

Evaluating the Spraycan

Understanding participant interaction
with a PPGIS

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PPGIS

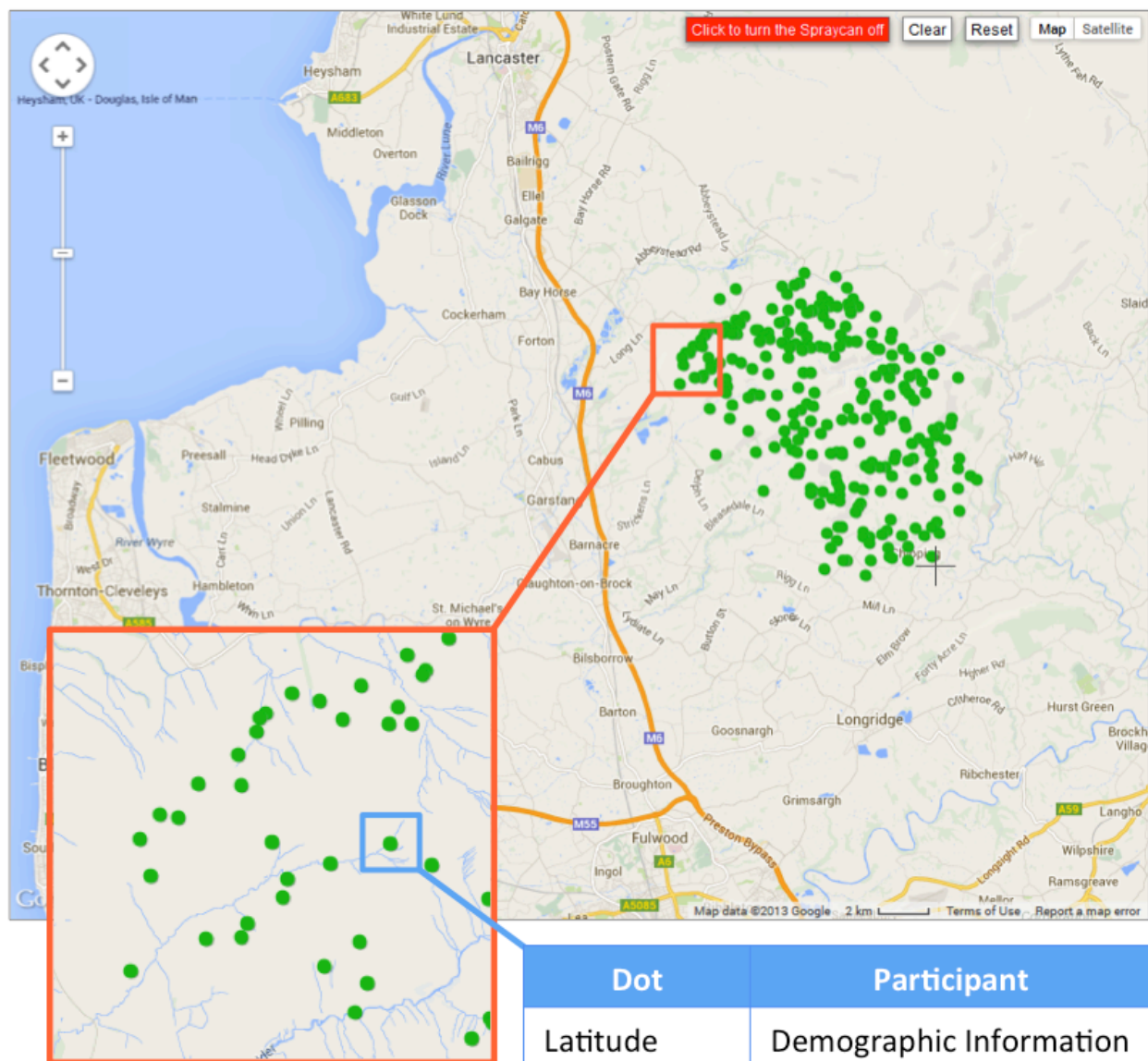
VAGUE

FUZZY

PLACE

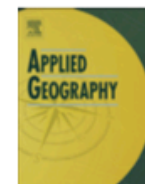
'AIRBRUSH'

MULTI-POINT AND ATTRIBUTE



APPLICATIONS

- Wind Farm Development
- Forest Management
- Avalanche Risk Perception
- Species Survey
- Vernacular Place Names
- Post-Hurricane Sandy Risk Perception
- And so on...



