British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Infiltration SuDS Map

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and
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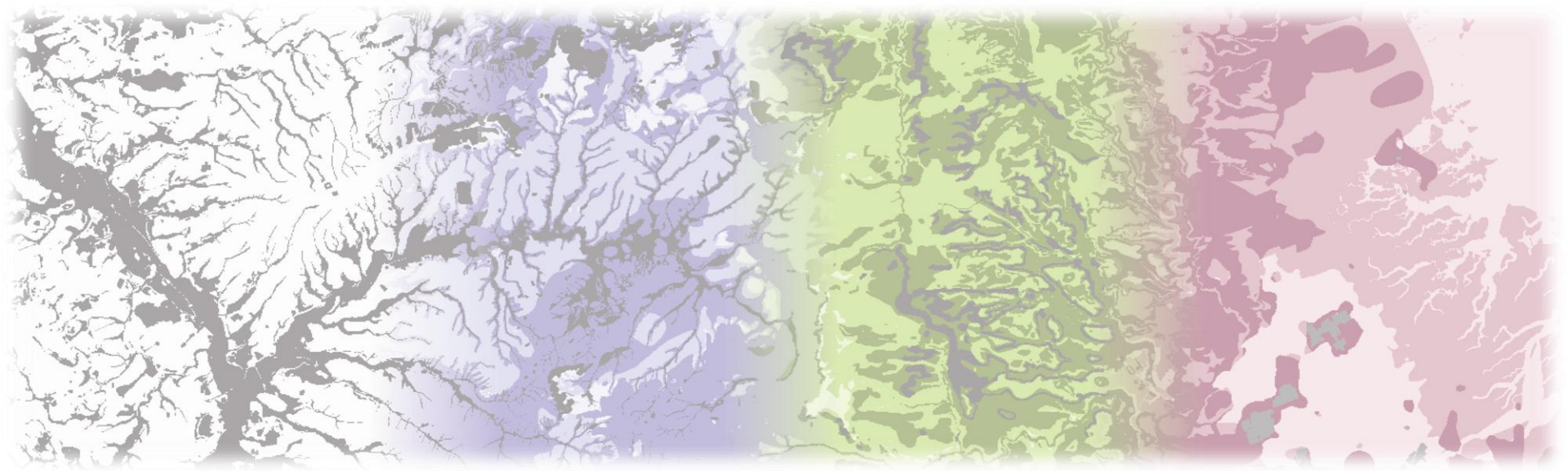
BGS was established in 1835 and is governed (and funded) by the Natural Environment Research Council, which reports to the Department of Business, Innovation and Skills.

We are a public sector, not for profit organisation with a turnover of £50M, of which 50% is sourced commercially.

We are a world-leading geoscience centre for:

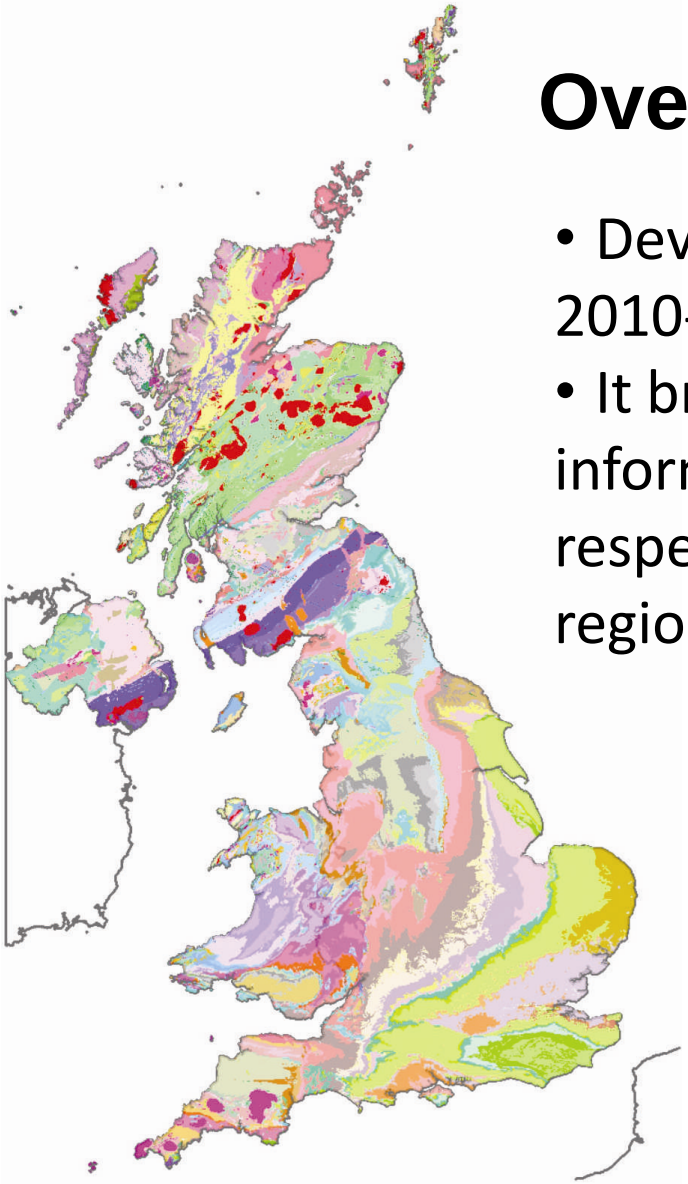
- survey and monitoring
- modelling and research
- data and knowledge

NATURAL ENVIRONMENT RESEARCH COUNCIL



Infiltration SuDS Map

A national map that provides the information necessary to assess the suitability of the subsurface for infiltration SuDS



Overview

- Developed internally within BGS between 2010-2012 and released in February this year
- It brings together a wealth of subsurface information to help decision making with respect to infiltration SuDS at both local and regional scale.

- Made ground
- Susceptibility to groundwater flooding
- Superficial deposit permeability
- Superficial deposit thickness
- Bedrock permeability
- Depth to water table
- Geo. indicators of flooding
- Soluble rocks
- Landslides
- Shallow mining (non-coal)
- Collapsible ground
- Compressible ground
- Running sand
- Swelling clays
- Predominant aquifer flow mechanism
- Groundwater source protection zones

Who is it for?

- For those involved with the assessment of the ground for infiltration SuDS (developers, planners, consultants)
- For local authority SuDS Approval Bodies

Soakaway

Wetland

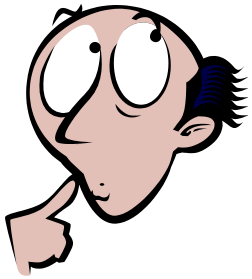
Infiltration basin

Permeable paving

Which would you choose?

Infiltration SuDS and ground compatibility

Key questions…

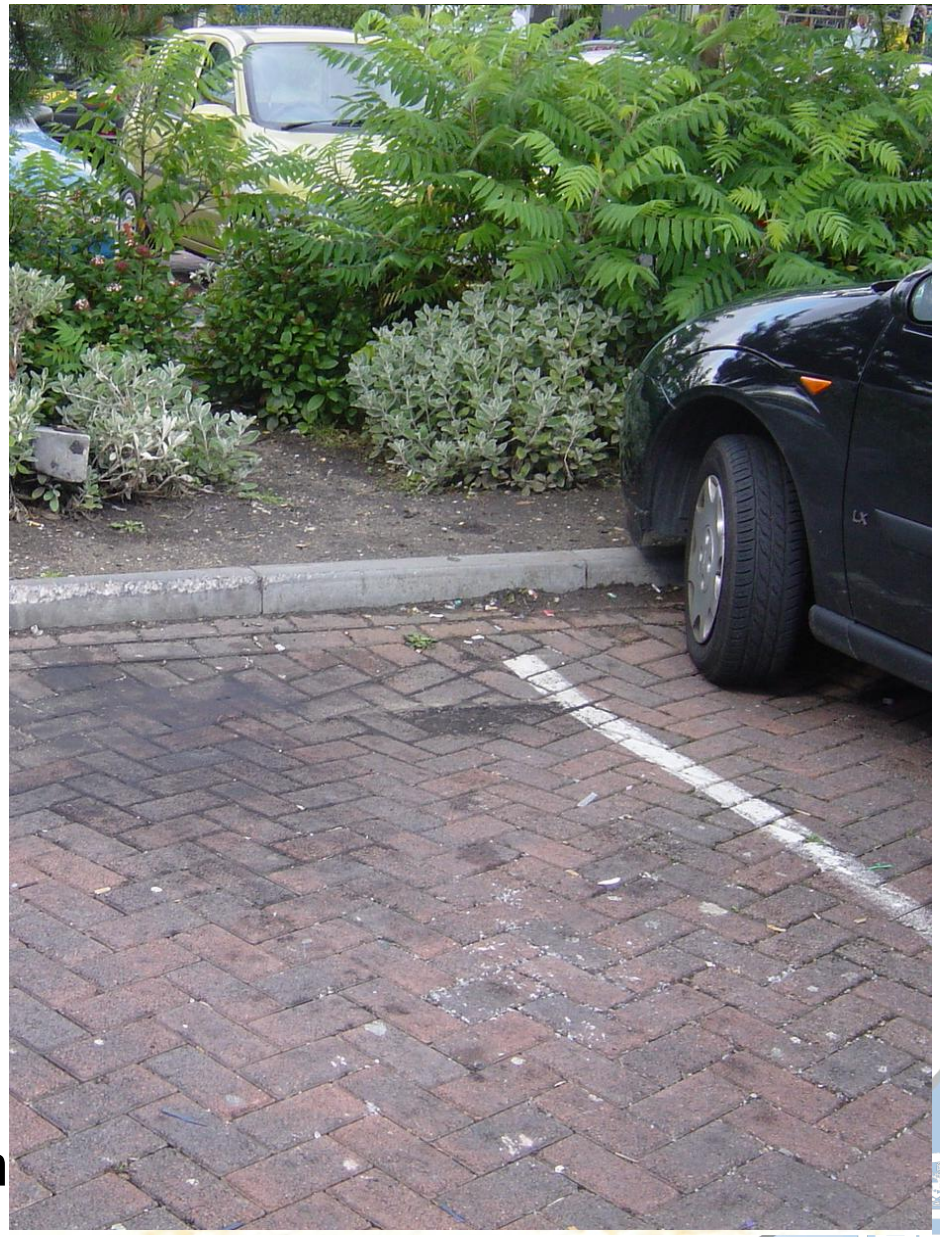


1. Are there any significant constraints that should be considered?

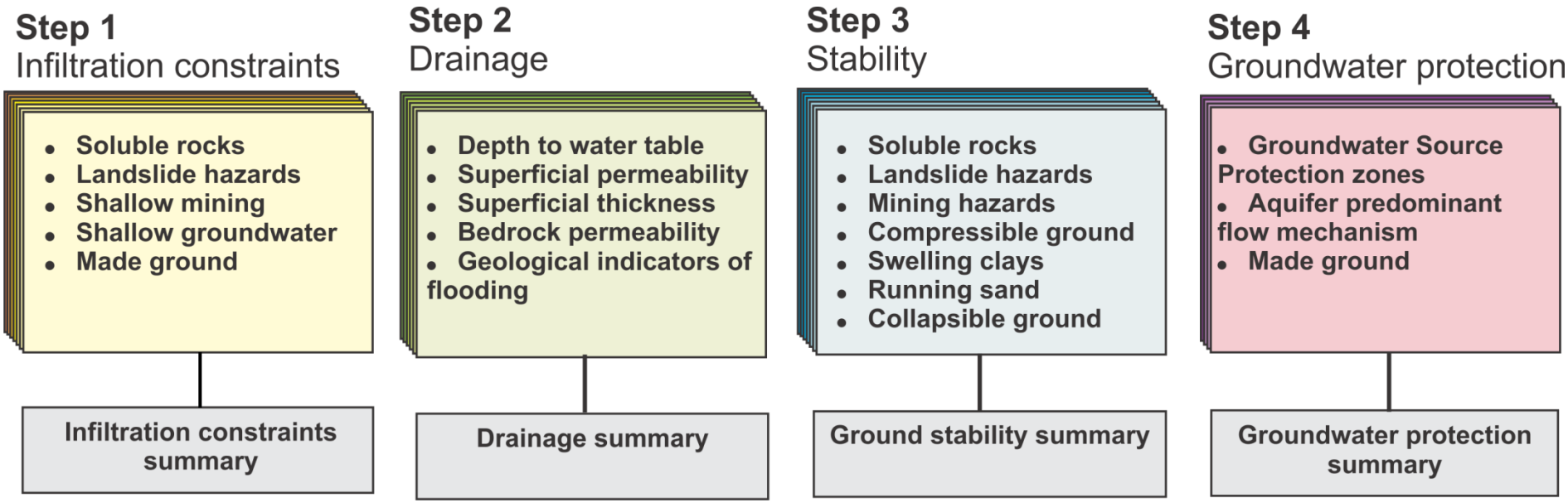
2. What is the drainage potential of the ground?

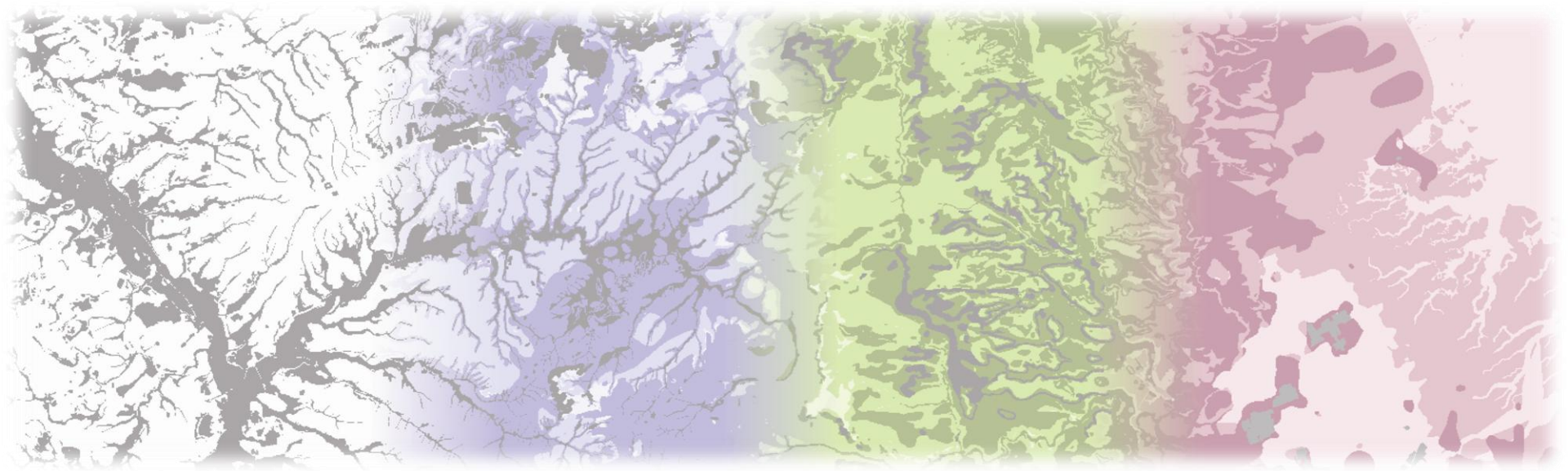
3. Are there any ground stability considerations?

