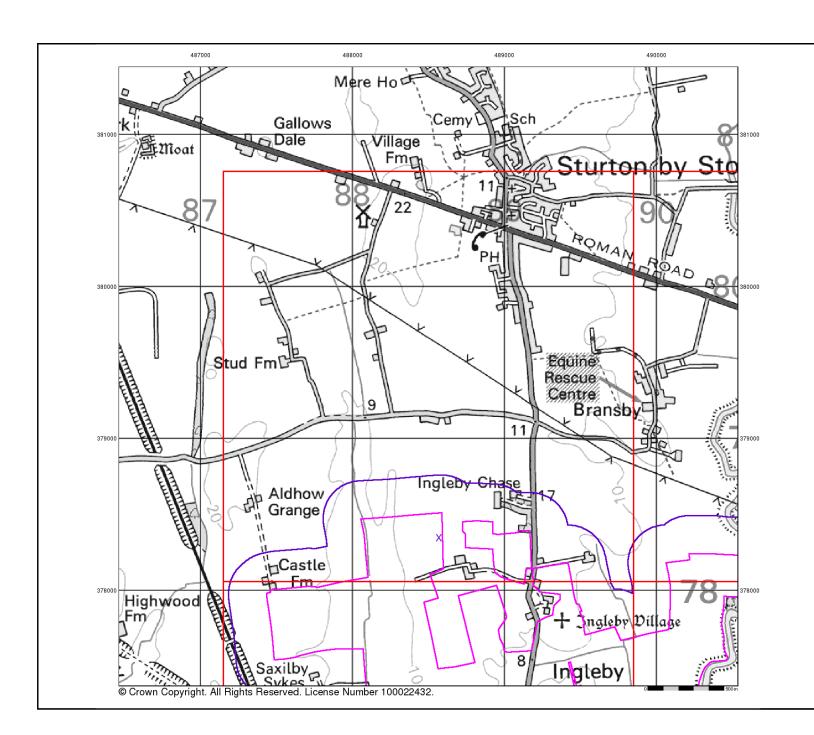
Prepared by: Delta Simons
March 2023

PINS reference: EN010132

Document reference: APP/WB6.3.11.2

APFP Regulation 5(2)(a)







#### **Artificial Ground and Landslip**

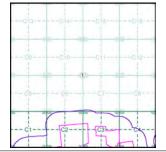
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground man-made deposits such as embankments and spoil heaps on the natural ground surface.
   Worked ground - areas where the ground has been cut away such as
- Worked ground areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground areas where the surface has been reshaped.
   Disturbed ground areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

#### Artificial Ground and Landslip Map - Slice C





Order Number: Customer Reference: National Grid Reference: Slice: Site Area (Ha):

Site Area (Ha): Search Buffer (m):

Site Details: West Burton 2 287331844\_1\_1 21-1098.02 488570, 378350

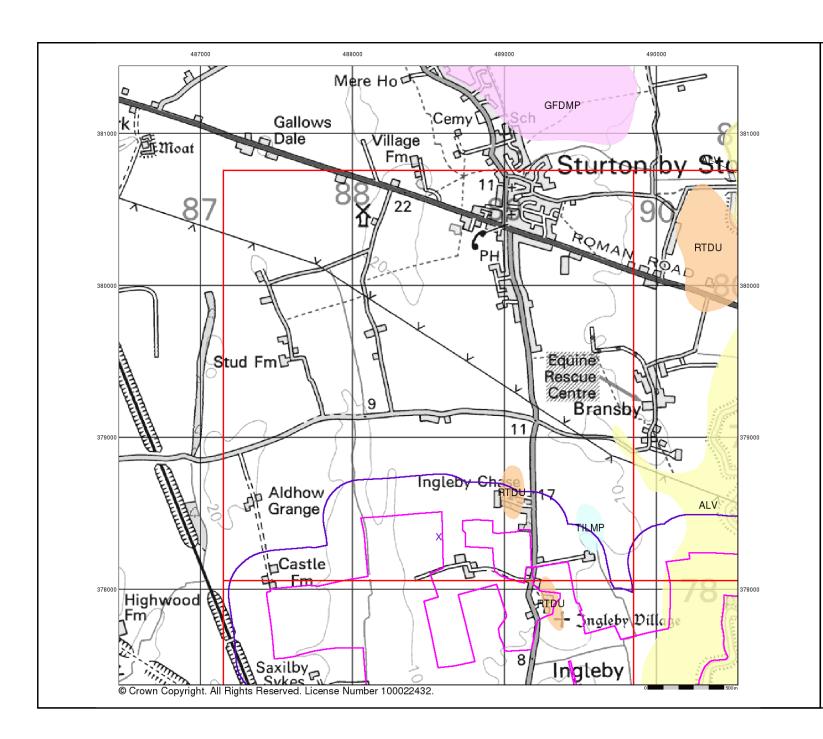
C 331.04 250



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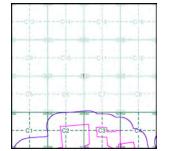
#### Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