Spraycan: A PPGIS for capturing imprecise notions of place



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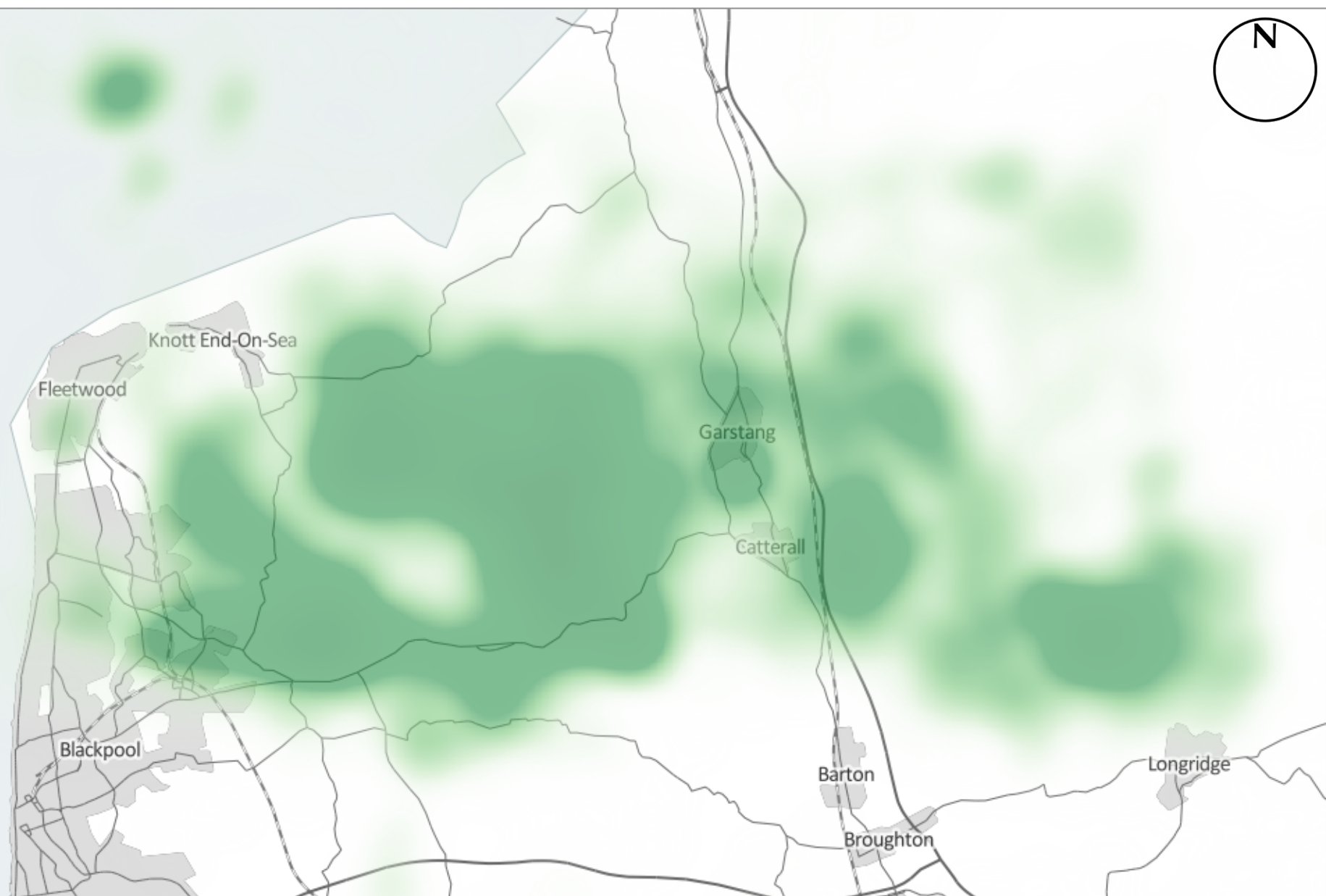
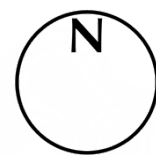
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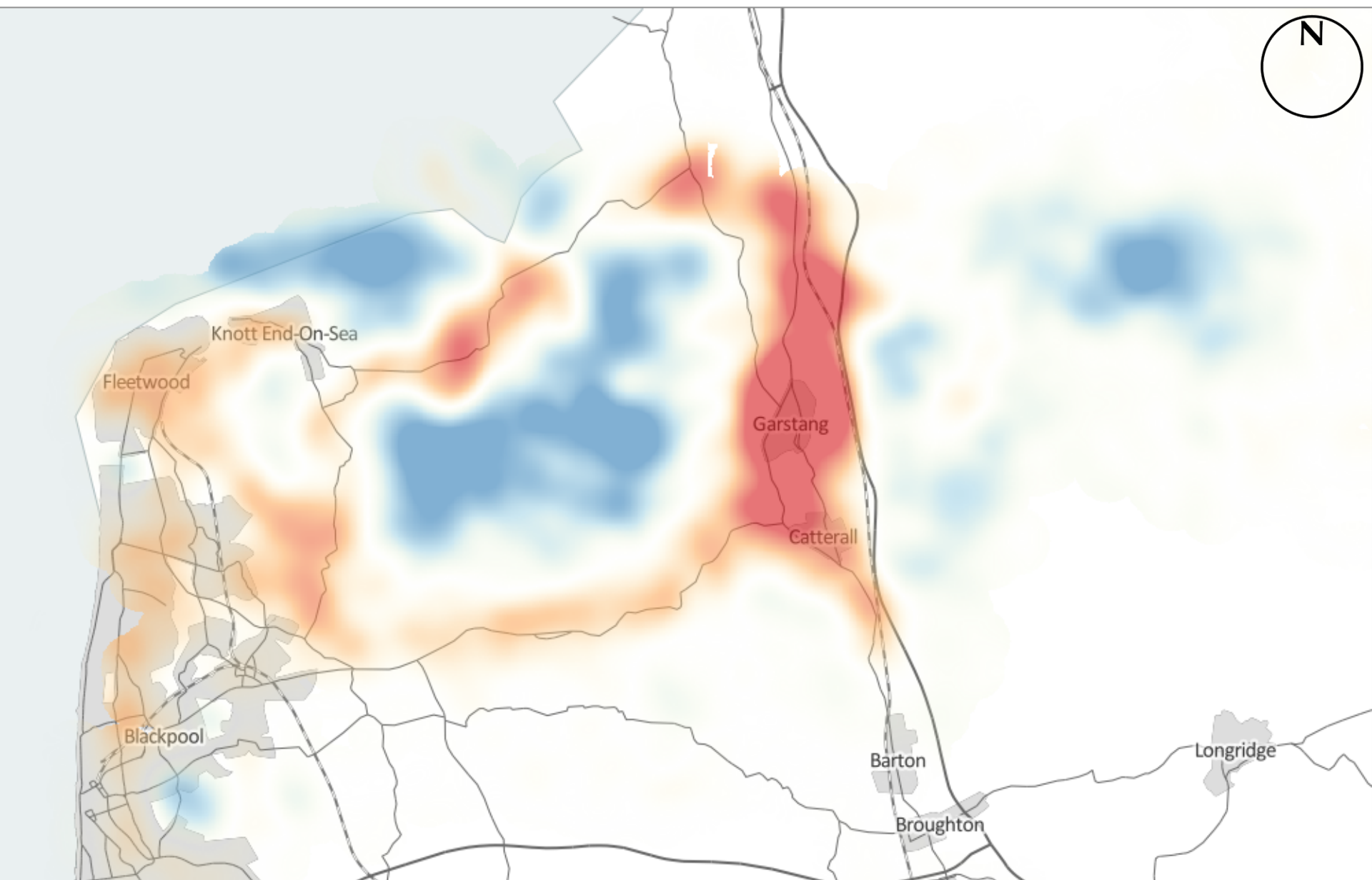
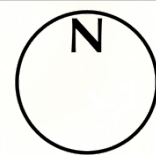
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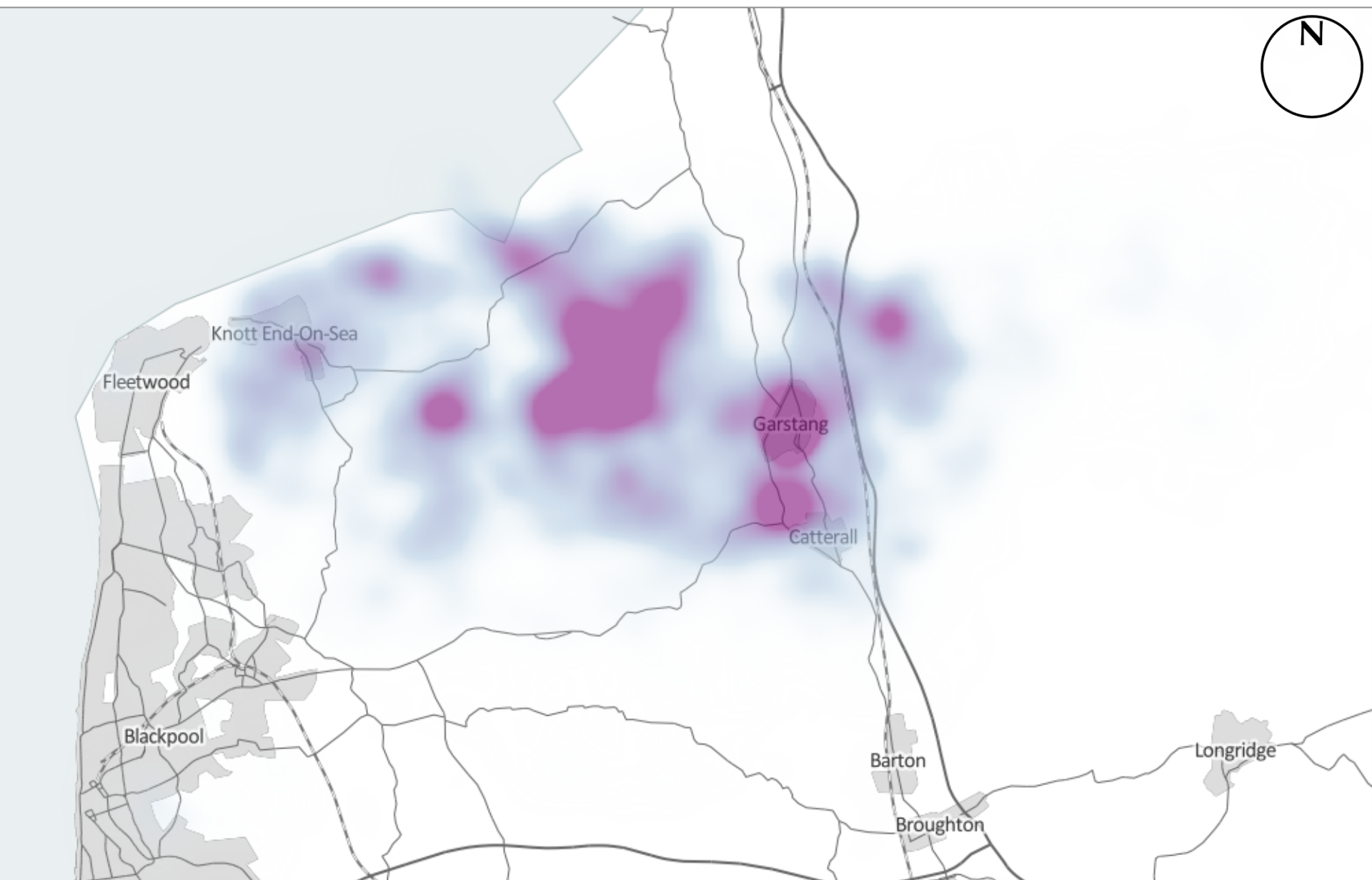
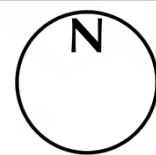
Keywords:
Place
PPGIS
Fuzzy geography
Vague concepts
VGI
Decision support