4. Is groundwater likely to be susceptible to a deterioration in quality?



Infiltration SuDS Map structure

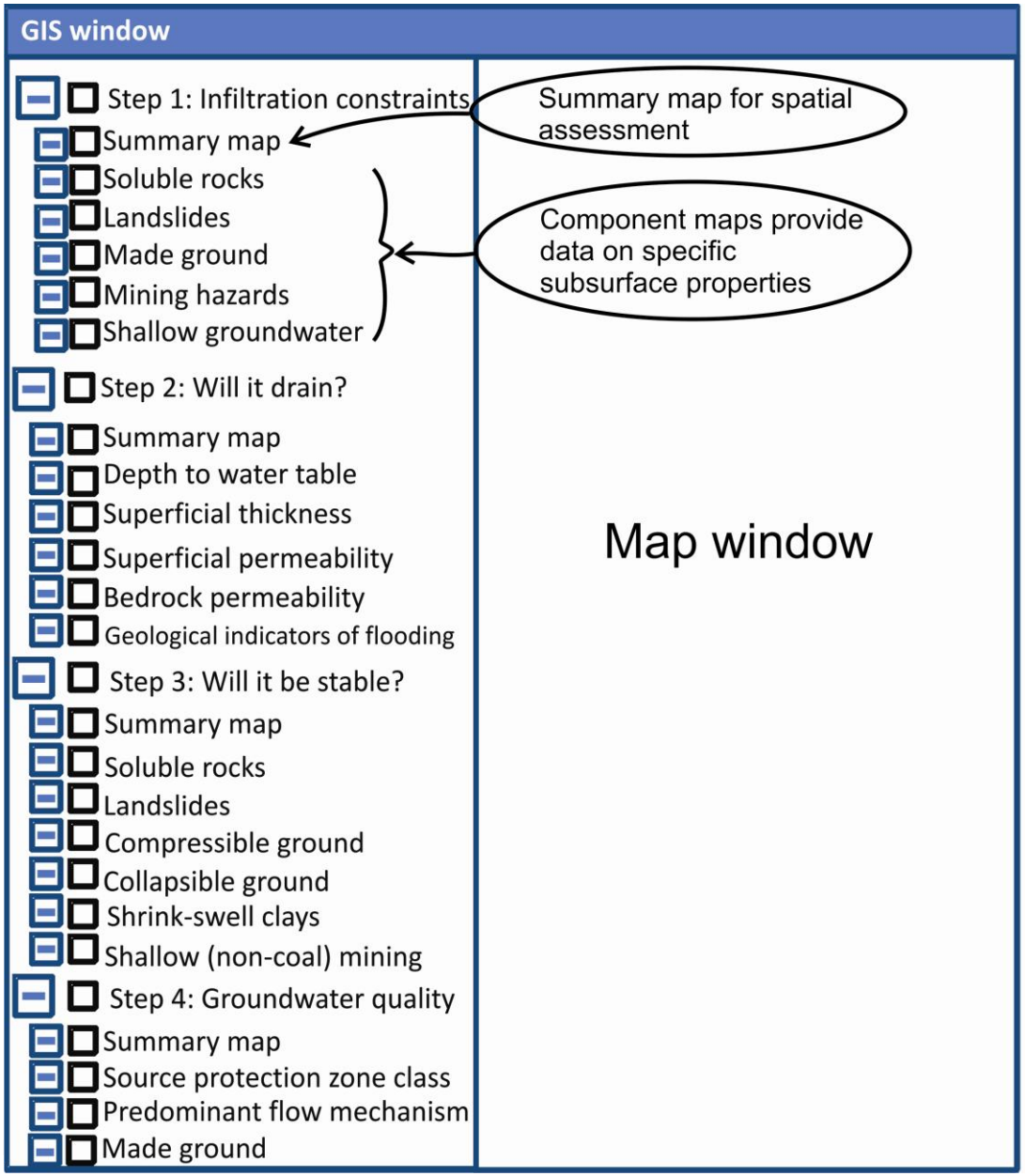


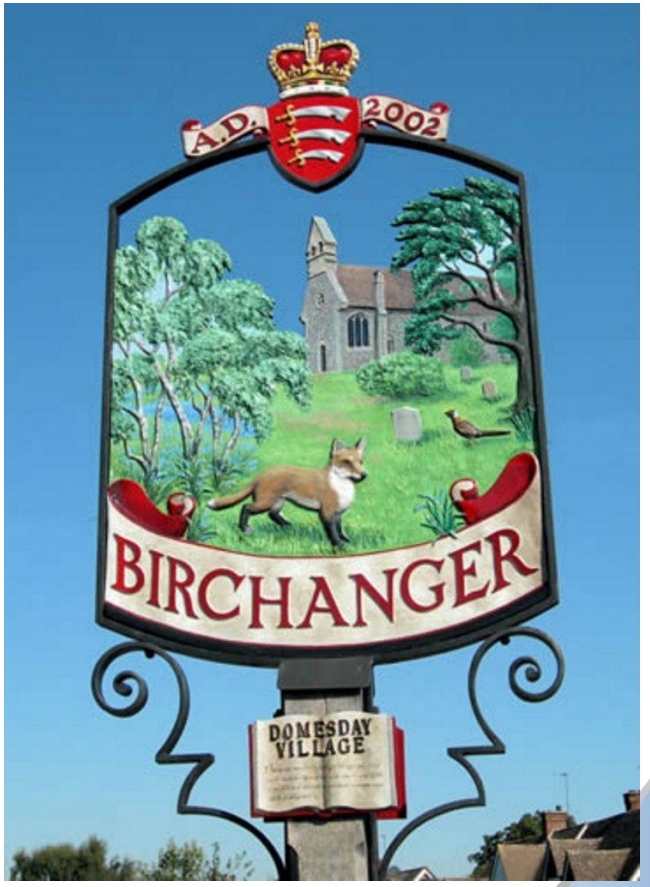


Infiltration SuDS Map: Detailed

Intended for use at a local scale to determine the suitability of the subsurface for infiltration SuDS

Infiltration SuDS Map GIS window





Infiltration SuDS constraints

Infiltration SuDS Drainage

Infiltration SuDS Ground stability

Infiltration SuDS GW protection

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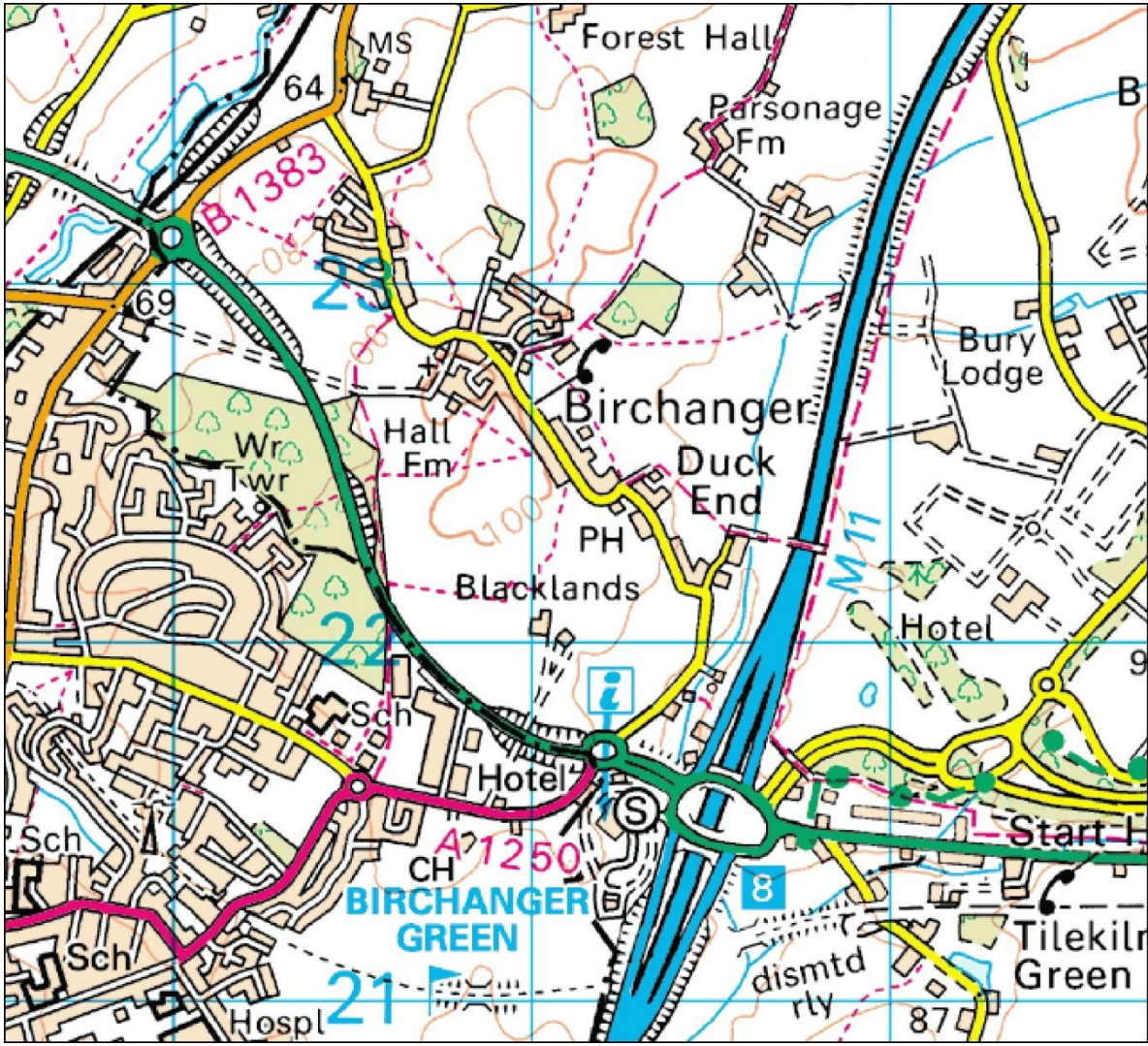

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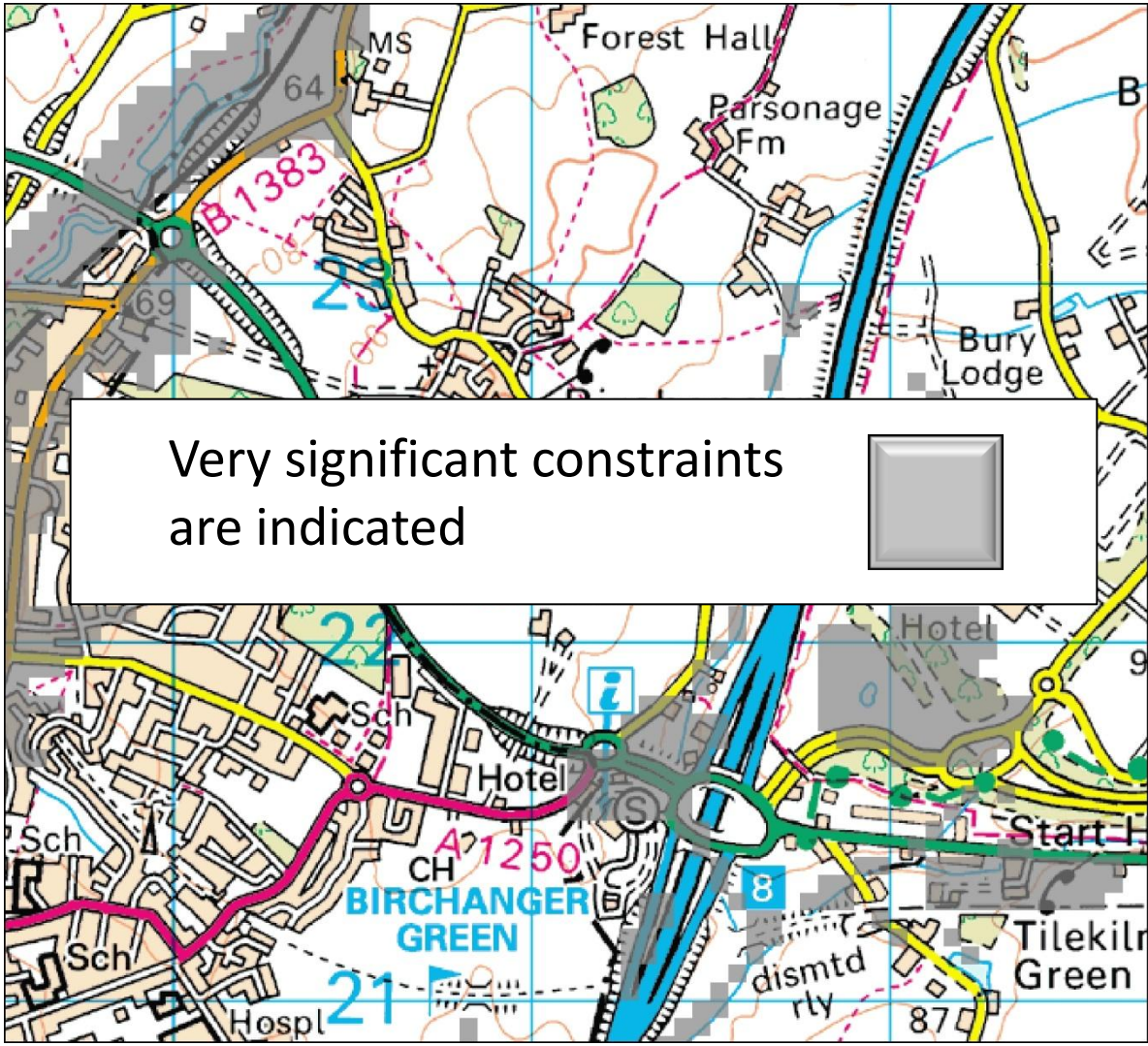

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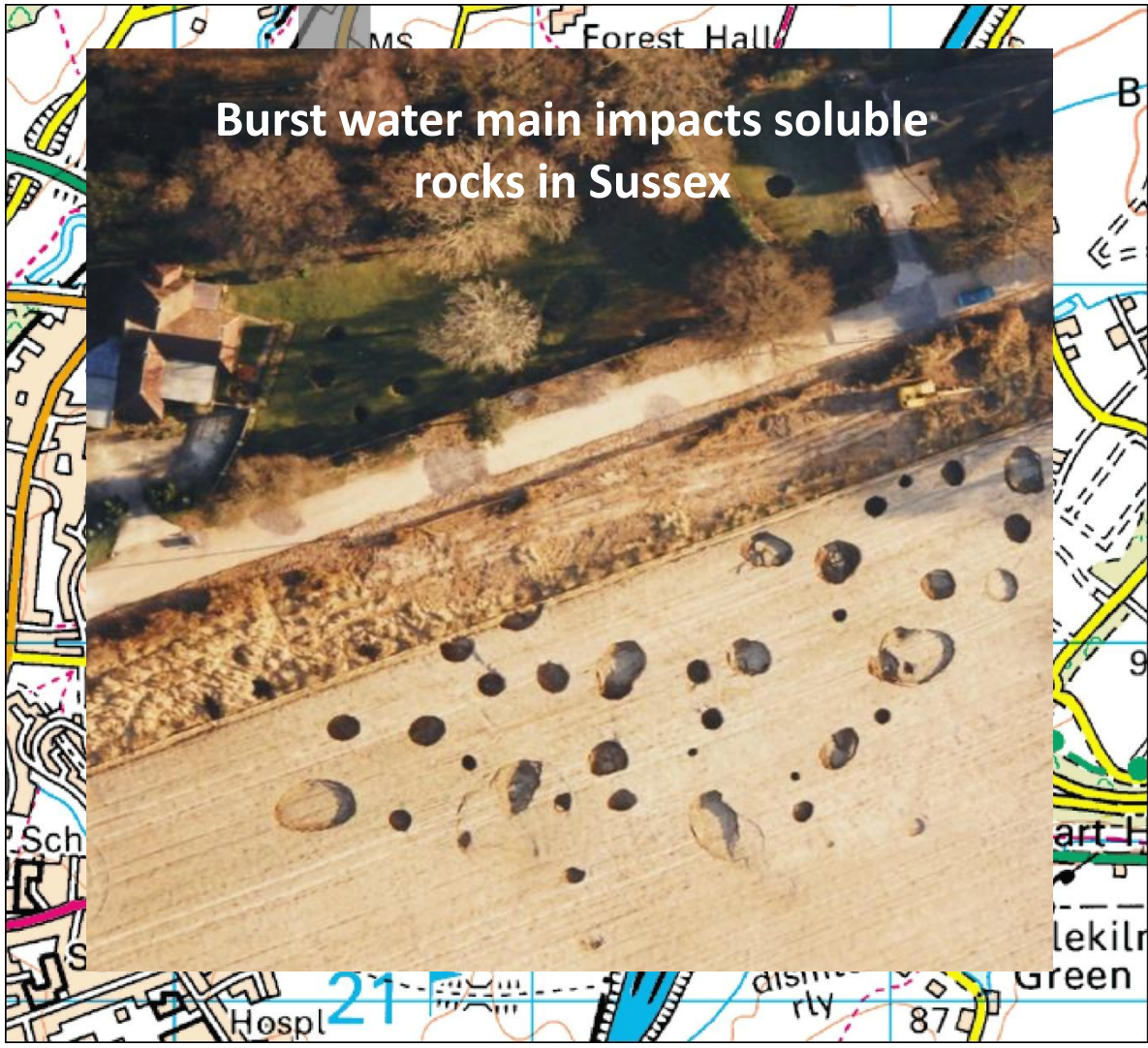

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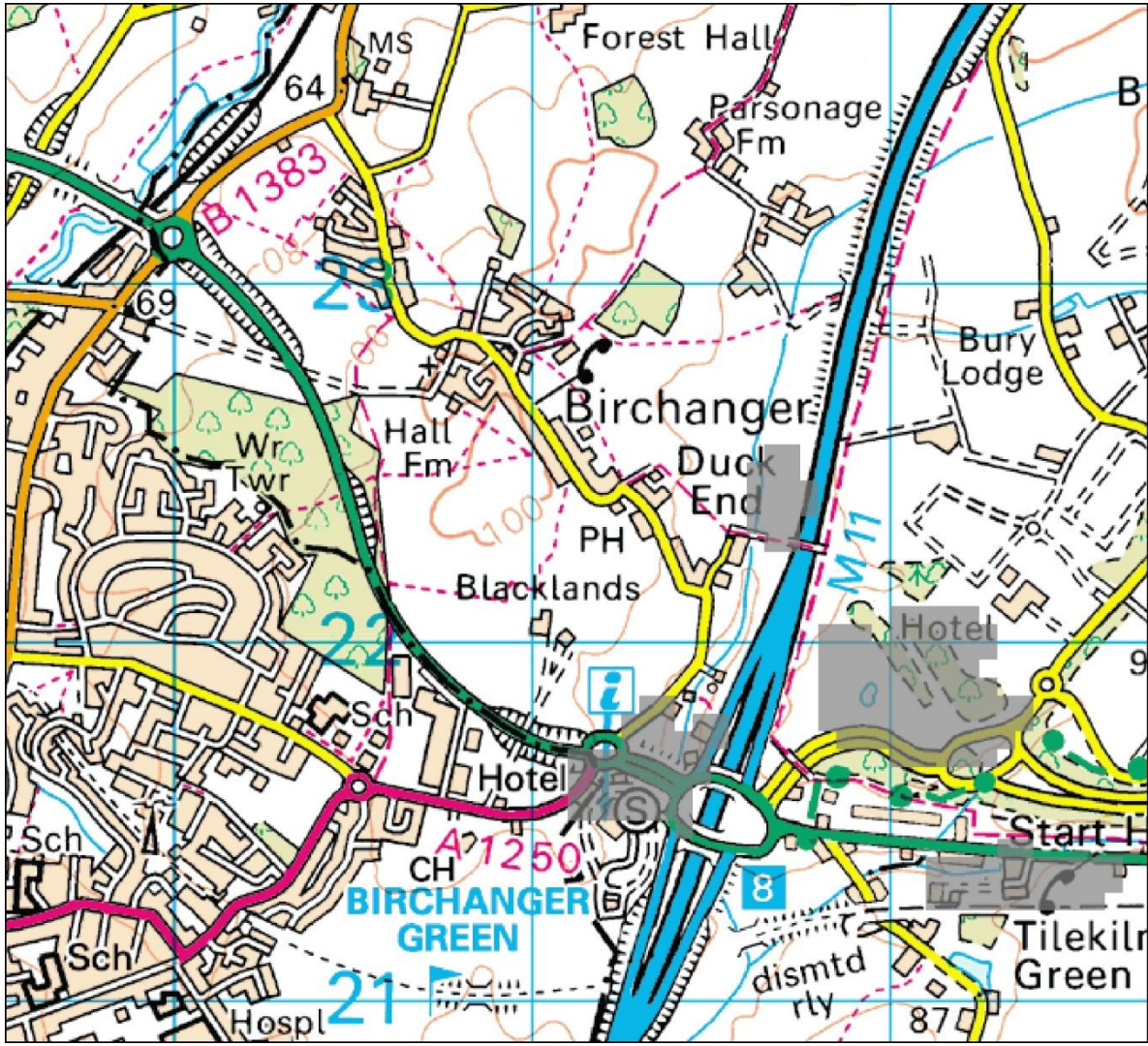