## Superficial Geology Map - Slice C



287331844\_1\_1 21-1098.02

488570, 378350

C 331.04



Order Number: Customer Reference: National Grid Reference: Slice:

Site Area (Ha): Search Buffer (m):

# Site Details:

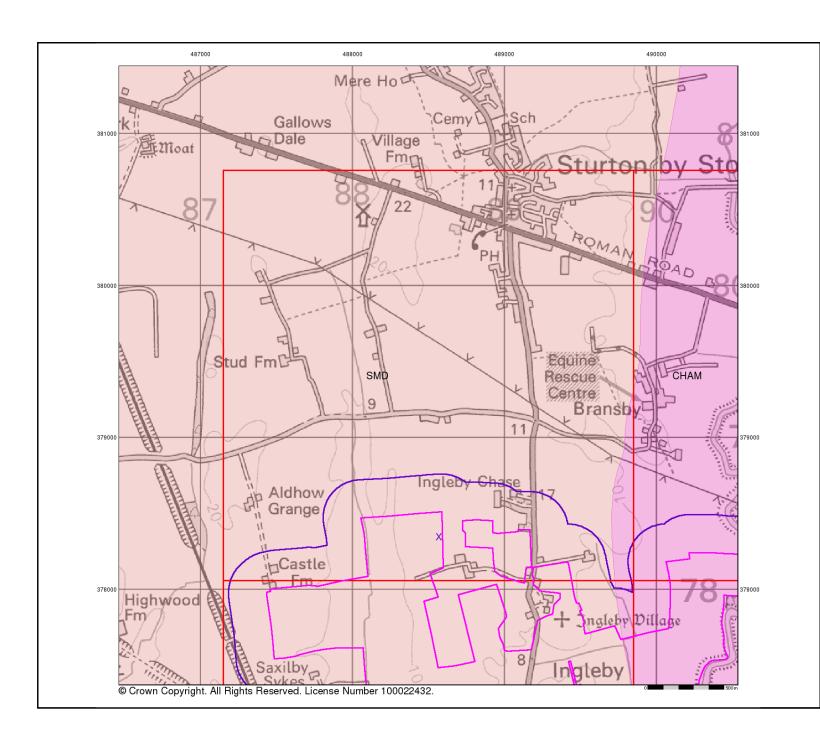
West Burton 2

Landmark

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#### **Bedrock and Faults**

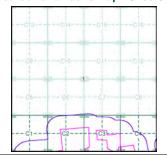
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

#### Bedrock and Faults Map - Slice C





# **Order Details:**

Order Number: Customer Reference: National Grid Reference:

488570, 378350 C 331.04 250

287331844\_1\_1 21-1098.02

Site Area (Ha): Search Buffer (m):

Site Details:

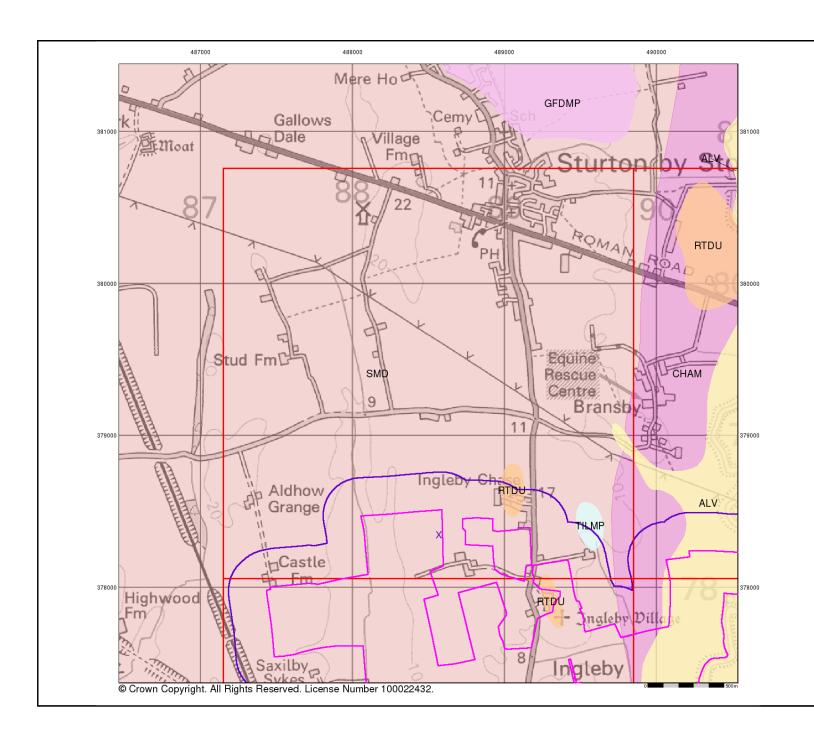
West Burton 2



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#### **Combined Surface Geology**