ABSTRACT

It is increasingly common for participatory data to be collected from the public via a PPGIS, in order to gain a greater understanding both of the world around us, and people's experience of it. The *place*-based thoughts and feelings of an individual do not, however, always fit well with the *space*-based points and polygons into which they are typically reduced in such a system, which can limit the effectiveness of many traditional PPGIS' for data collection. In order to address this issue, an alternative PPGIS platform is presented, which allows the collection, storage and analysis of spatial data from the public without the requirement to artificially reduce these data to geographic primitives. The 'Spraycan' platform allows participants to create spatial representations on a map using a familiar airbrush-style interface, permitting the creation of vague regions and boundaries that better reflect the *places* to which they refer. Data are stored within a 'multi-point-and-attribute' data structure whereby each individual 'dot' of 'paint' created using the airbrush is stored as a discrete geographical object, and is joined to all other associated 'dots', as well as a variety of other demographic and contextual data, including free-text data in which the participants may add context to their spray patterns. The flexibility of this data structure provides a wide and extensible variety of analytical choices for the researcher, as is shown here by an example study demonstrating the use of the *Spraycan* for decision-support, as well as a number of real-world 'in the wild' applications. It is hoped that this work will open up the agenda for alternative PPGIS interfaces, in order to further explore the possibilities associated with the capture and analysis of 'fuzzy' *place*-based data.