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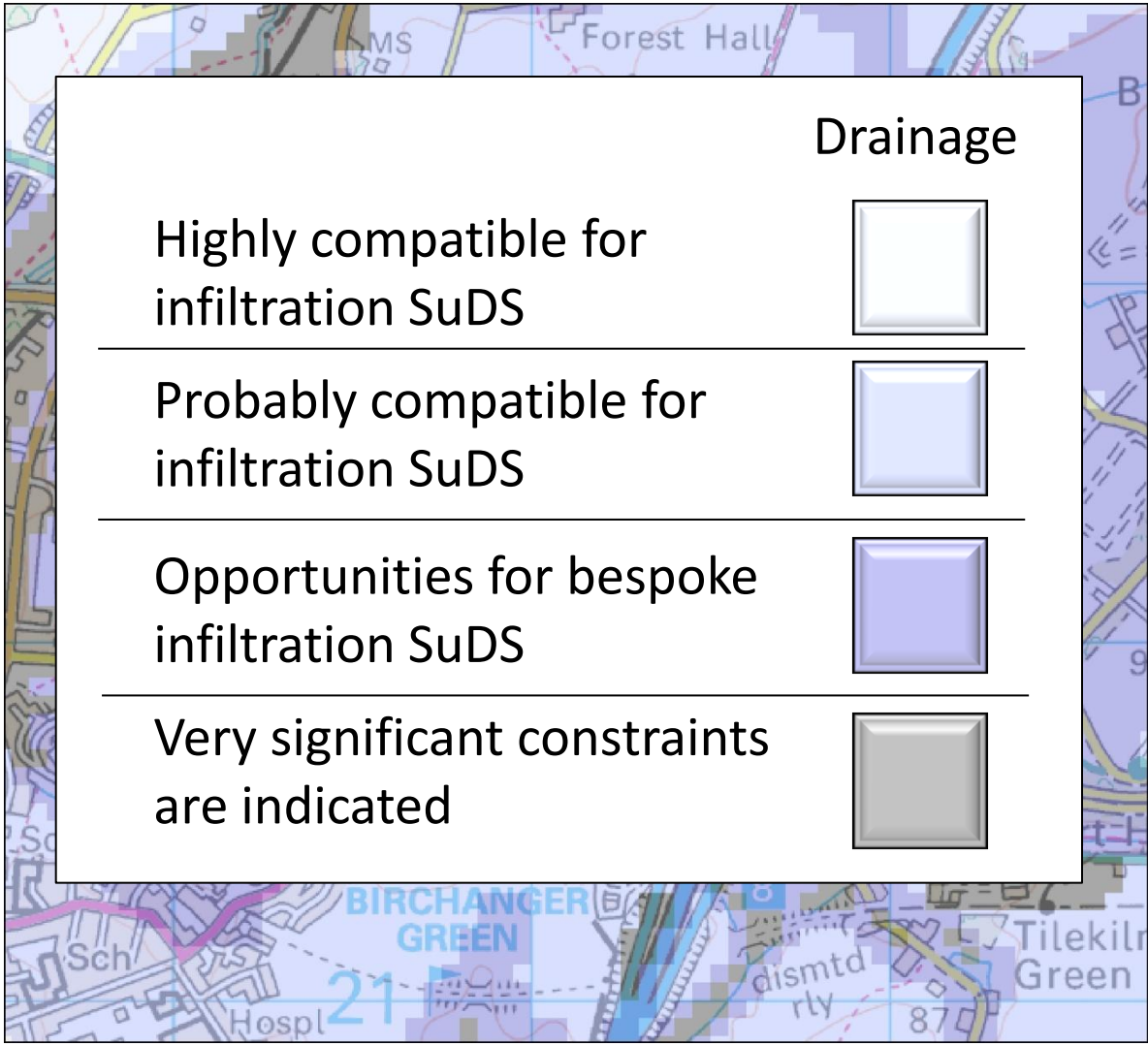

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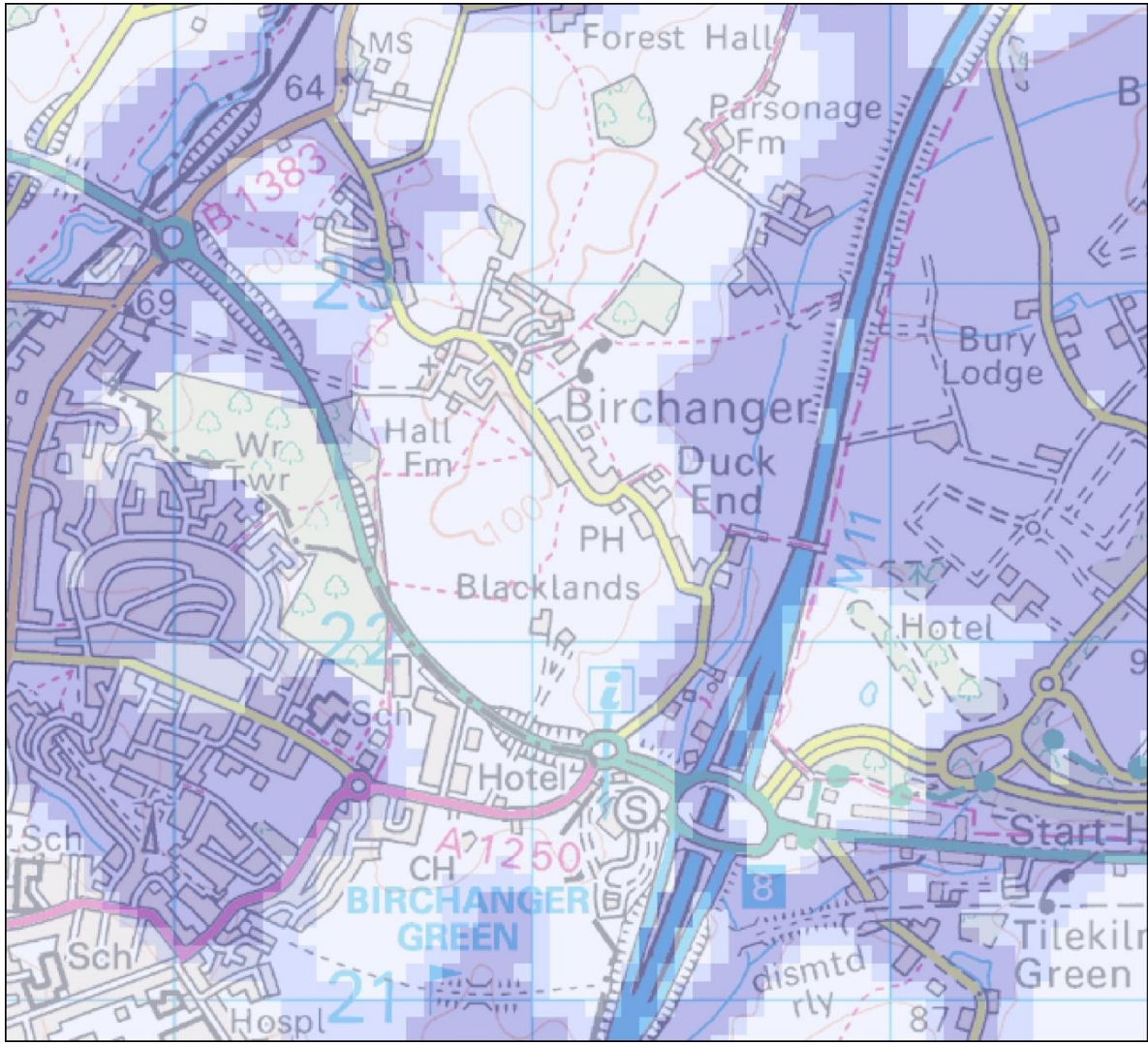

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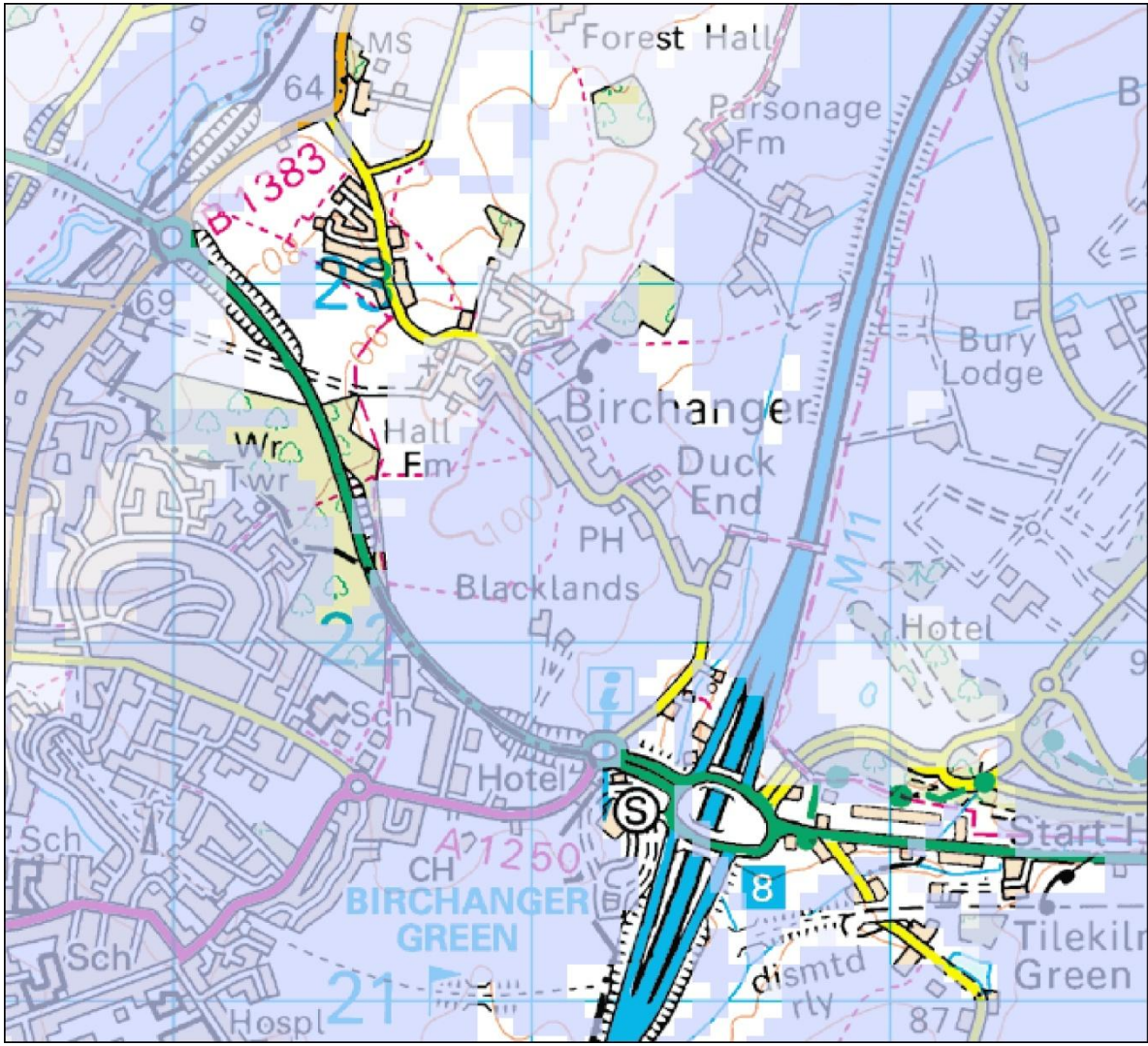

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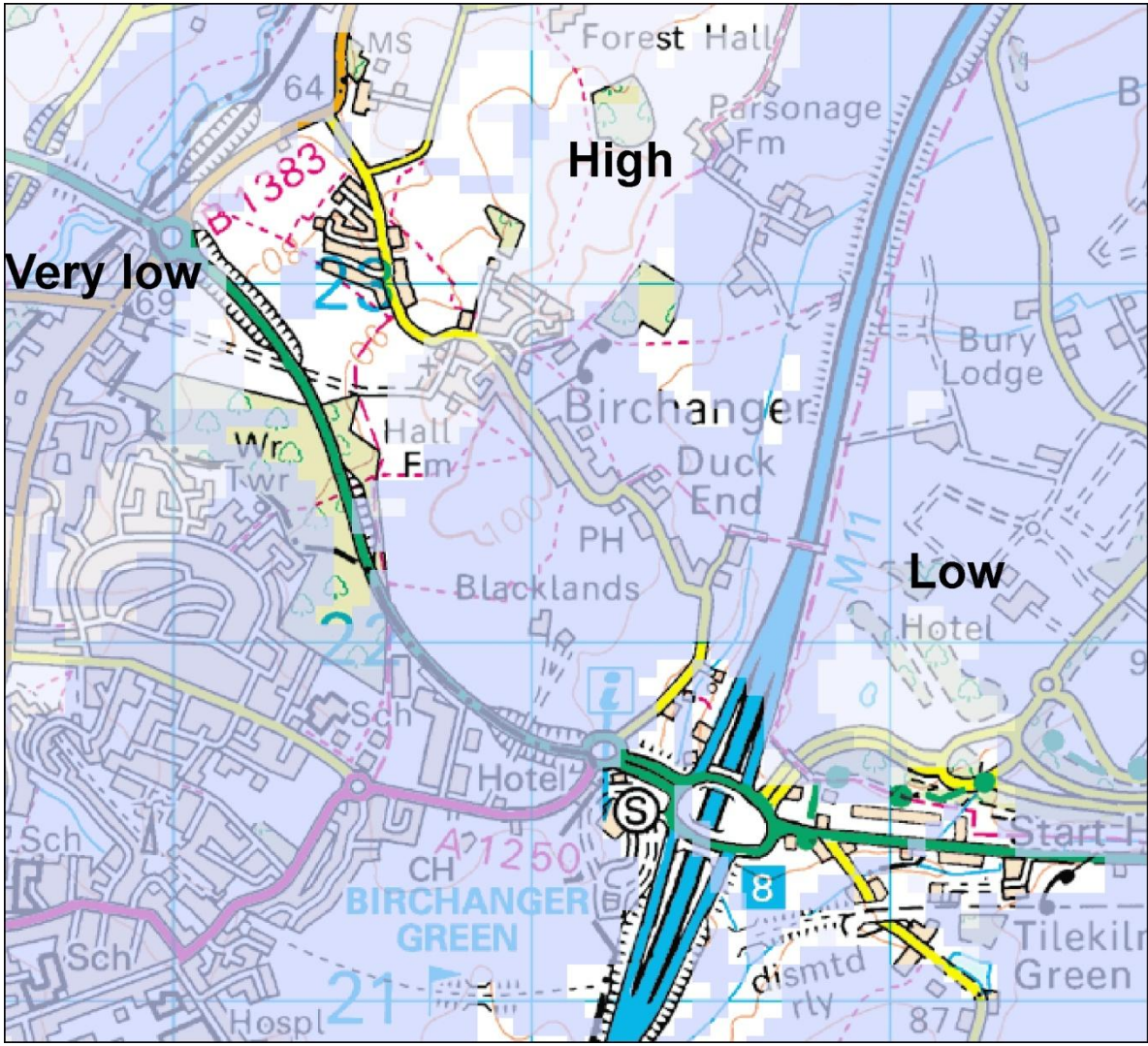

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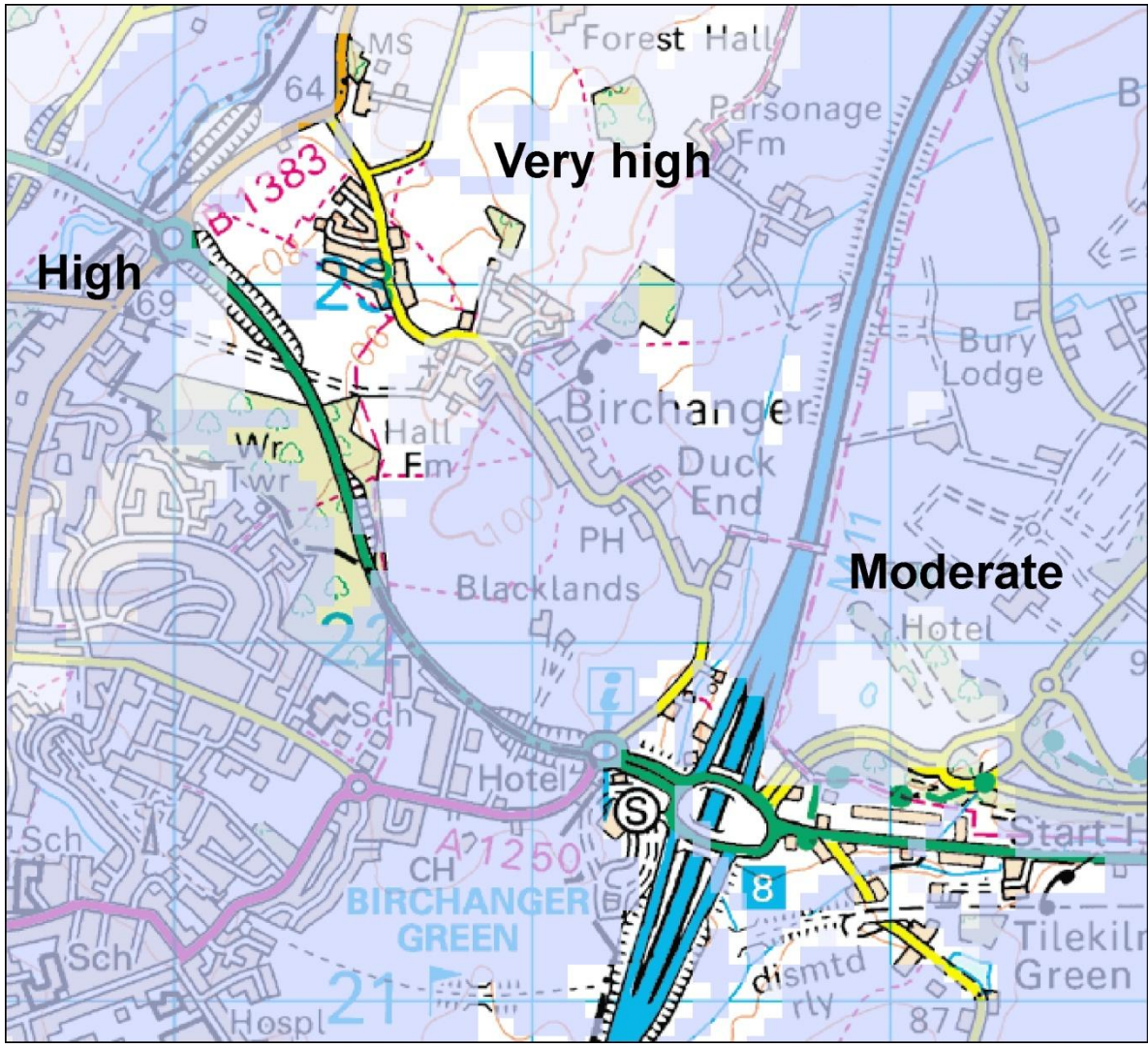