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

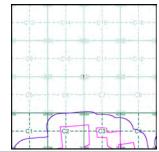
#### **Additional Information**

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

#### Contact

British Geological Survey Kingsley Dunham Centre Keyworth Nottingham NG12 5GG Telephone: 0115 936 3143 Fax: 0115 936 3276 email: enquiries@bgs.ac.uk website: www.bgs.ac.uk

### Combined Geology Map - Slice C





# Order Details:

Order Number: Customer Reference: National Grid Reference: Slice: Site Area (Ha): Search Buffer (m):

488570, 378350 C 331.04

287331844\_1\_1 21-1098.02

Site Details:

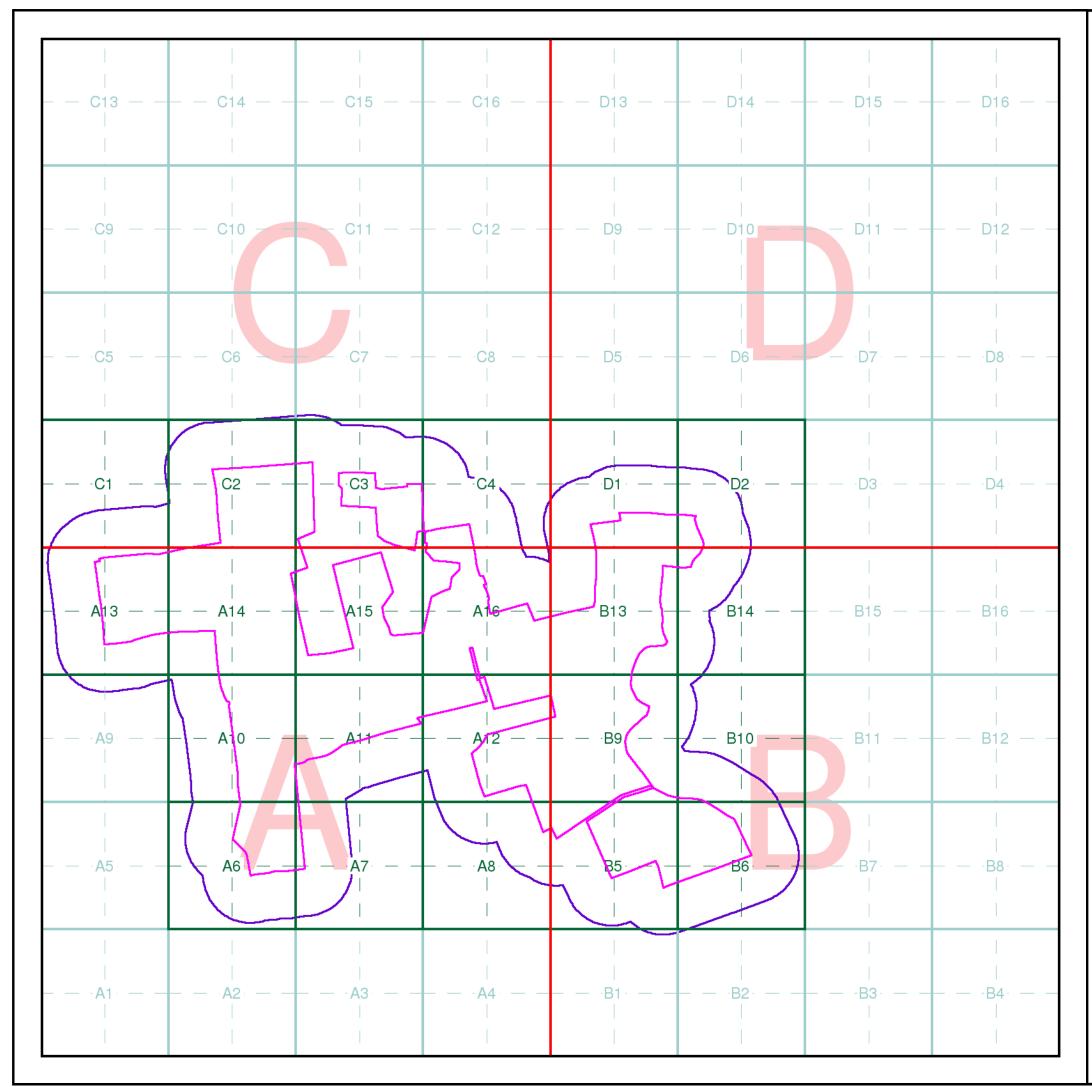
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# **Index Map**

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

#### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

#### Seament

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

# Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:









Envirocheck reports are compiled from 136 different sources of data.

# **Client Details**

Mr A Howells, Delta Simons, 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR

# **Order Details**

Order Number: 287331844\_1\_1
Customer Ref: 21-1098.02
National Grid Reference: 489180, 377430
Site Area (Ha): 331.04

Search Buffer (m): 331.04

# **Site Details**

West Burton 2

Full Terms and Conditions can be found on the following link: http://www.landmarkinfo.co.uk/Terms/Show/515



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