BUT

WHAT

HOW

HOW
EFFECTIVE

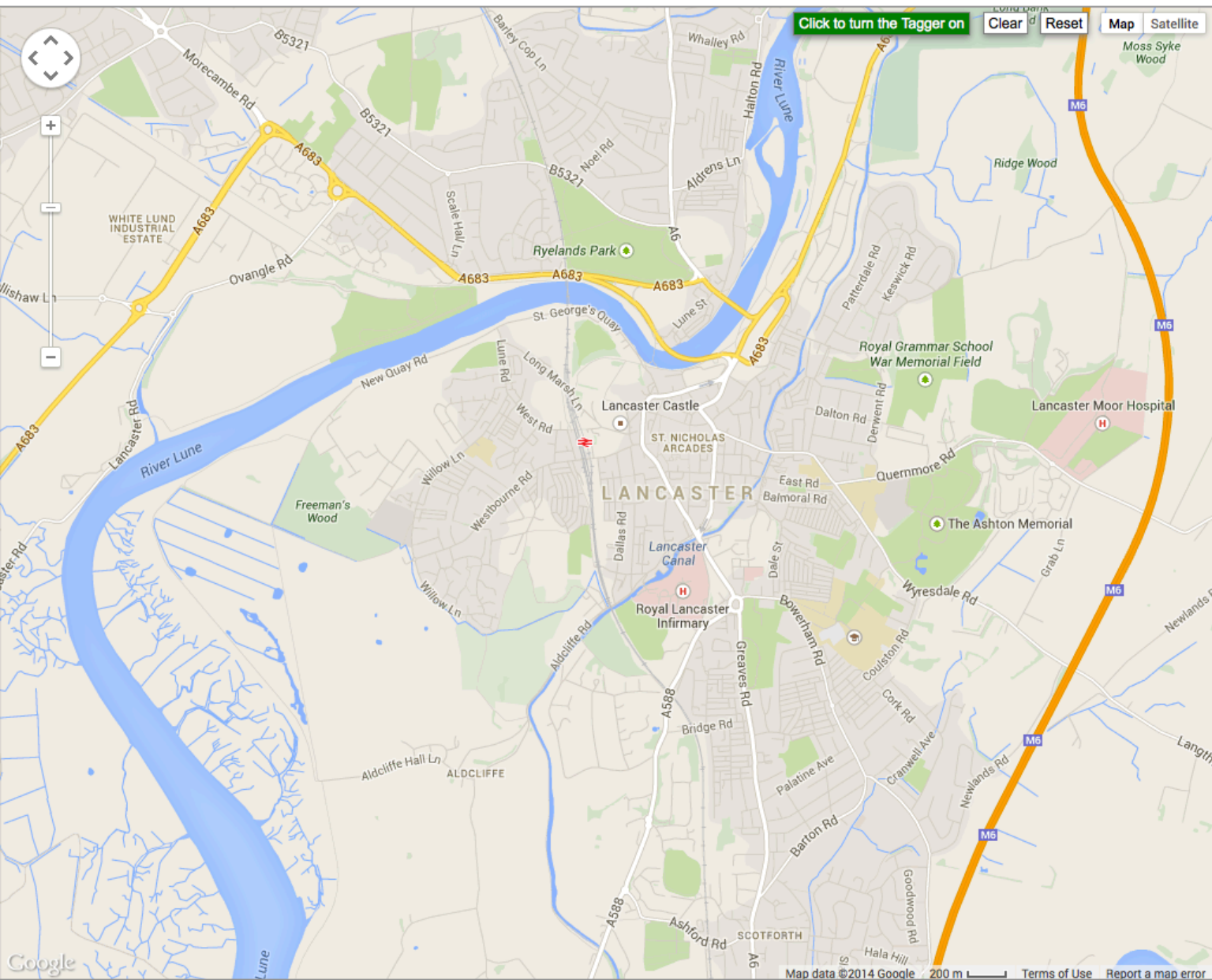
TEST

100

SAFE?

UNSAFE?

4



Where do you feel safe in Lancaster?

What do you call this place?

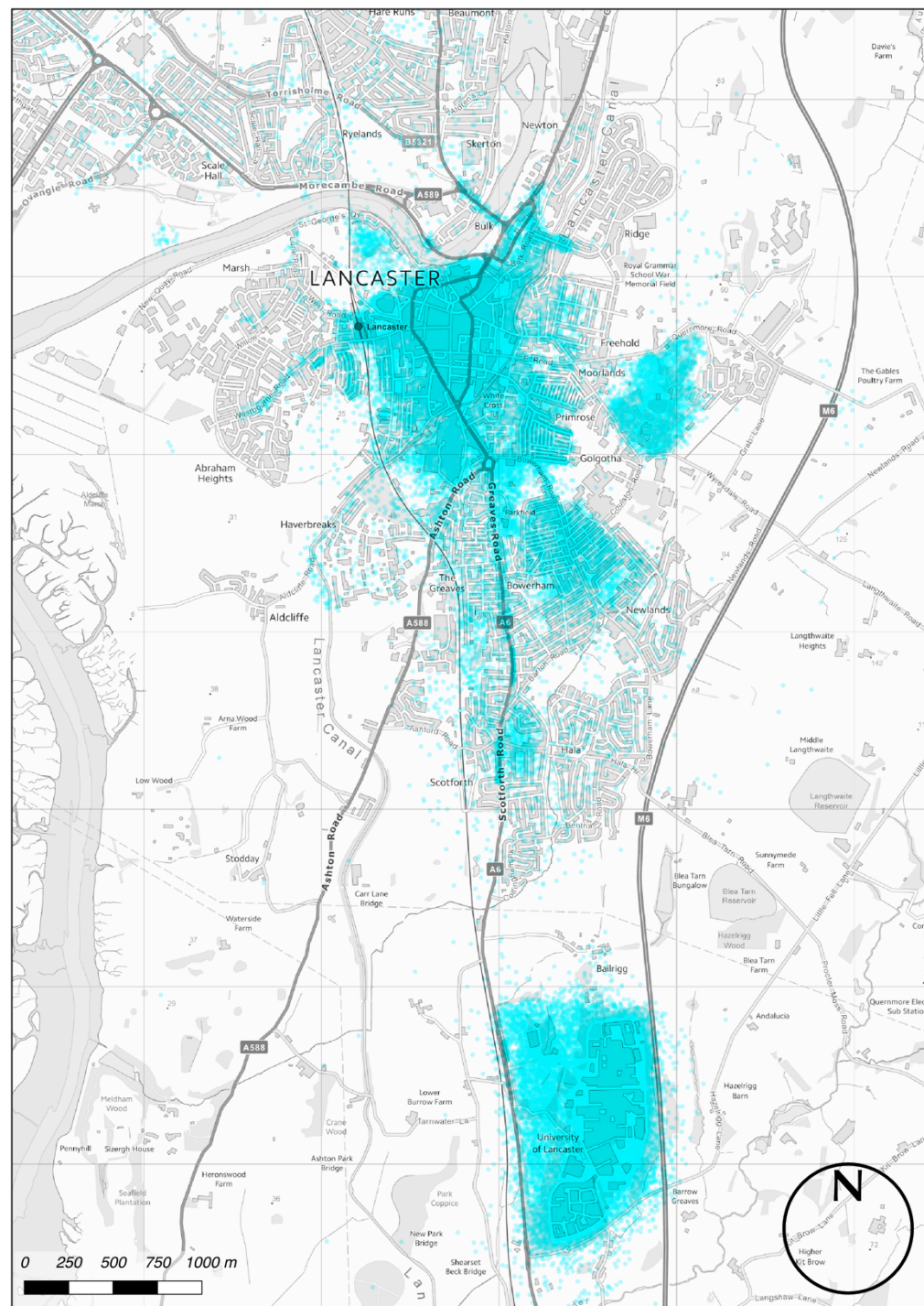
How often do you go there?