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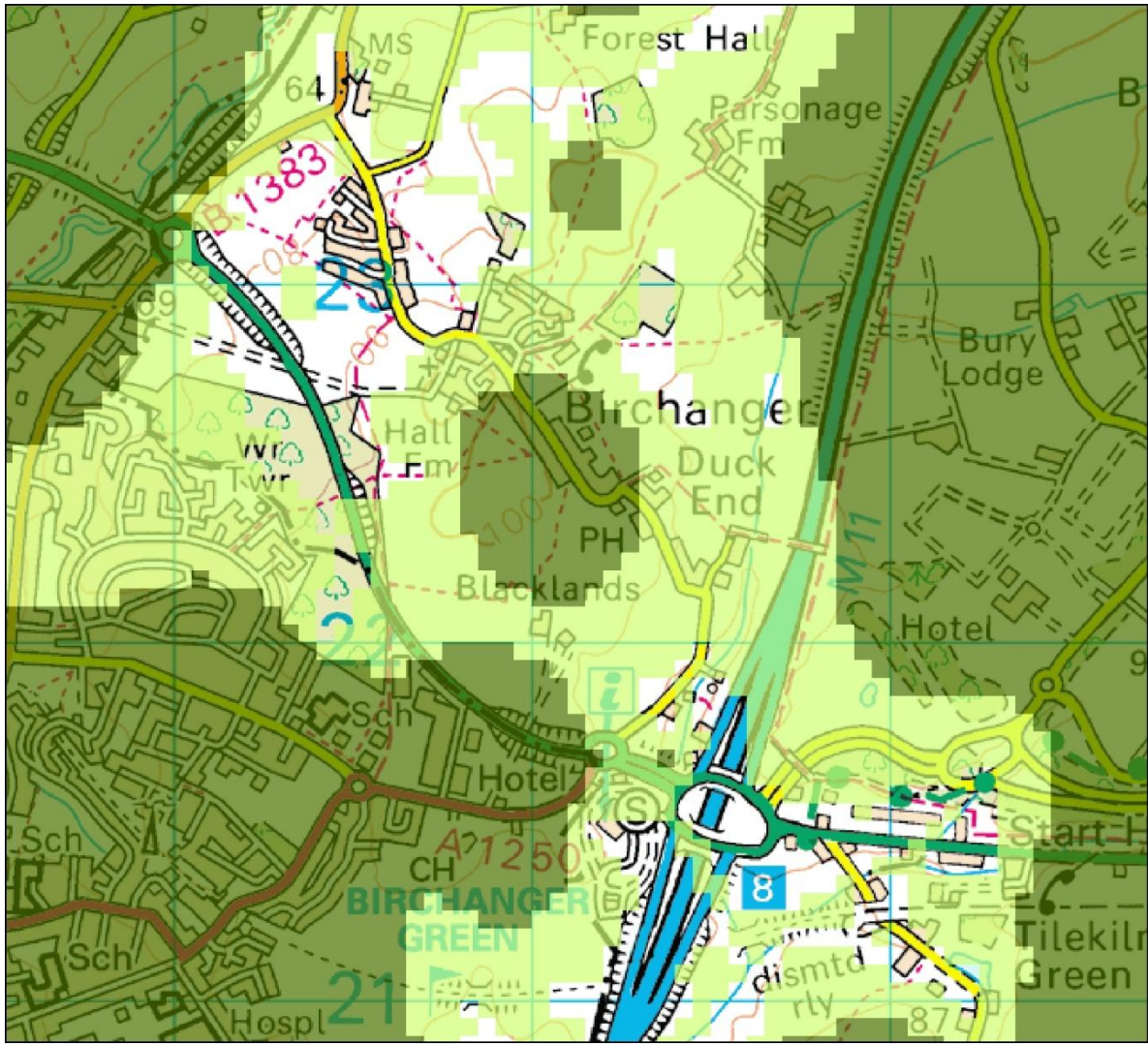

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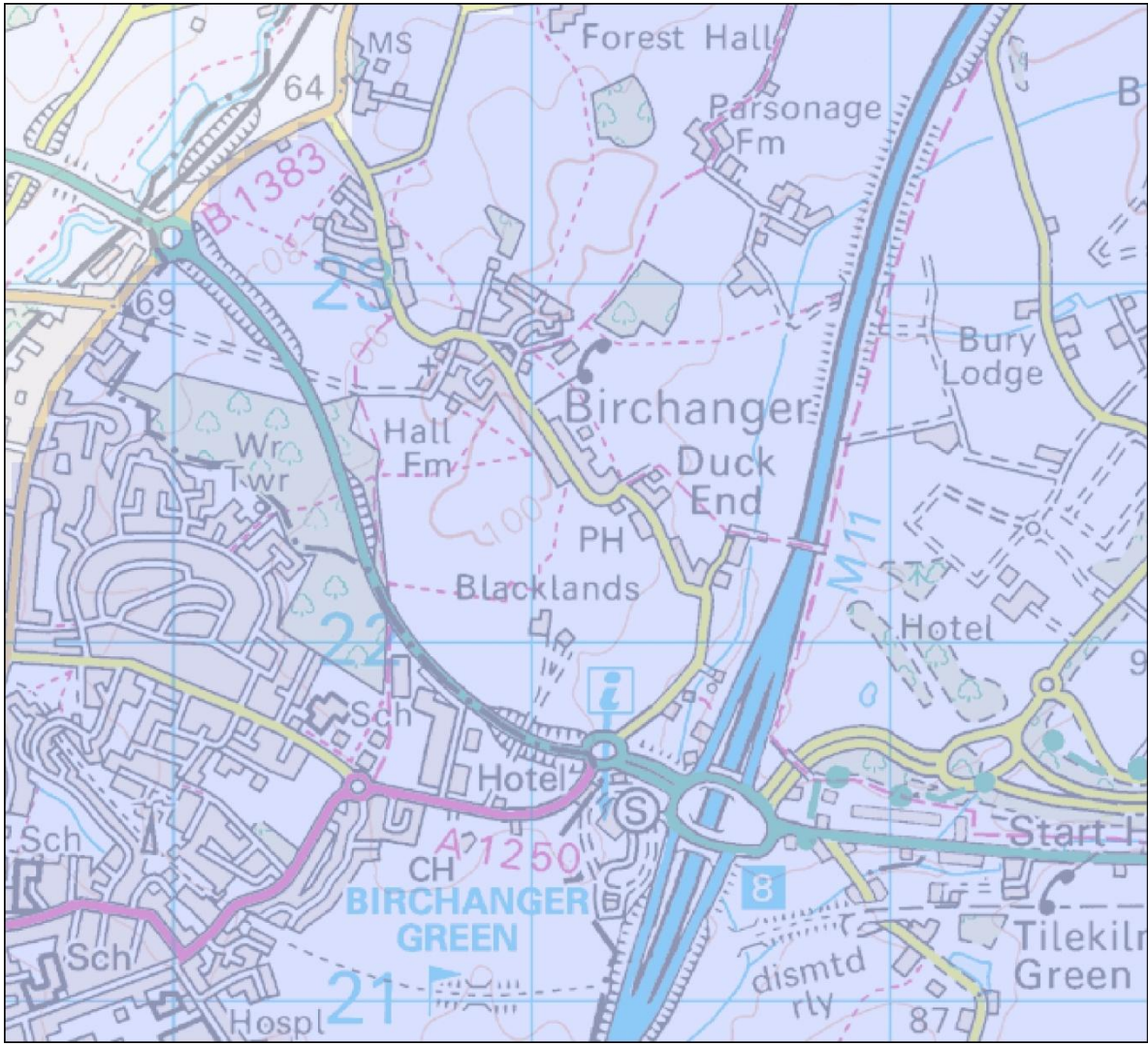

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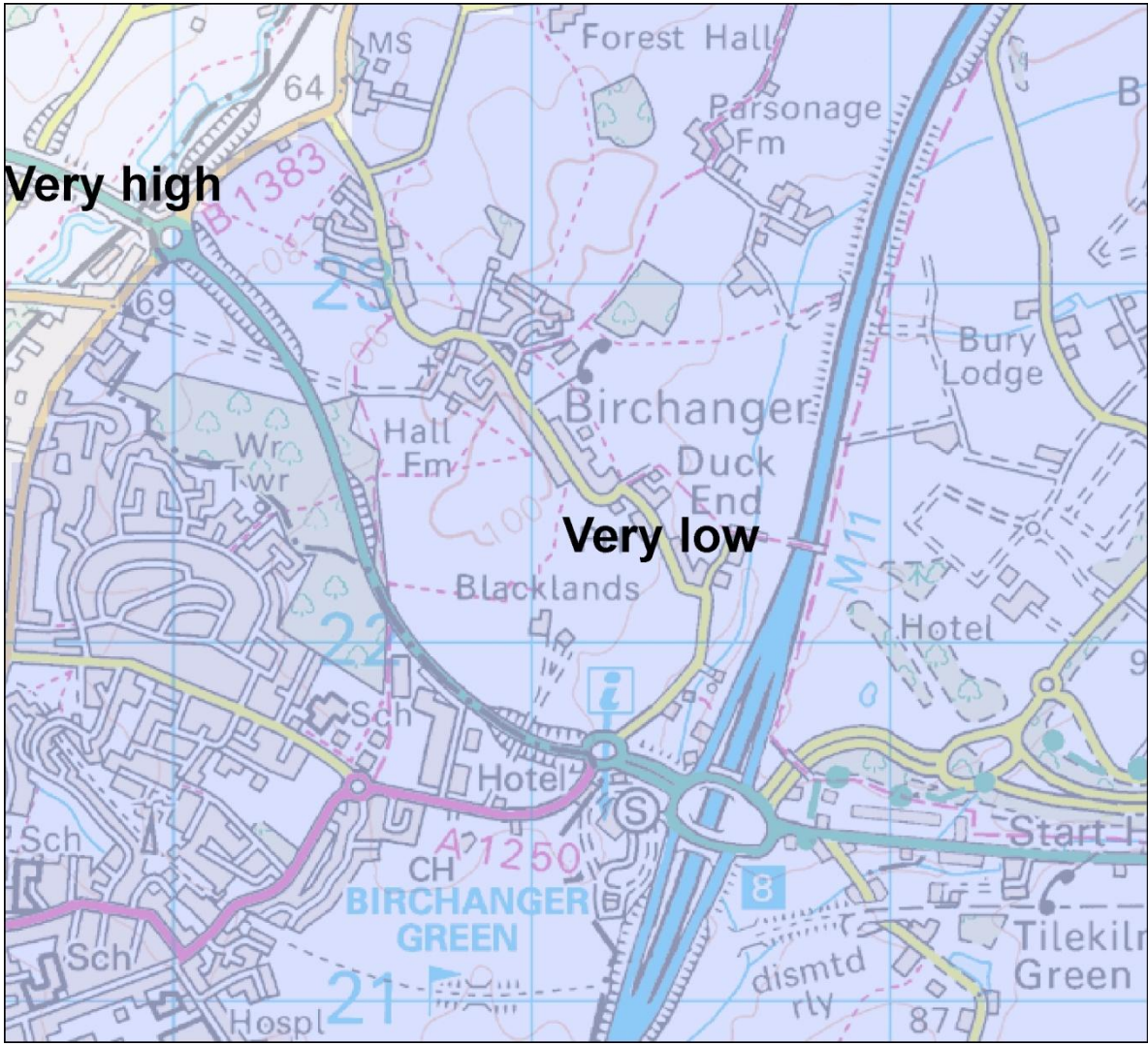

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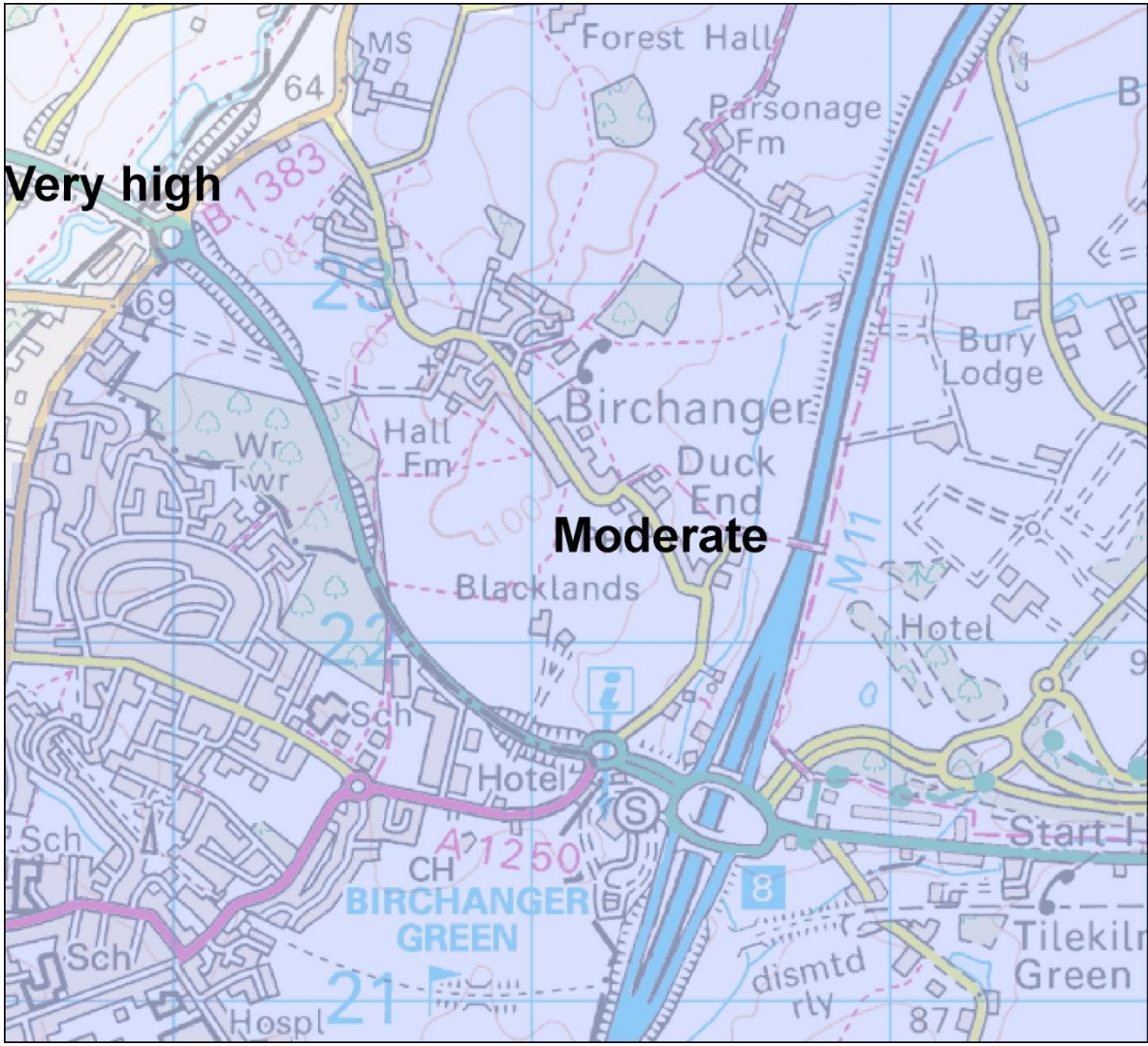