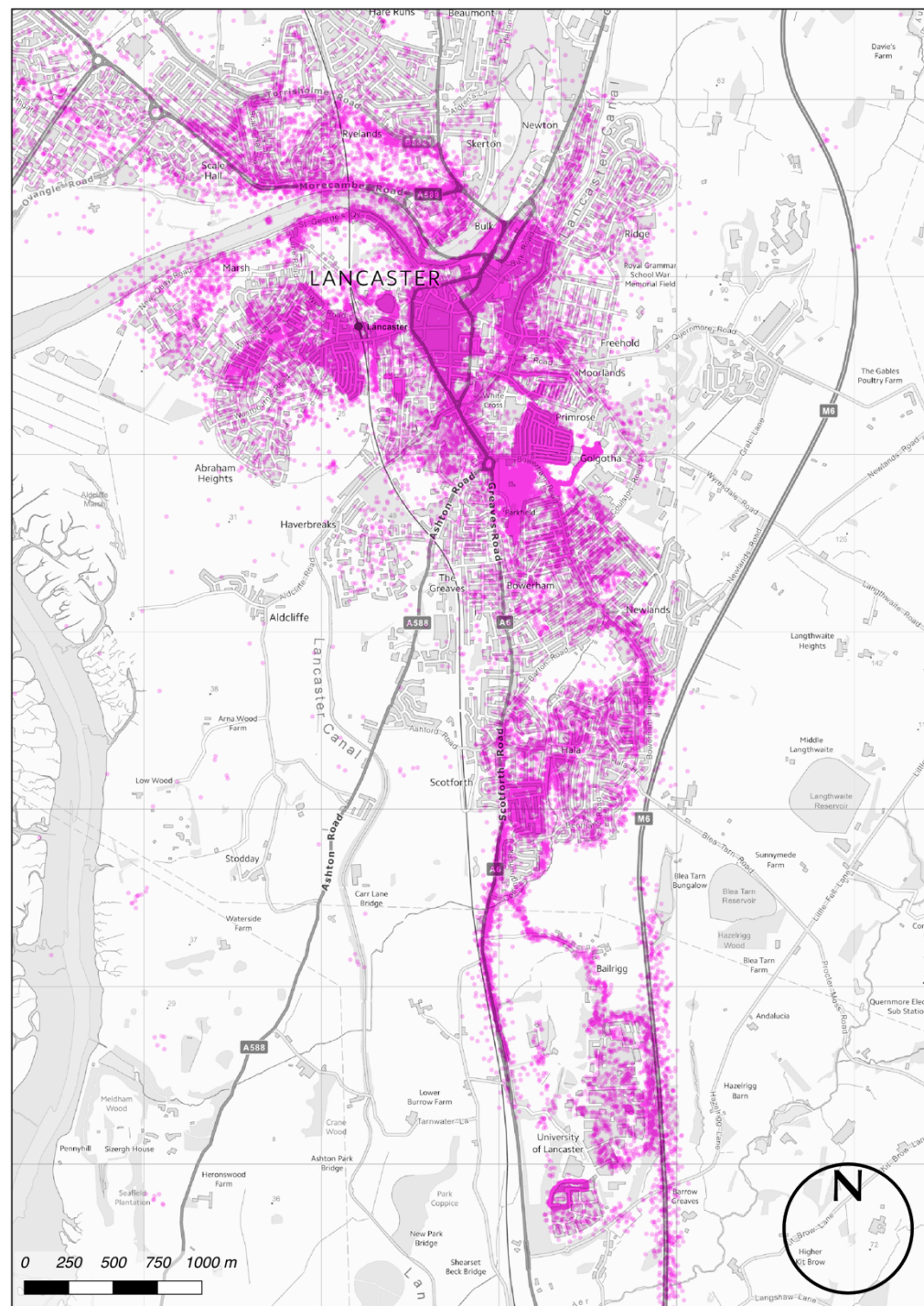
What makes it feel safe?

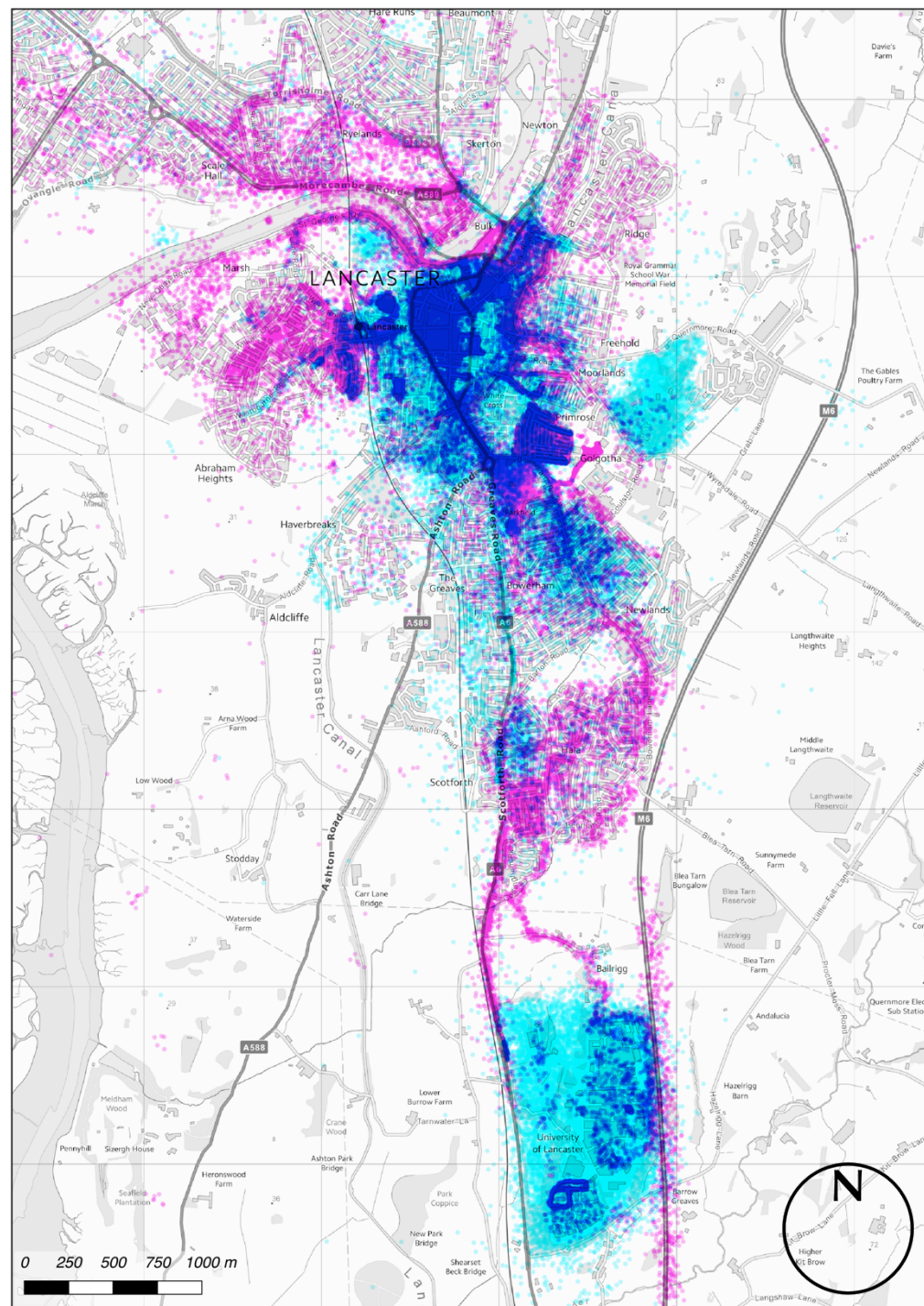
[Back](#) [Spray Again](#) [Next](#)

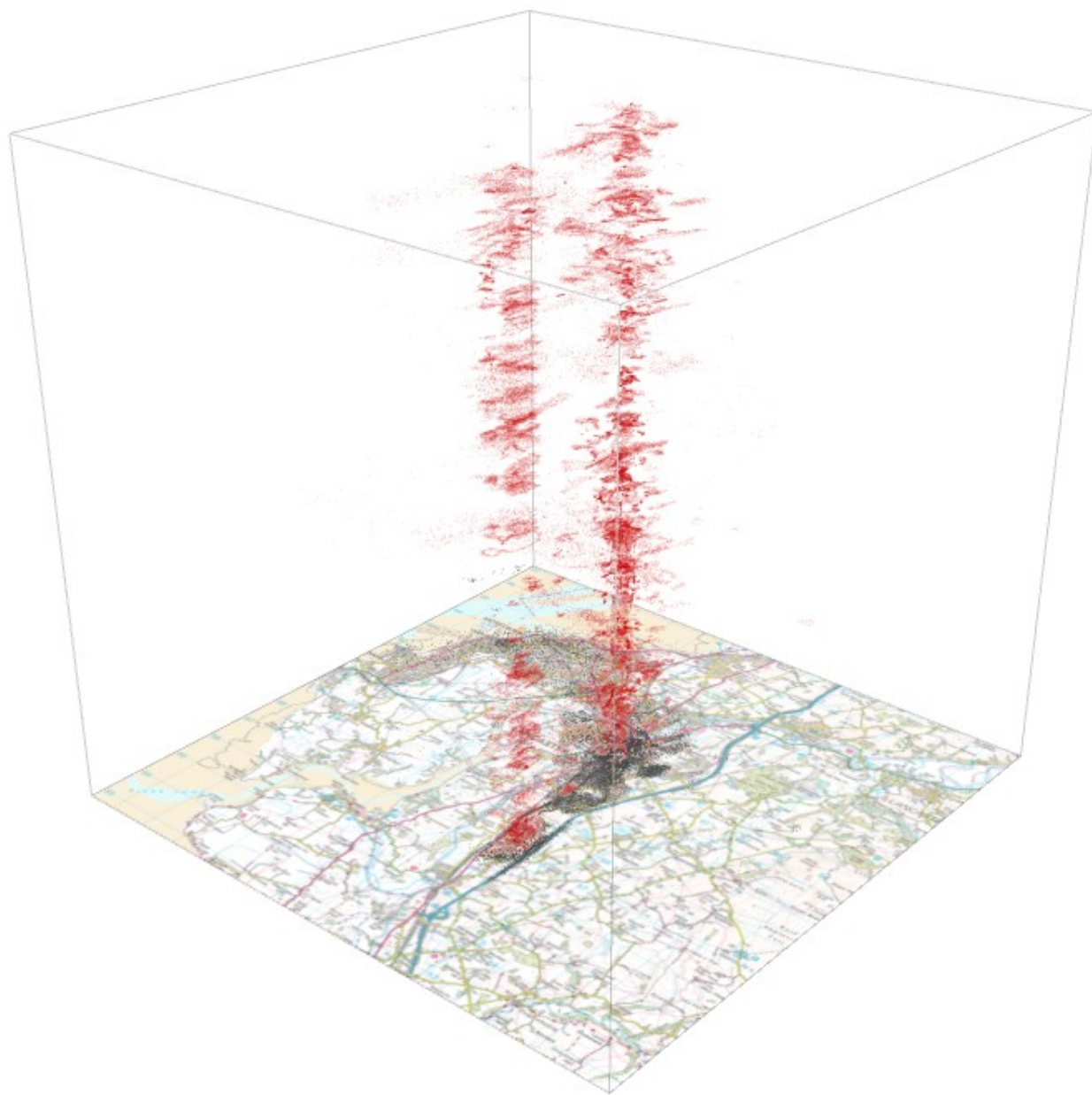
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198,430