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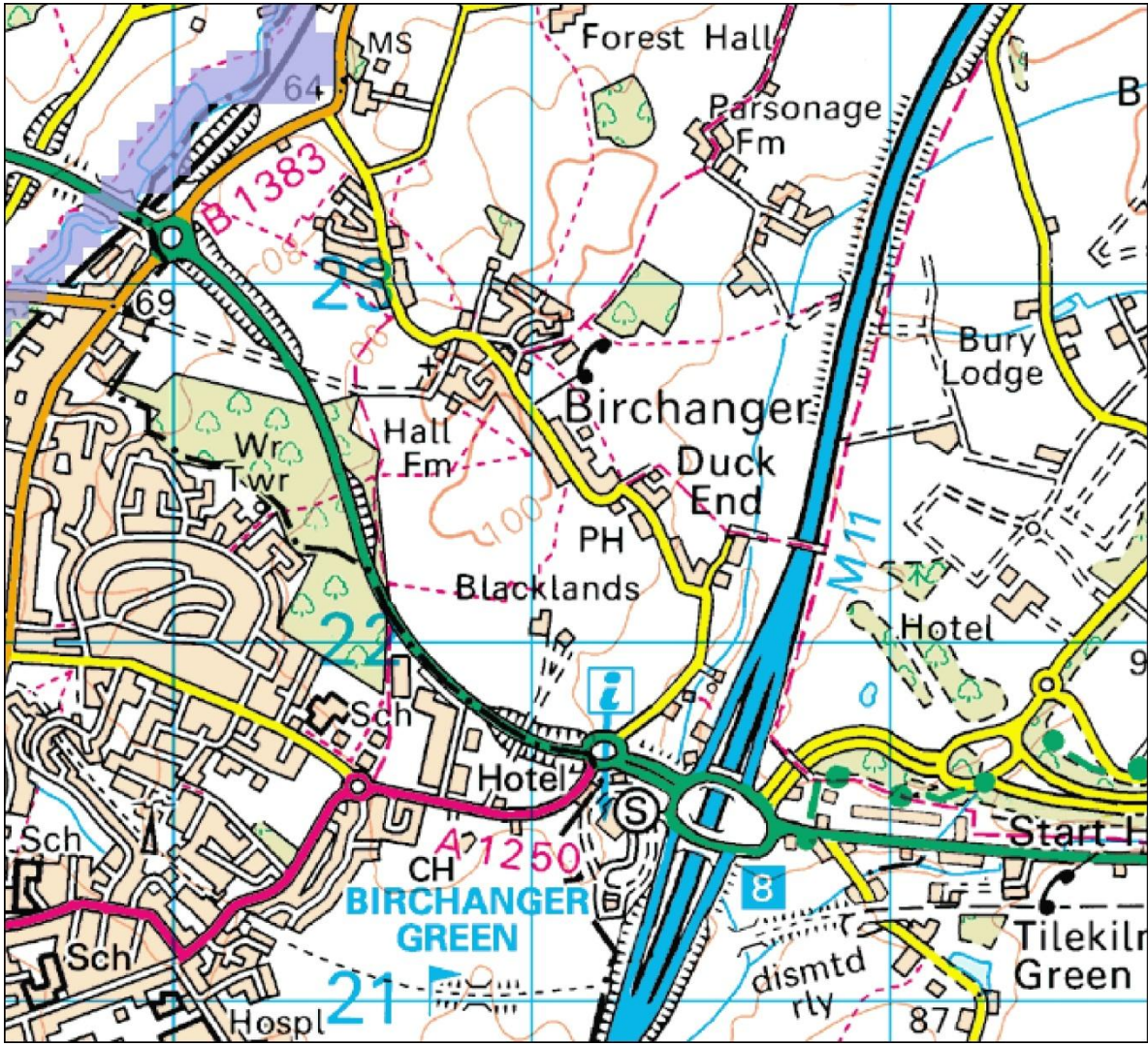

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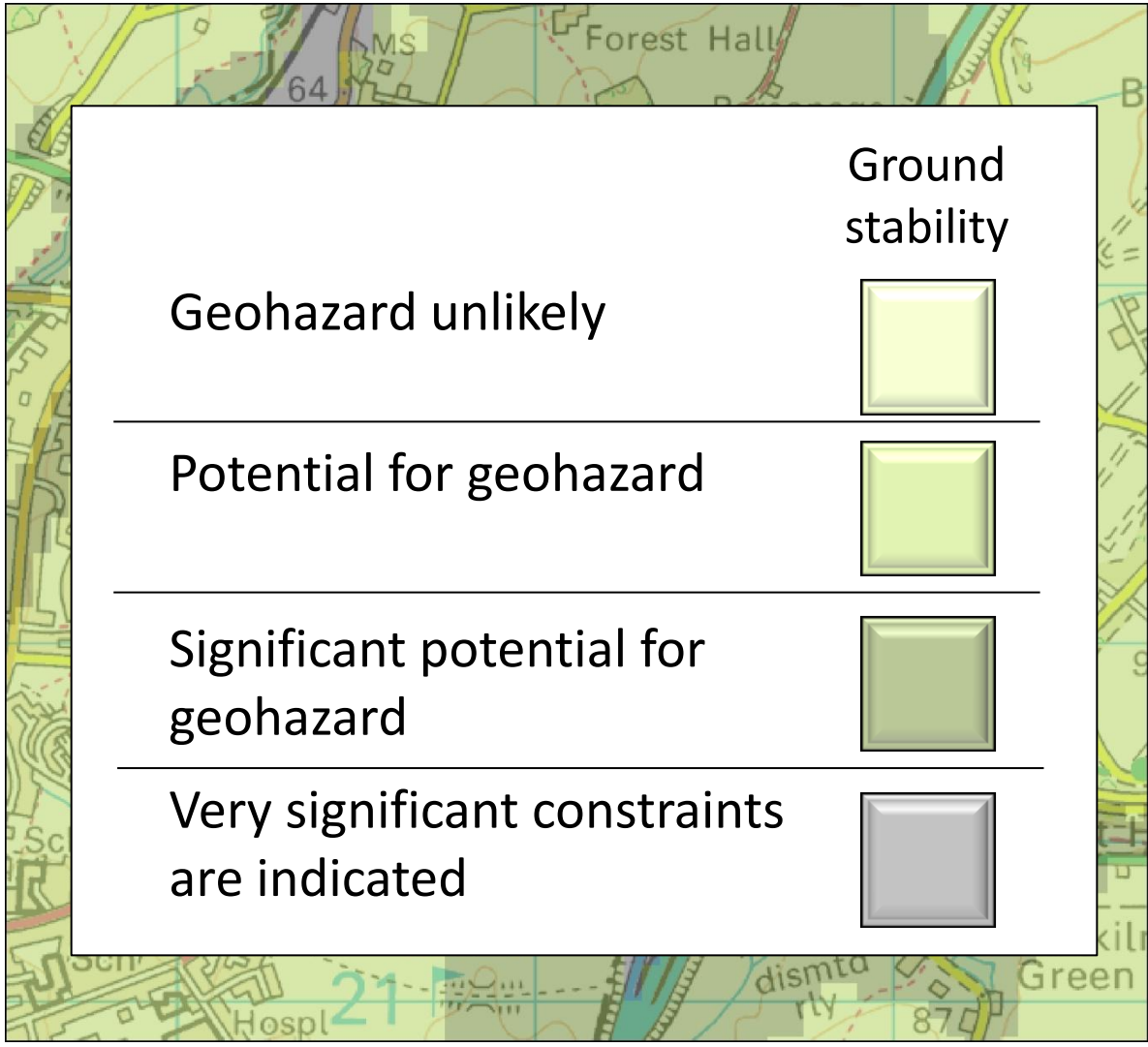

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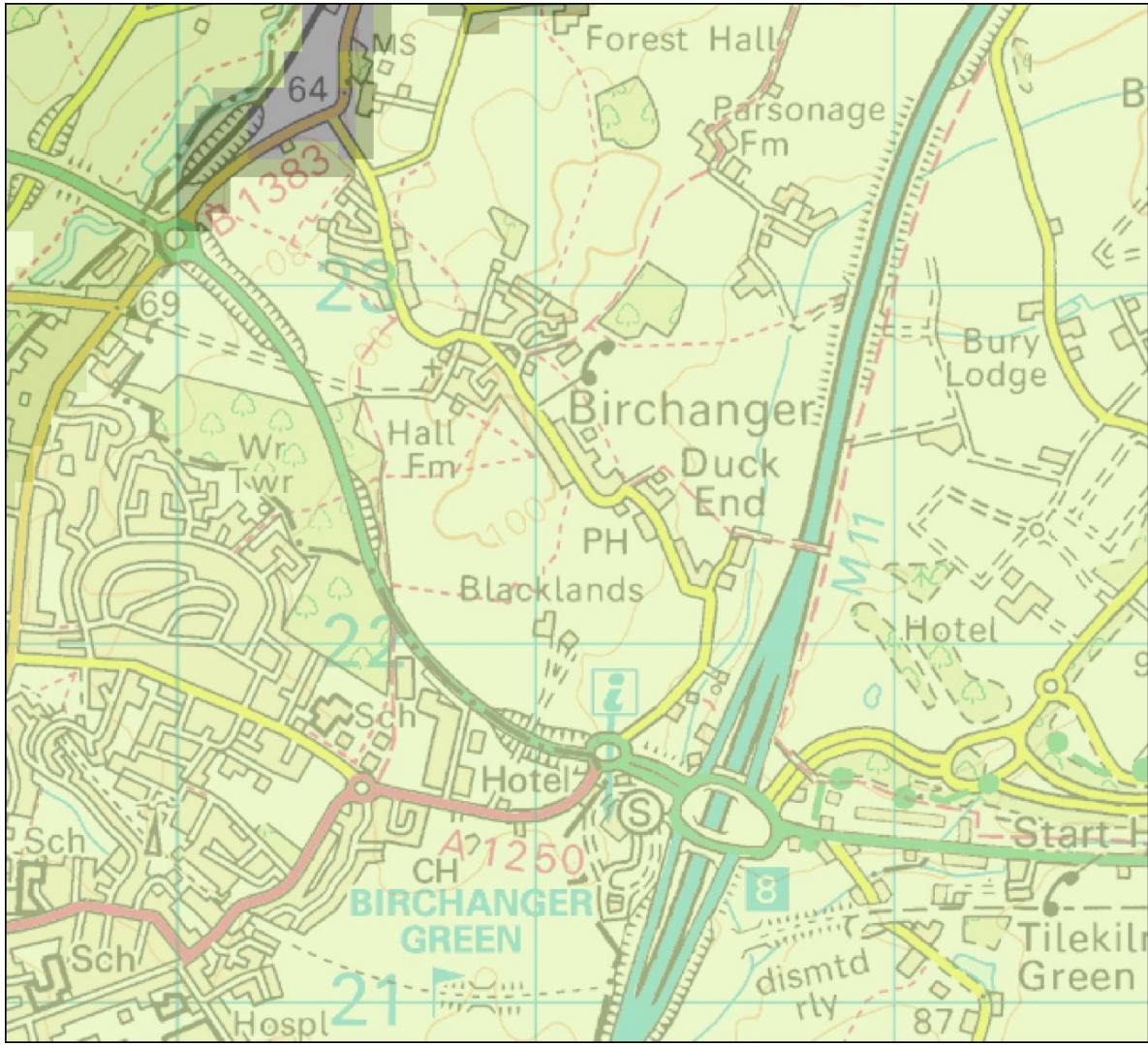

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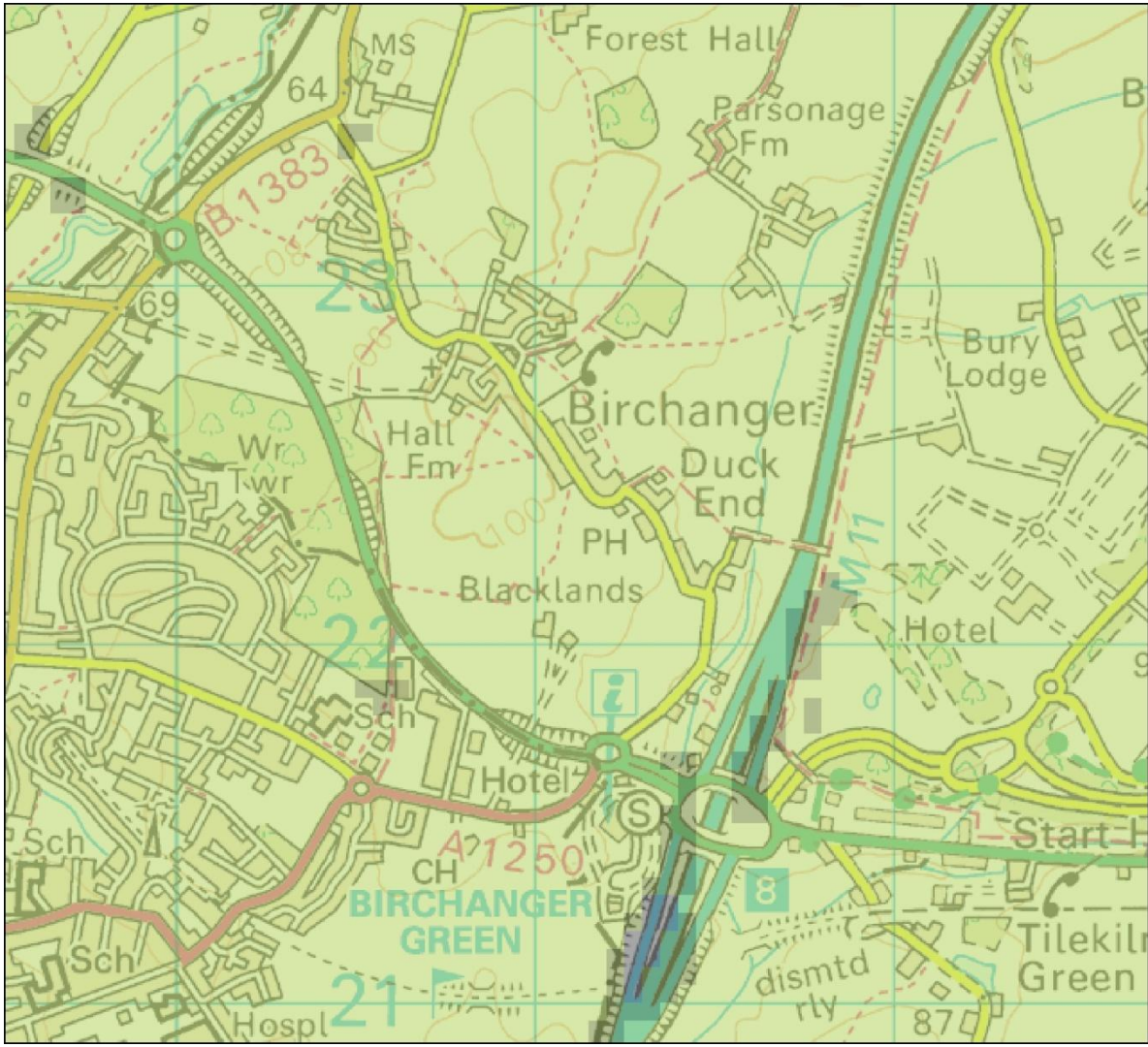

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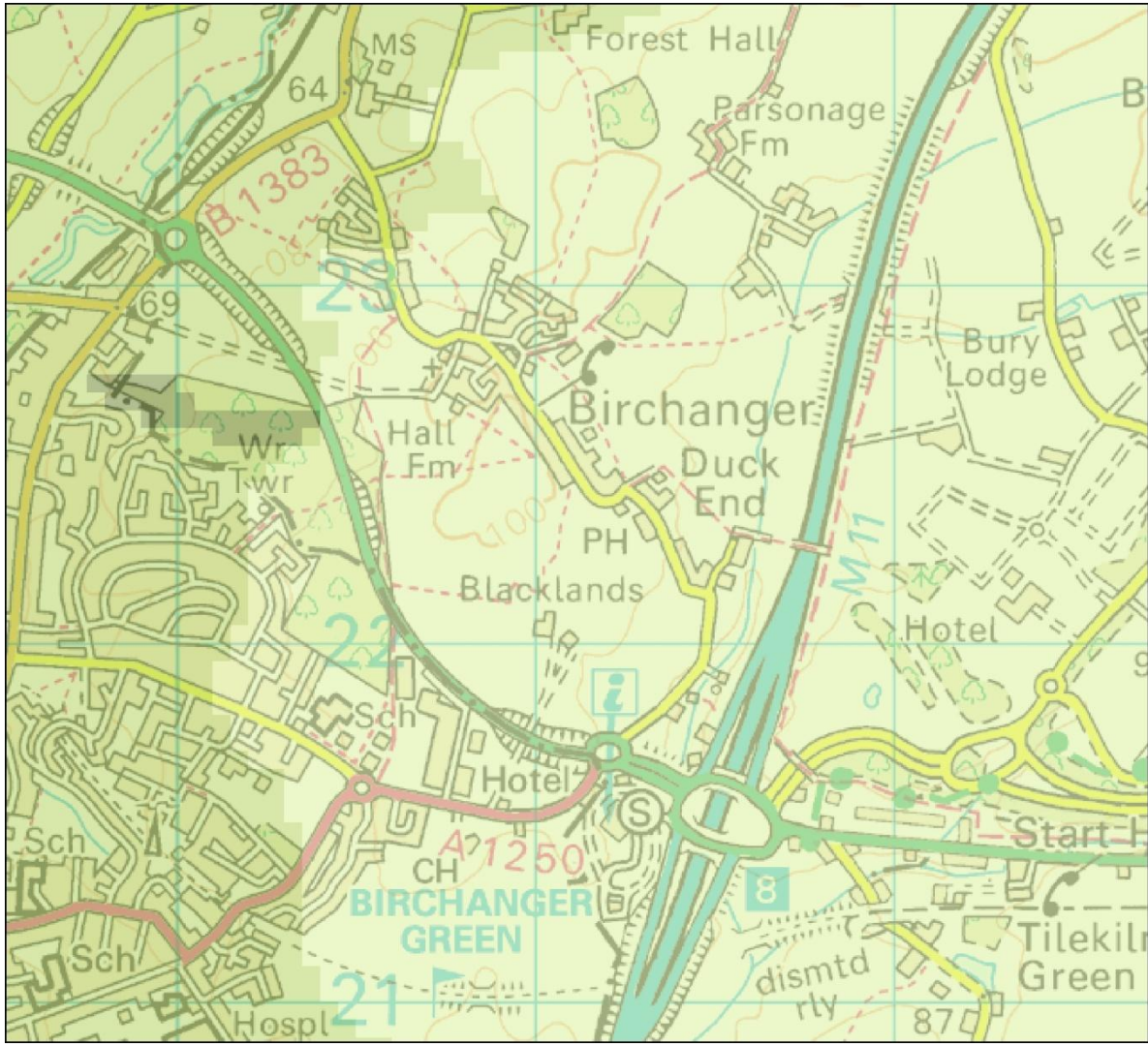