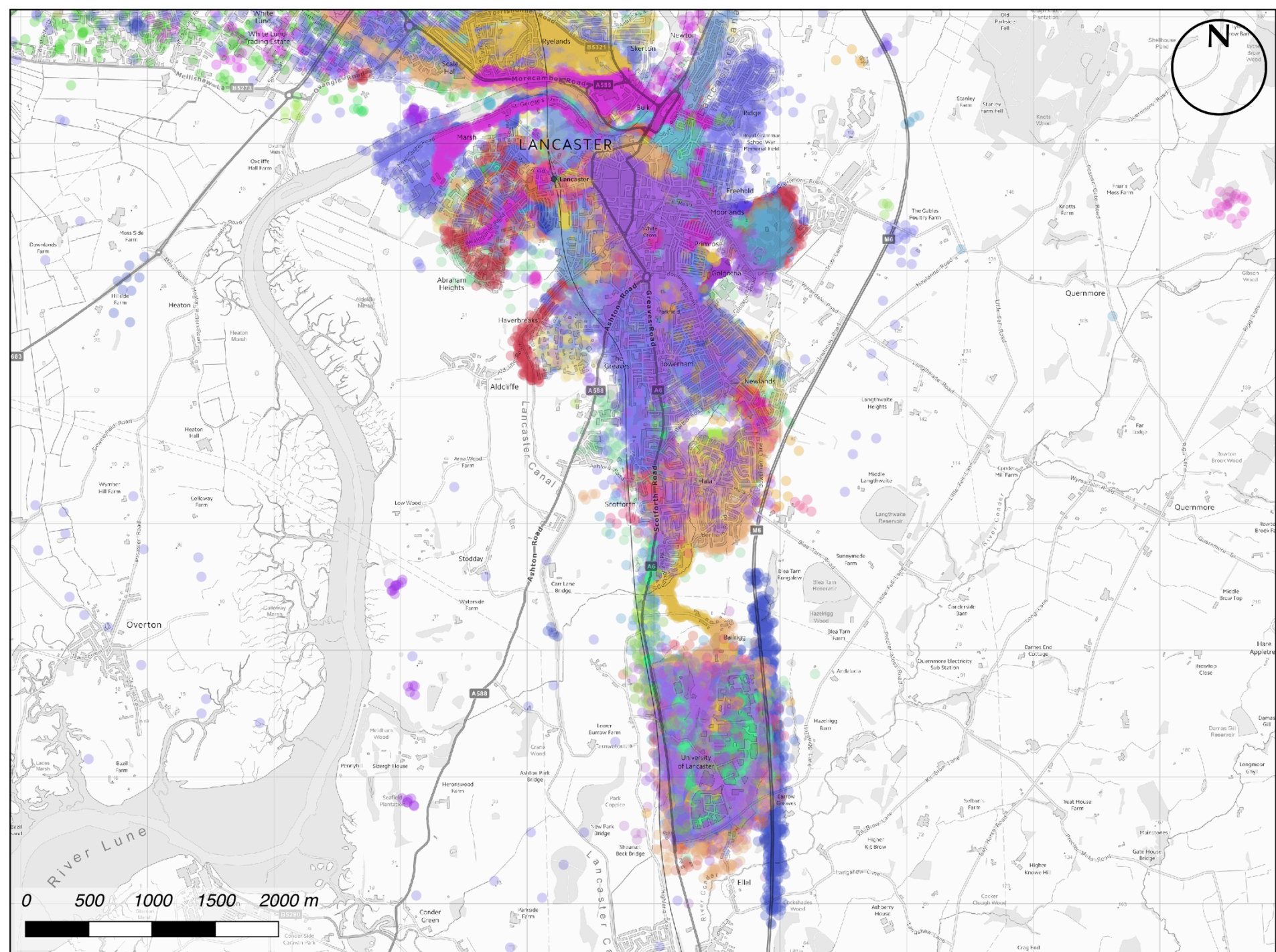








PLACES



[illegible]

East Morecambe

Ryelands Parks and Ryelands Estate
"shit end of town"