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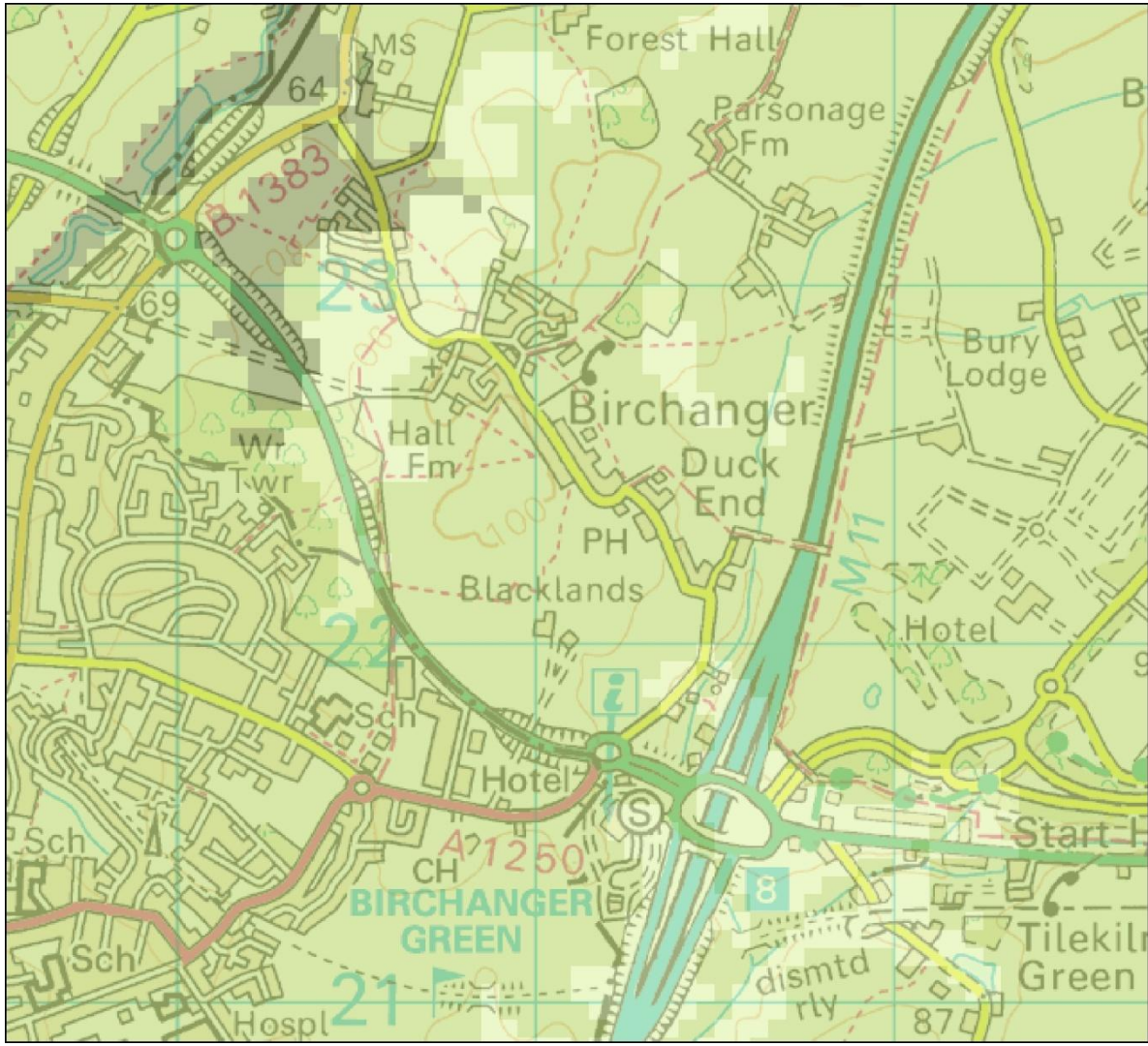

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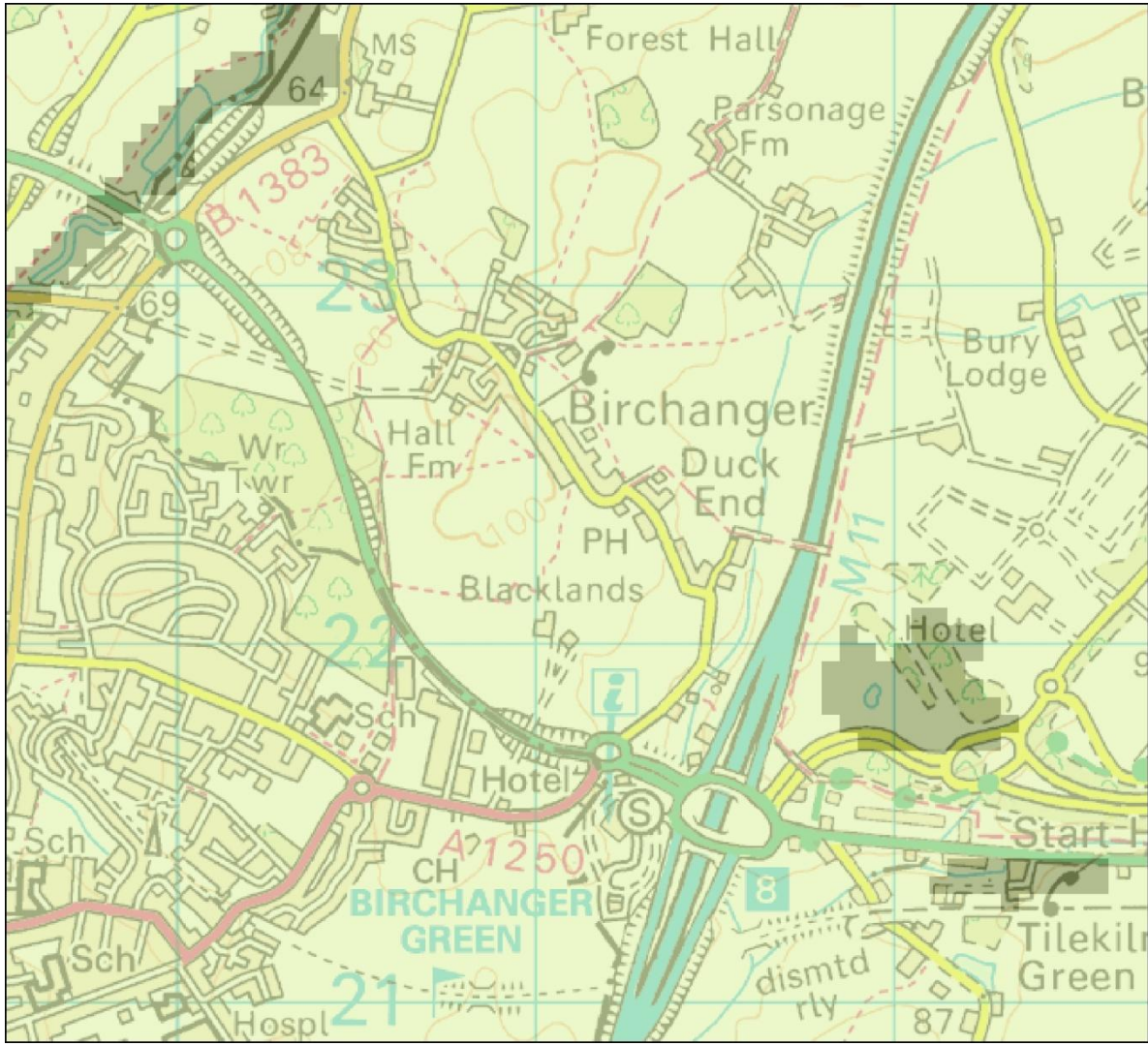

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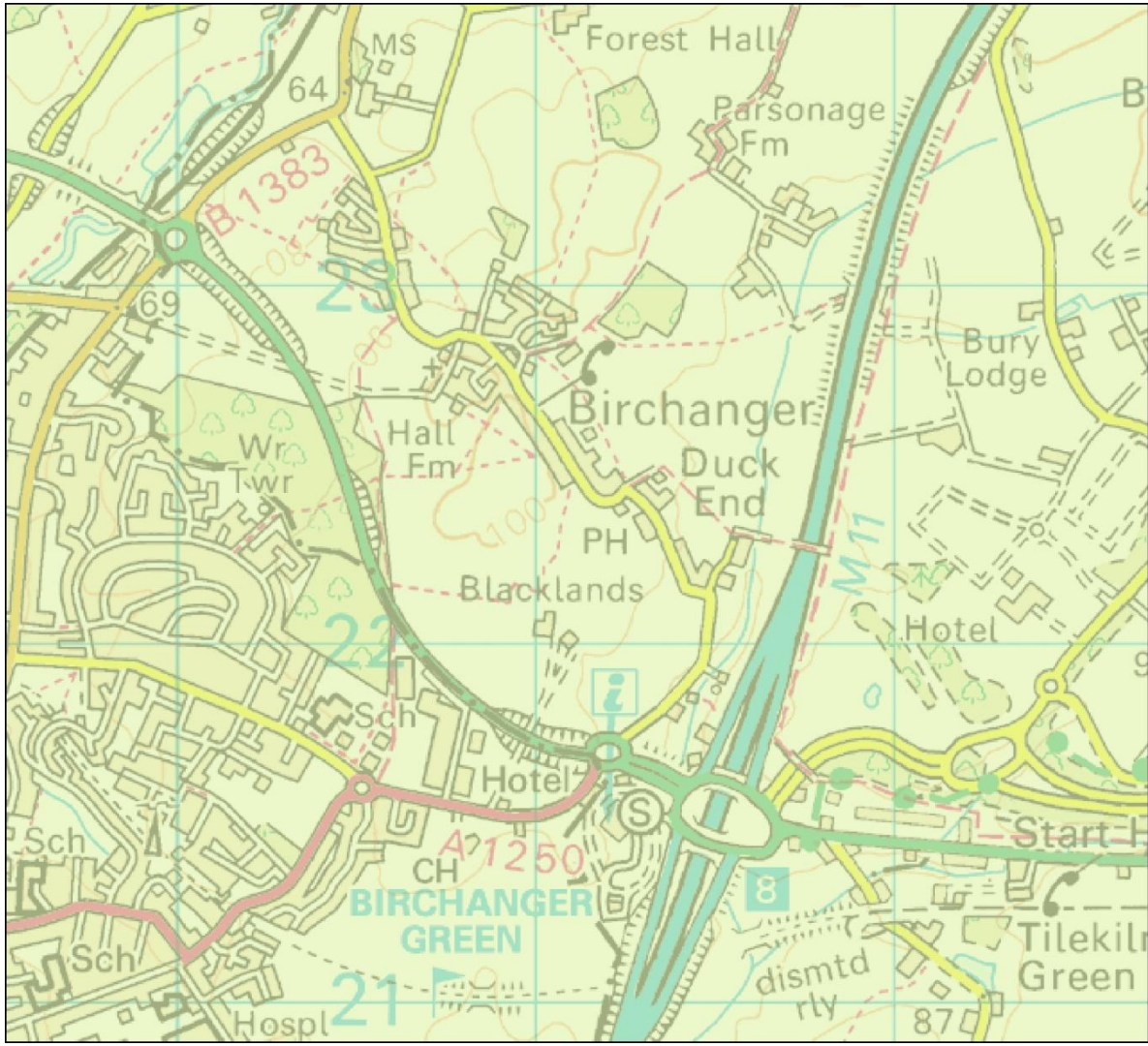

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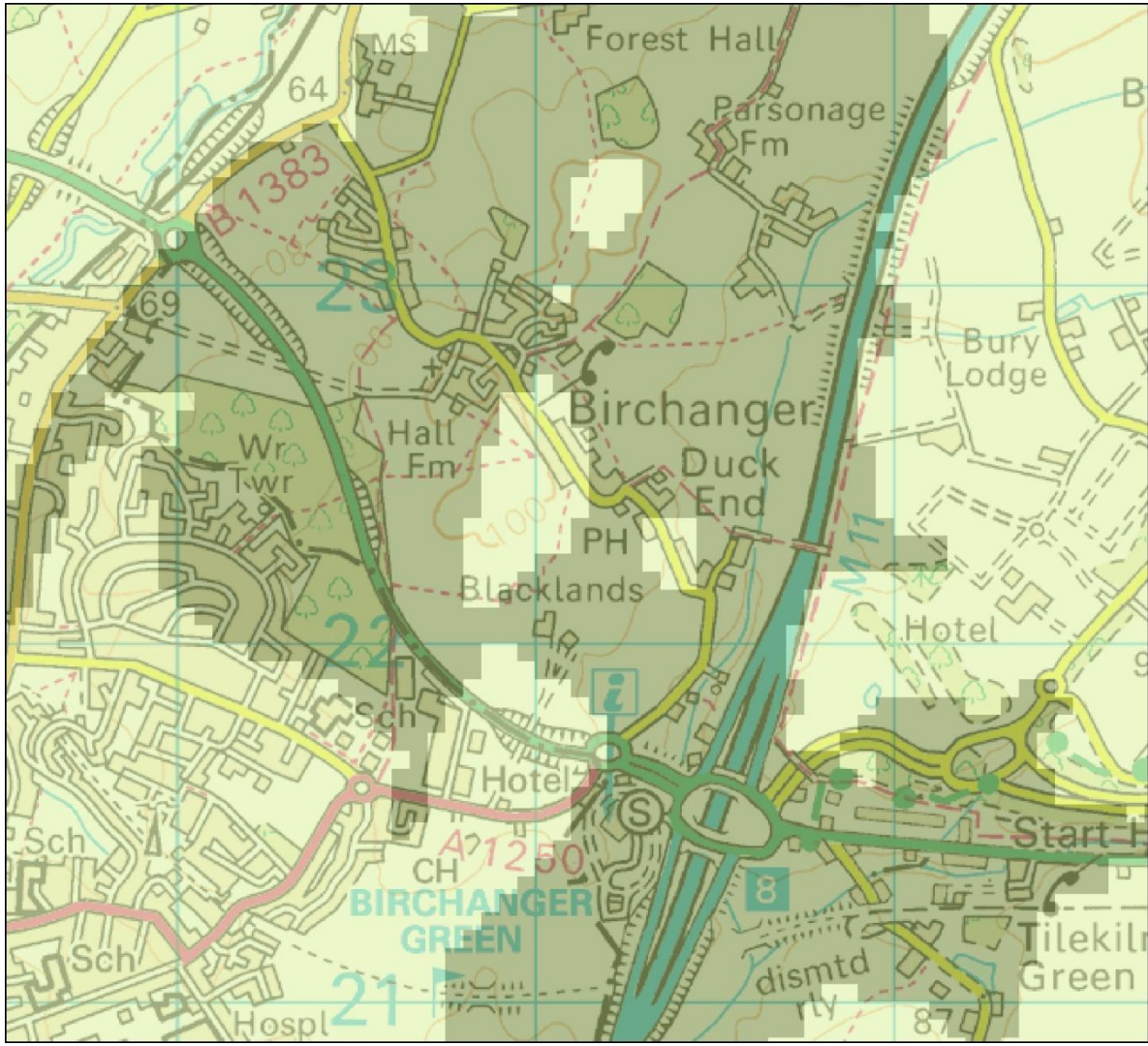

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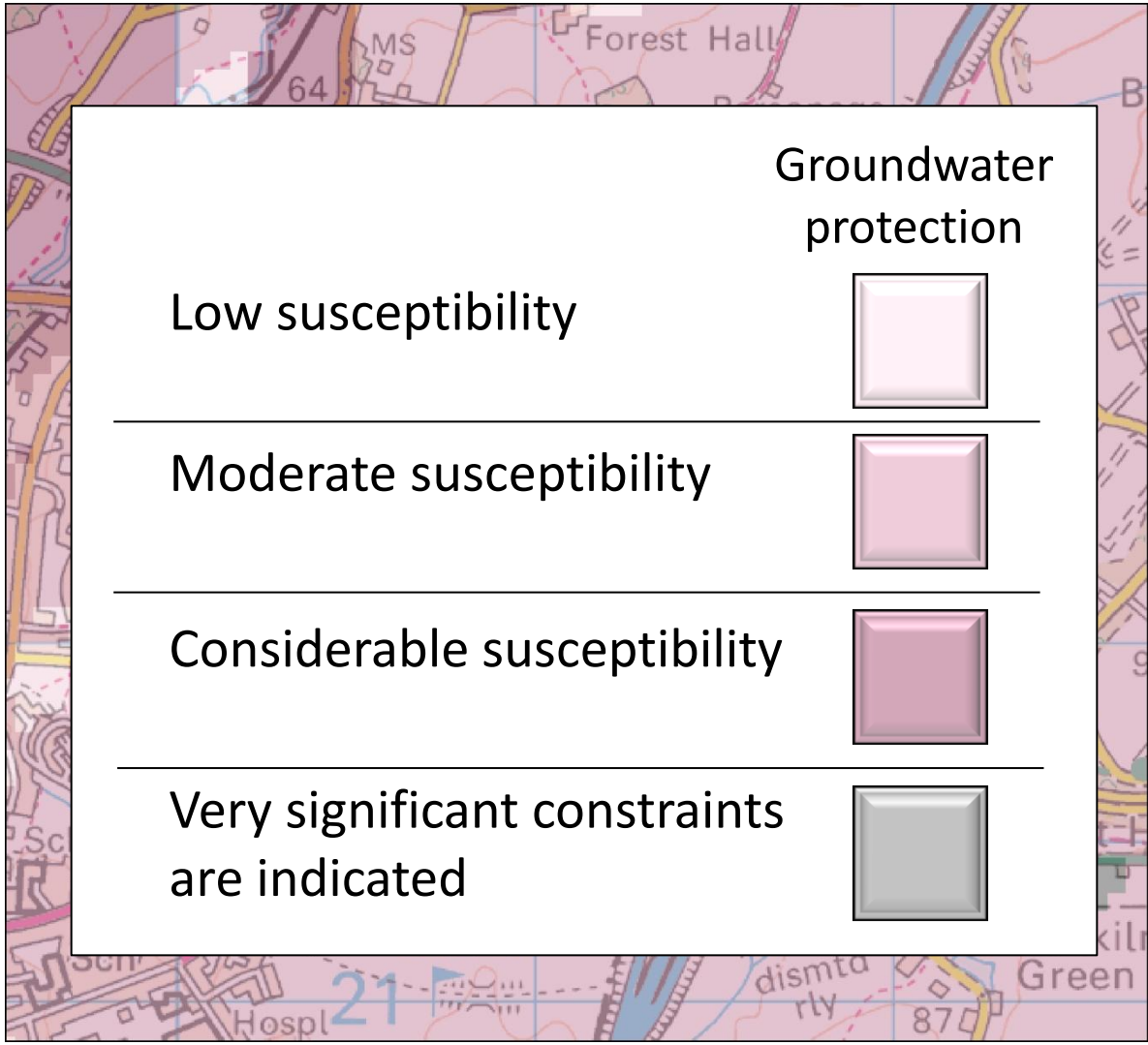

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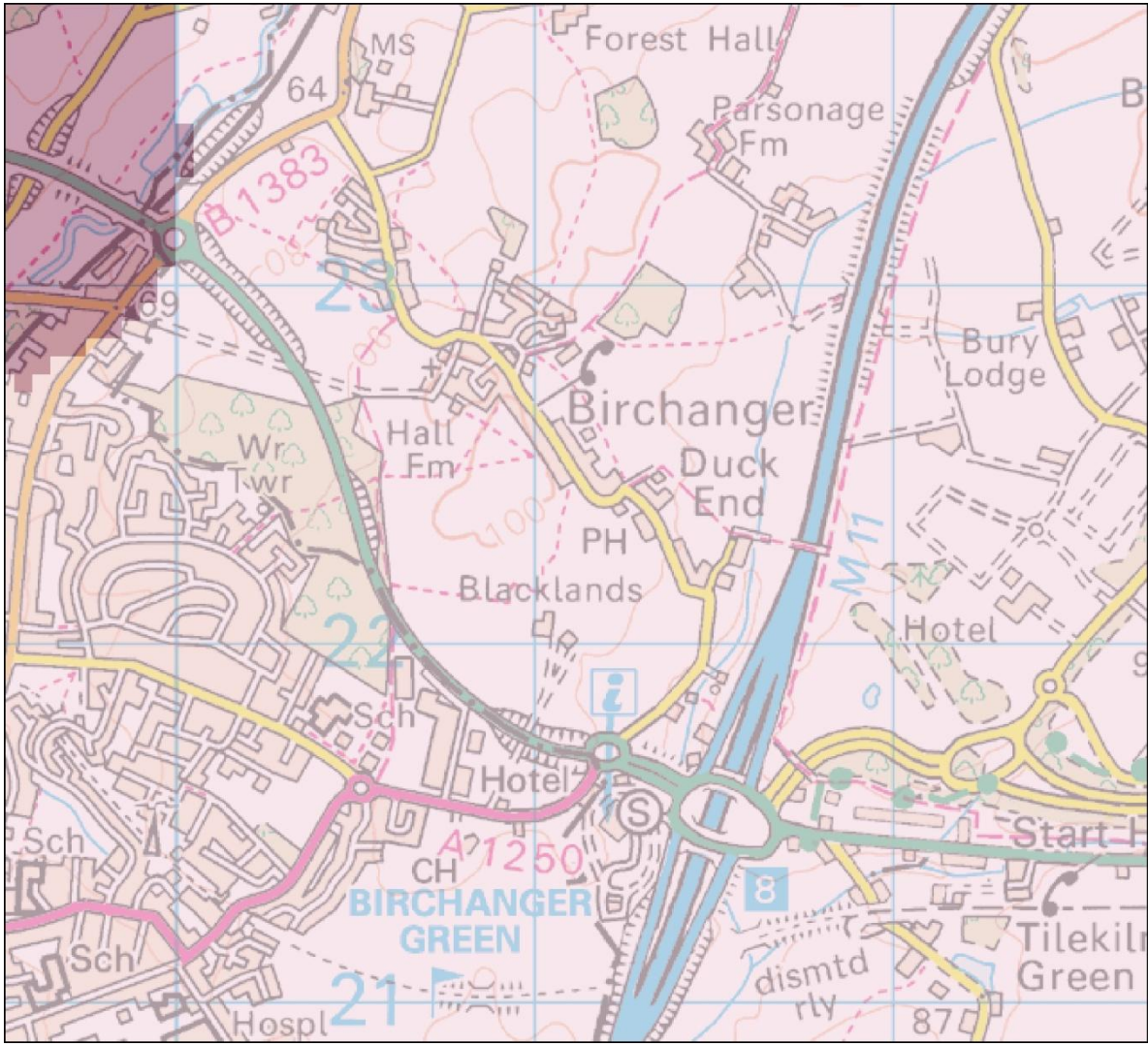

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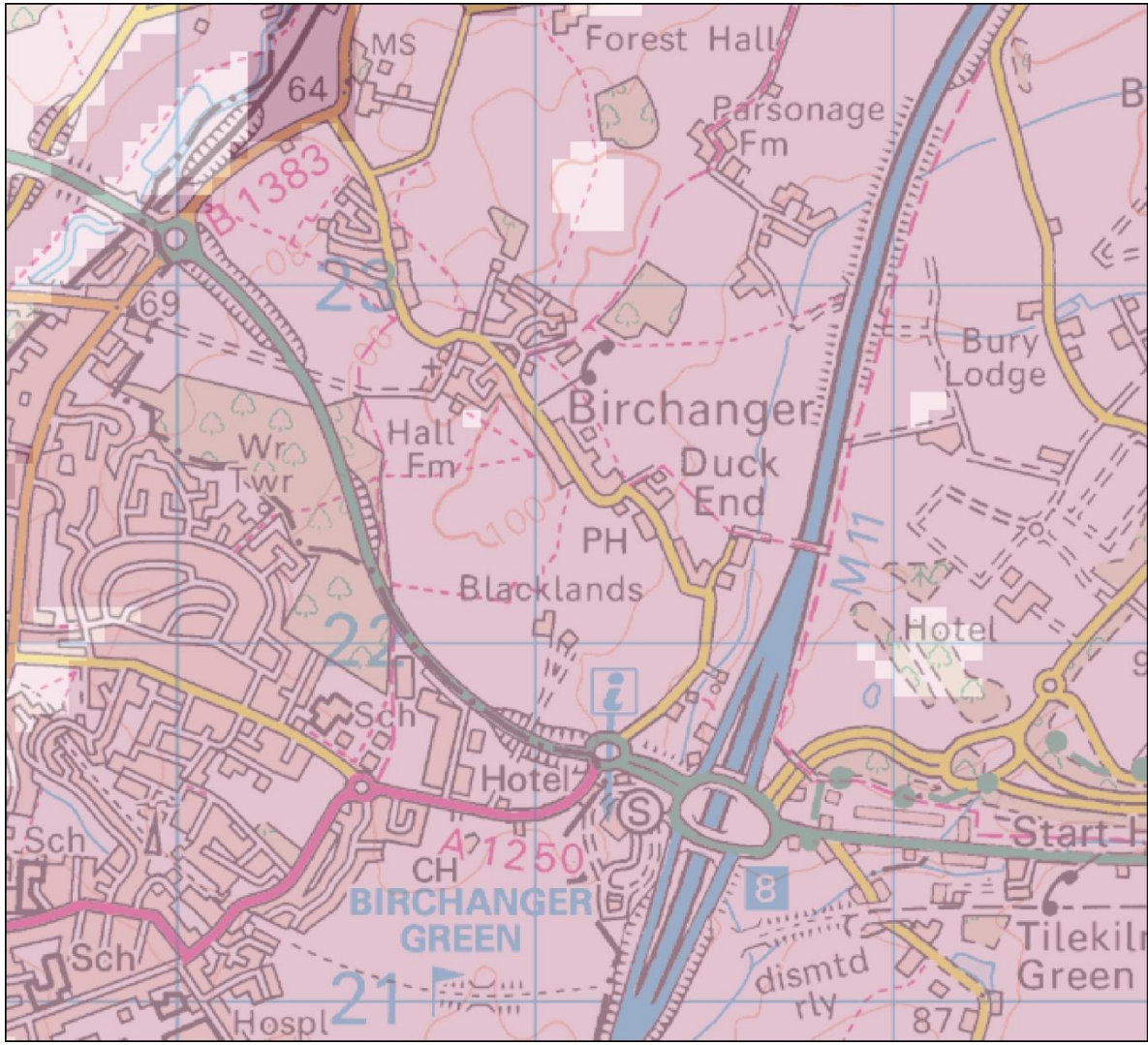

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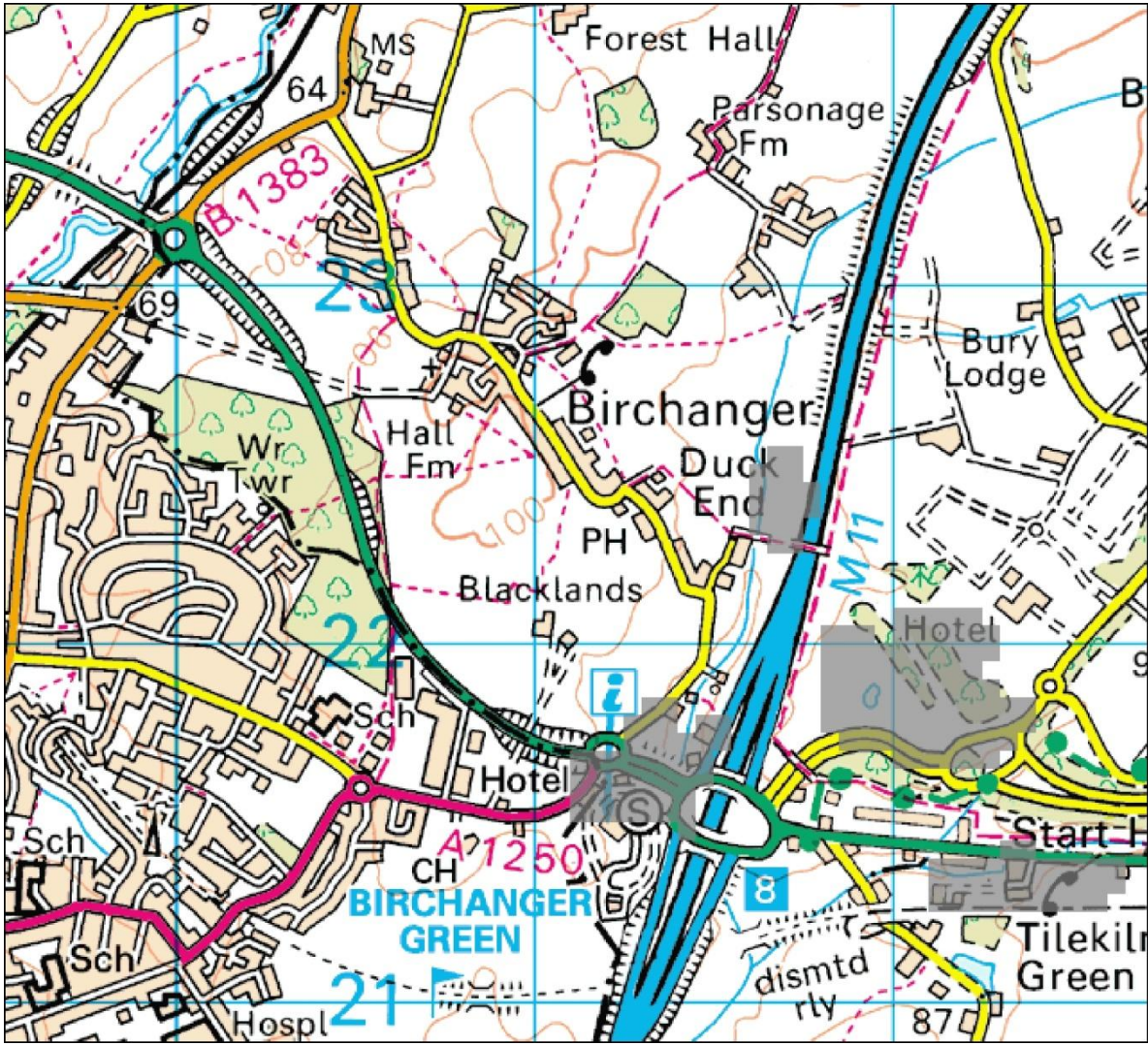
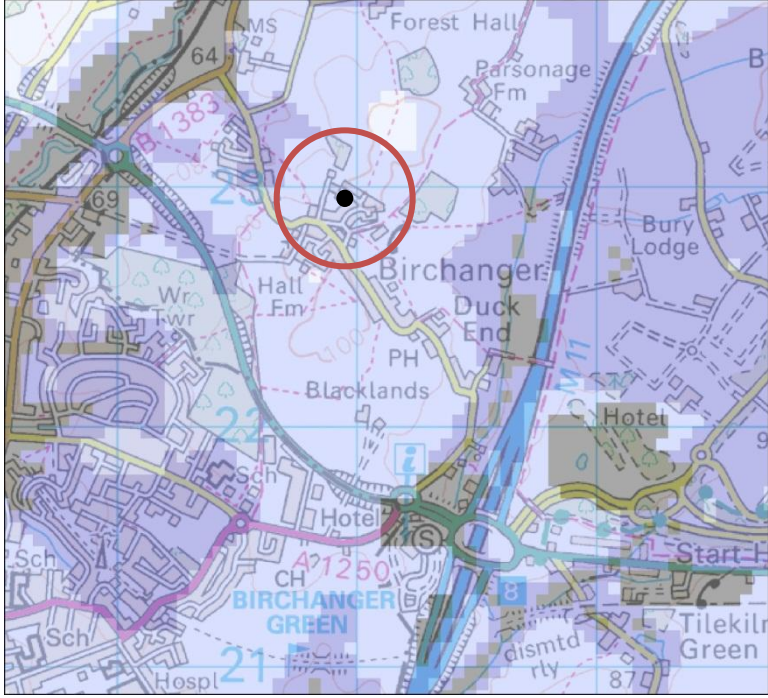


Birchanger – data summary



Step 1

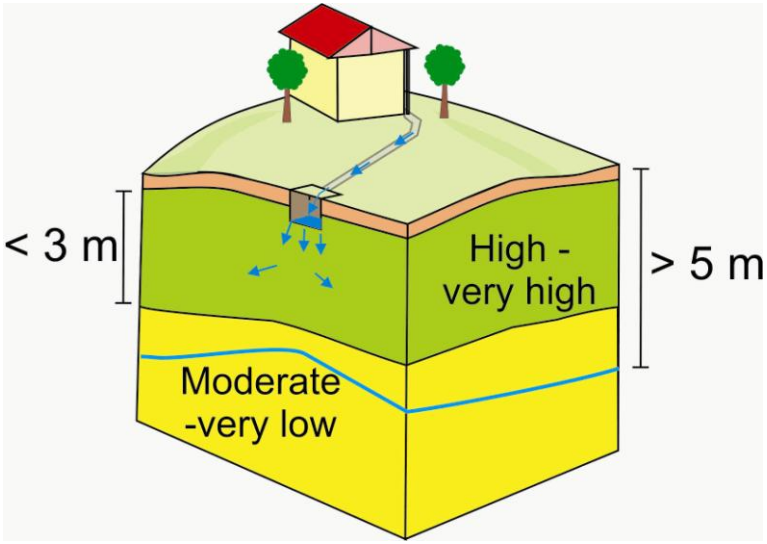
Soluble rocks	Null
Landslides	Null
Groundwater flooding	Null
Artificial ground	Null
Mining hazards	Null

Step 2

Superficial permeability	High to very high
Superficial thickness	< 3 m
Bedrock permeability	Moderate to very low
Depth to water table	>5 m
Geological indicators of flooding	Null

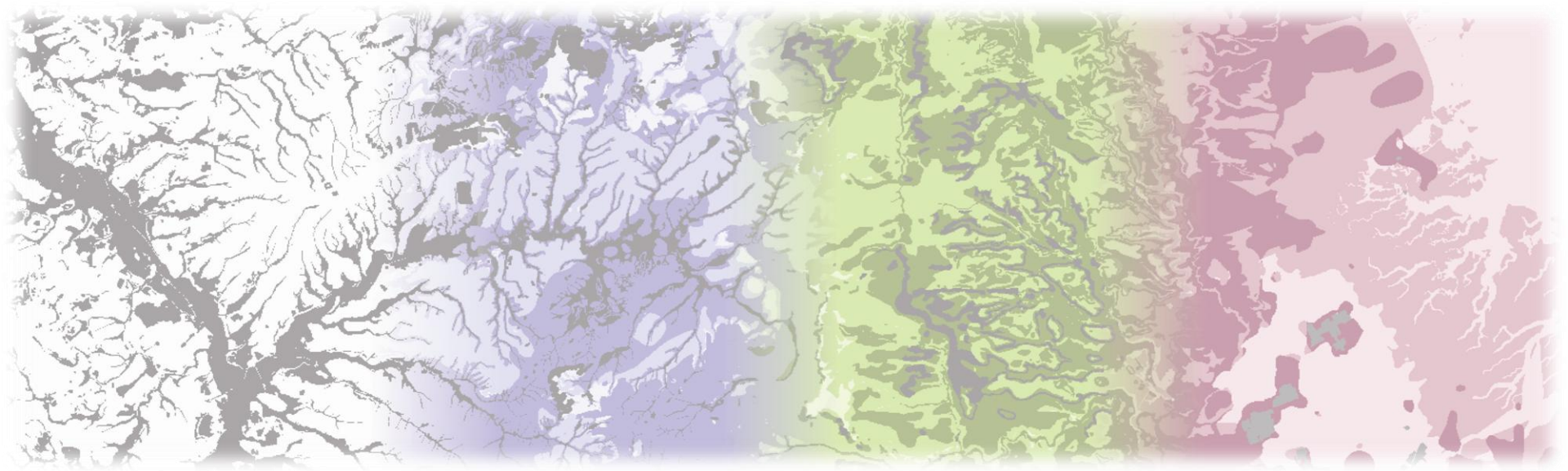
Step 3

Soluble rocks	Geohazard unlikely
Landslides	Moderate constraint
Compressible deposits	Geohazard unlikely
Swelling clays	Considerable constraint
Running sands	Moderate constraint
Collapsible ground	Geohazard unlikely
Mining hazards	Geohazard unlikely



Step 4

Groundwater source protection zones	Null
Predominant flow mechanism	Fracture flow
Made ground	Null



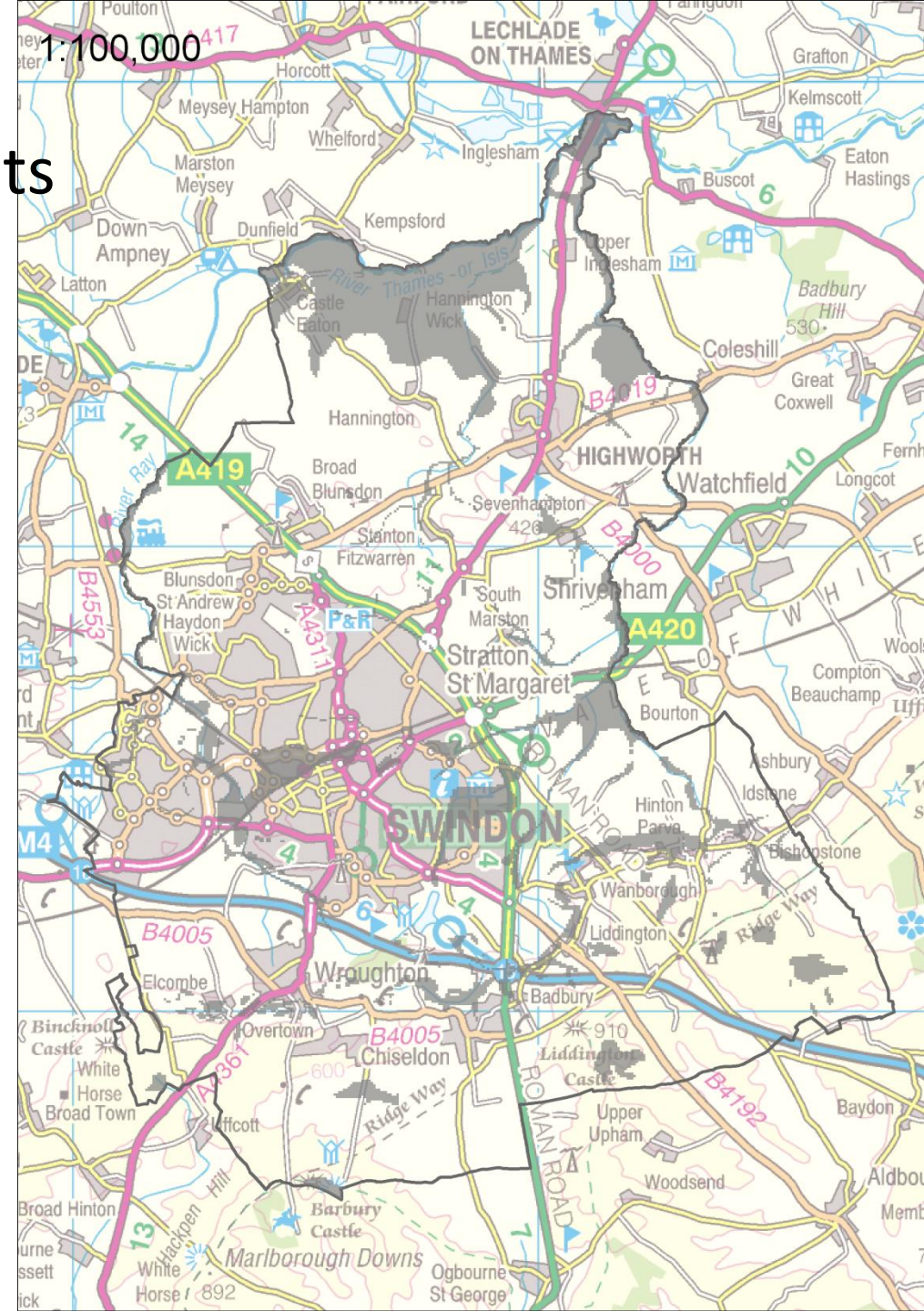
Infiltration SuDS Map: Summary

Using the Infiltration SuDS Map for strategic planning

Swindon

Infiltration SuDS Constraints

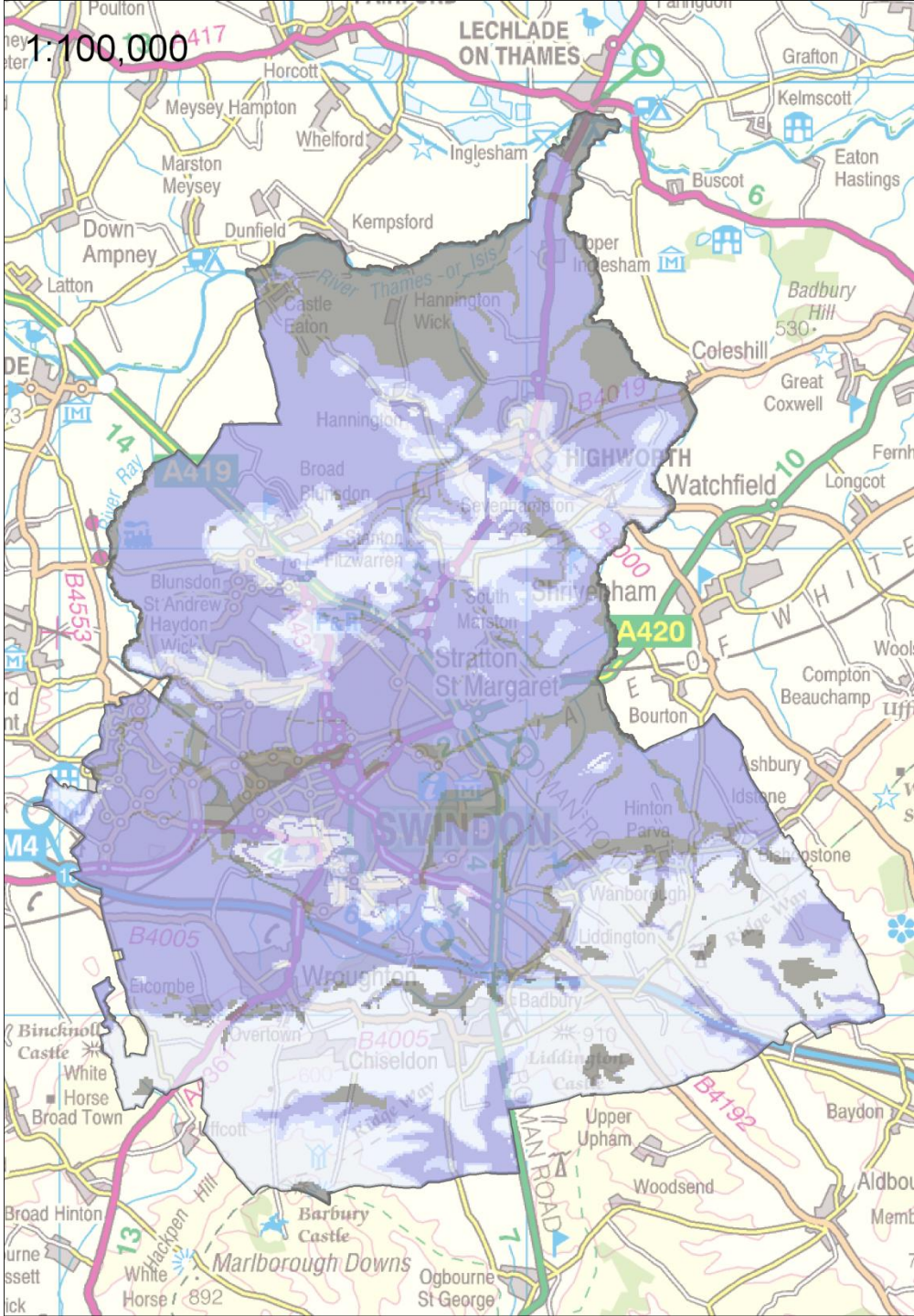
Very significant constraints are indicated



Swindon

Drainage potential

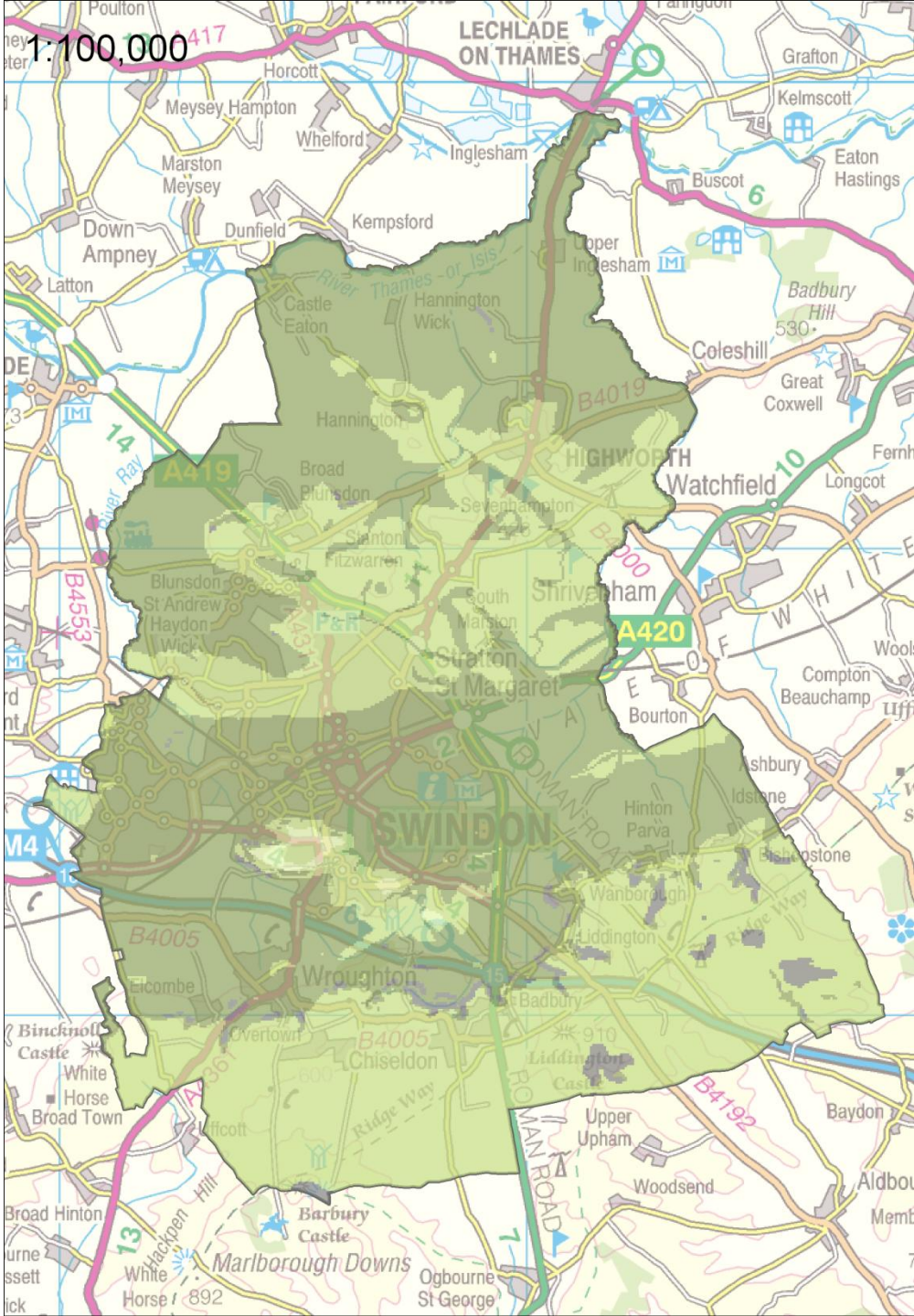
- Compatible for infiltration SuDS
- Probably compatible for infiltration SuDS
- Opportunities for bespoke infiltration SuDS
- Very significant constraints are indicated



Swindon

Ground stability

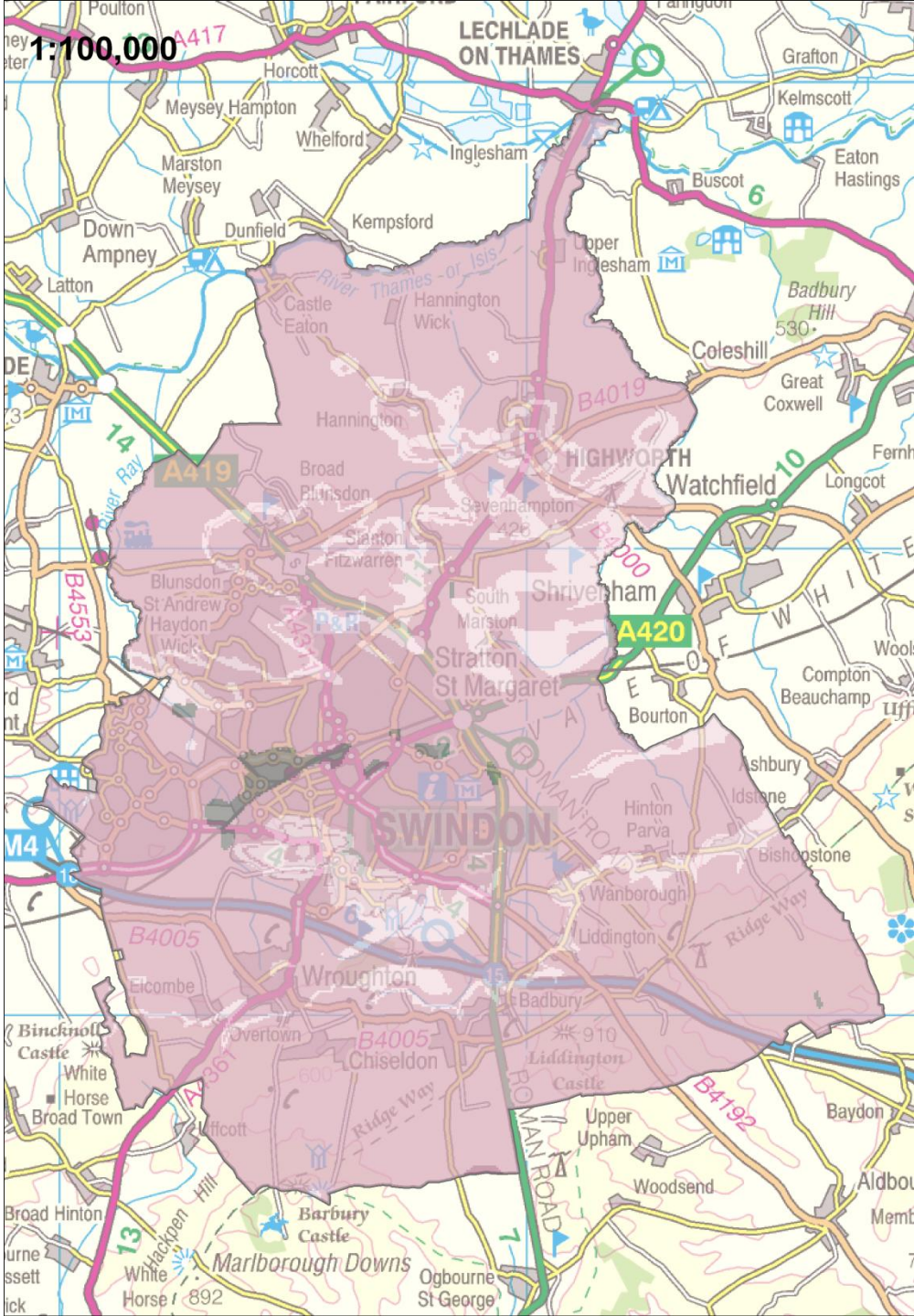
- Geohazard unlikely
- Potential for geohazard
- Significant potential for geohazard
- Very significant constraints are indicated

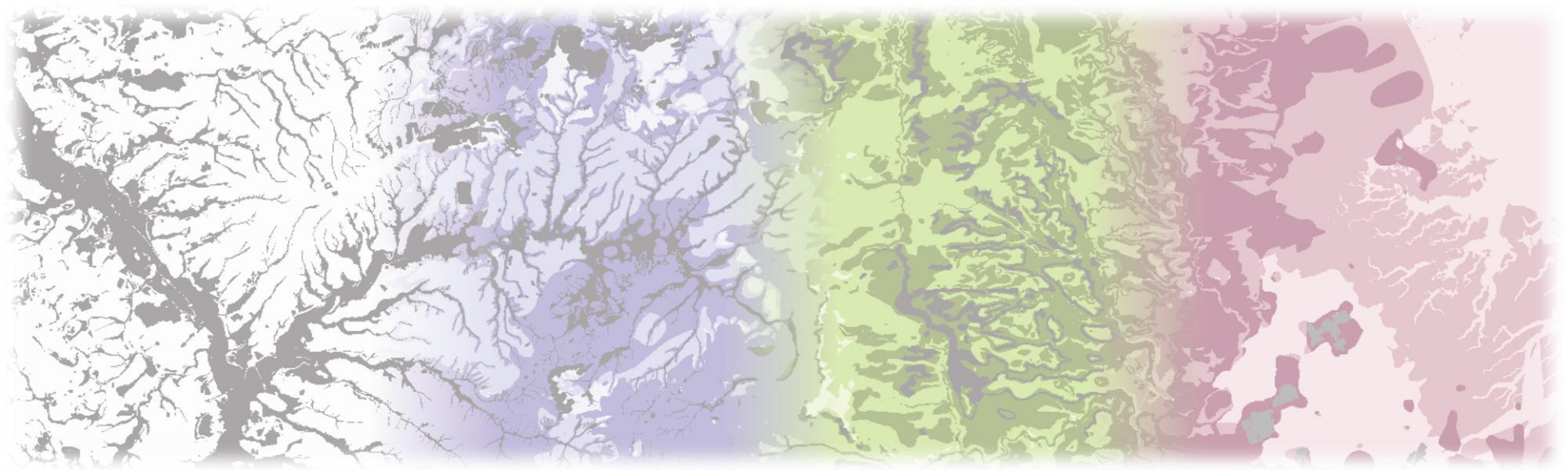


Swindon

Groundwater protection

- Low susceptibility
- Moderate susceptibility
- Considerable susceptibility
- Very significant constraints are indicated





Further details

- Infiltration SuDS GeoReport = £70 (+VAT)
- Infiltration SuDS Map GIS data
  - Summary (4 summary layers) = £0.50 per km^2 (+£300)
  - Detailed (24 layers) = £1.50 per km^2 (+£300)
  - Quotes from digitaldata@bgs.ac.uk
- Coming soon… Infiltration SuDS Extranet
  - Online access to the national dataset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