macdonalds and elements

Wooded areas at night

Canal
Creepy Park

Bowerham

A6

The road between Lancaster and the University

Sports fields

Woodland Trail
cartmel



0 500 1000 1500 2000 m



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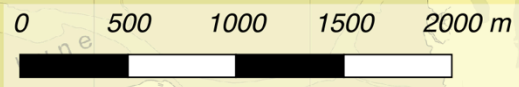
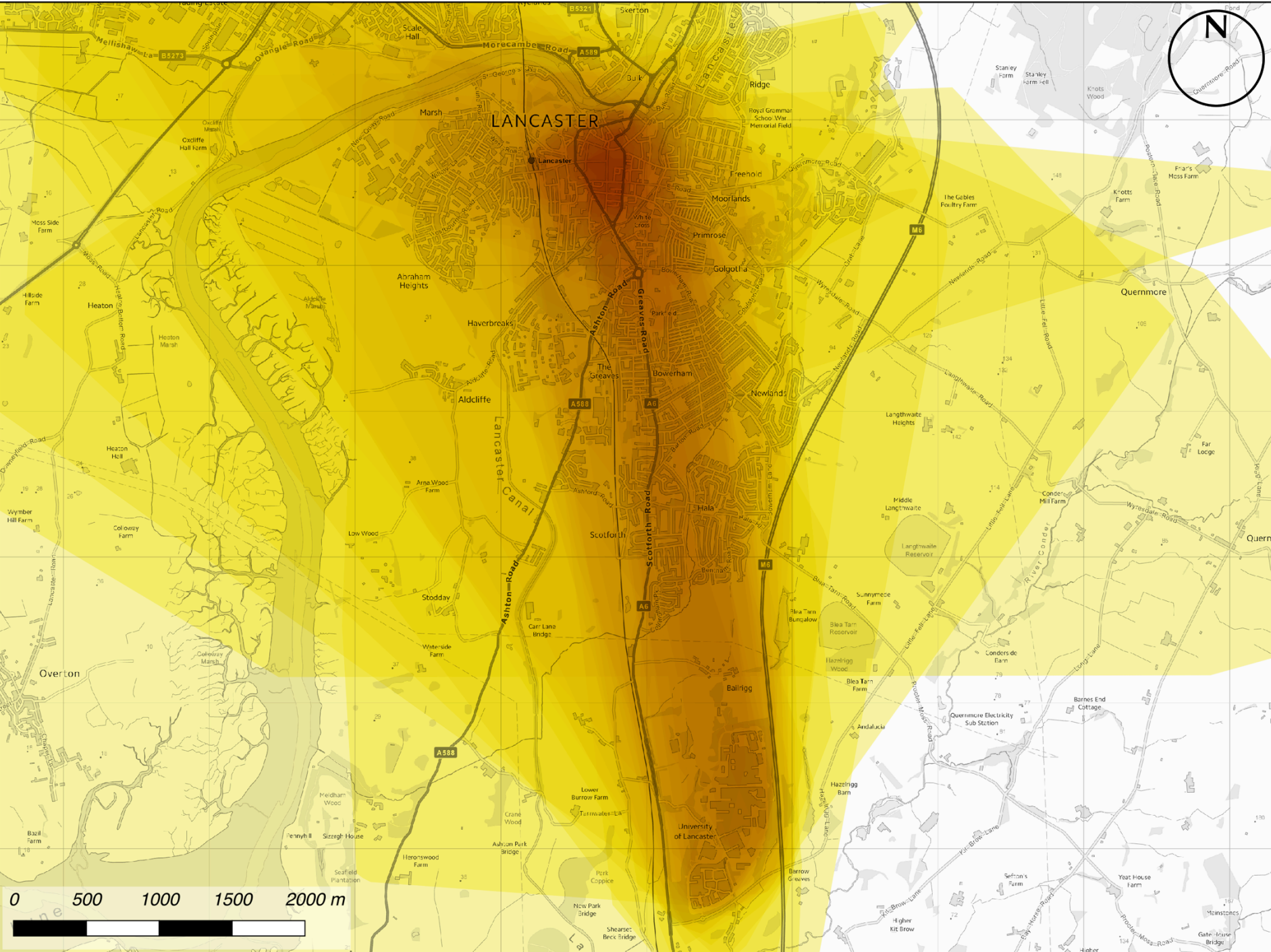
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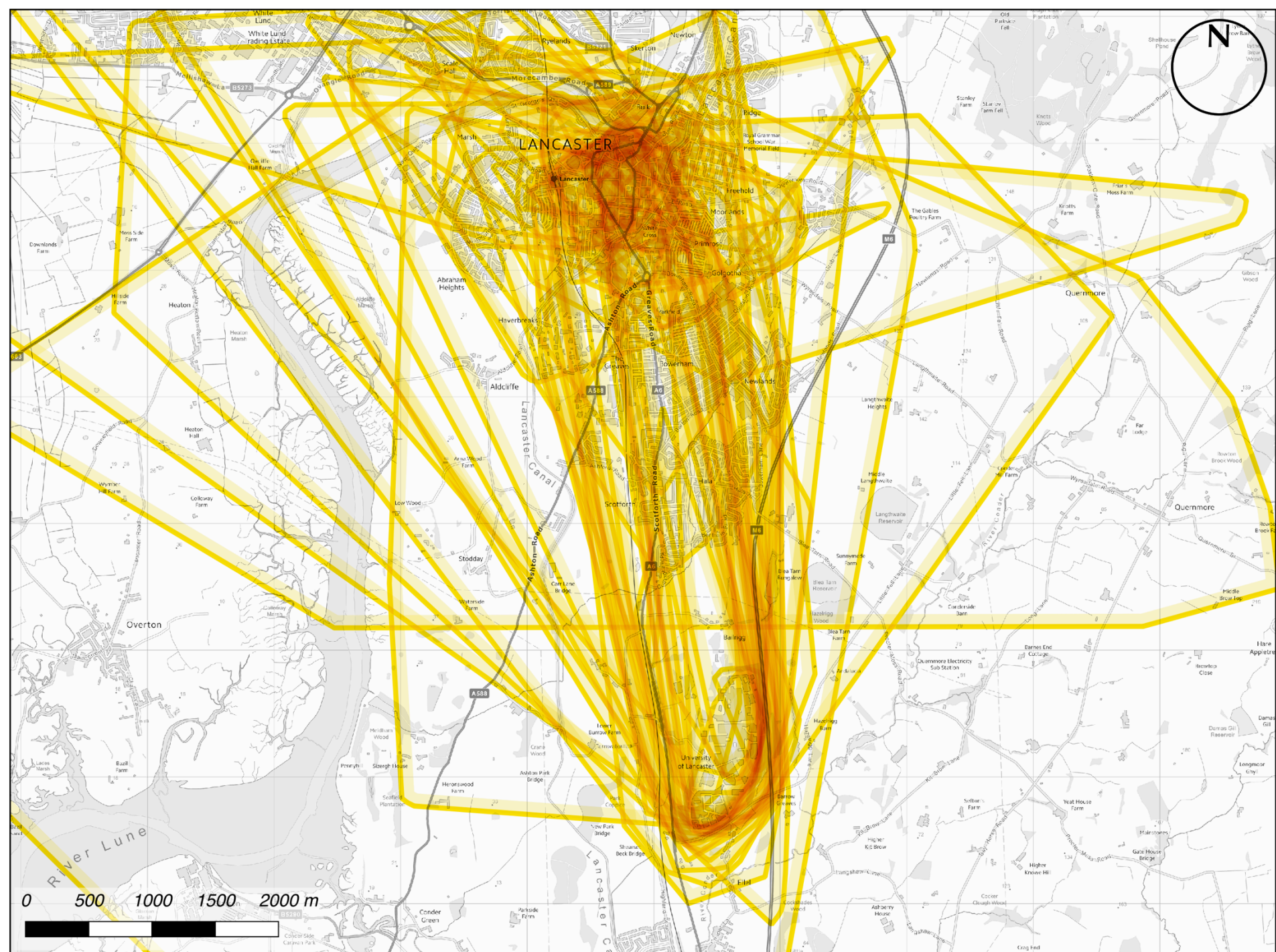
The road between Lancaster and the University

Sports fields

**Woodland Trail
cartmel**

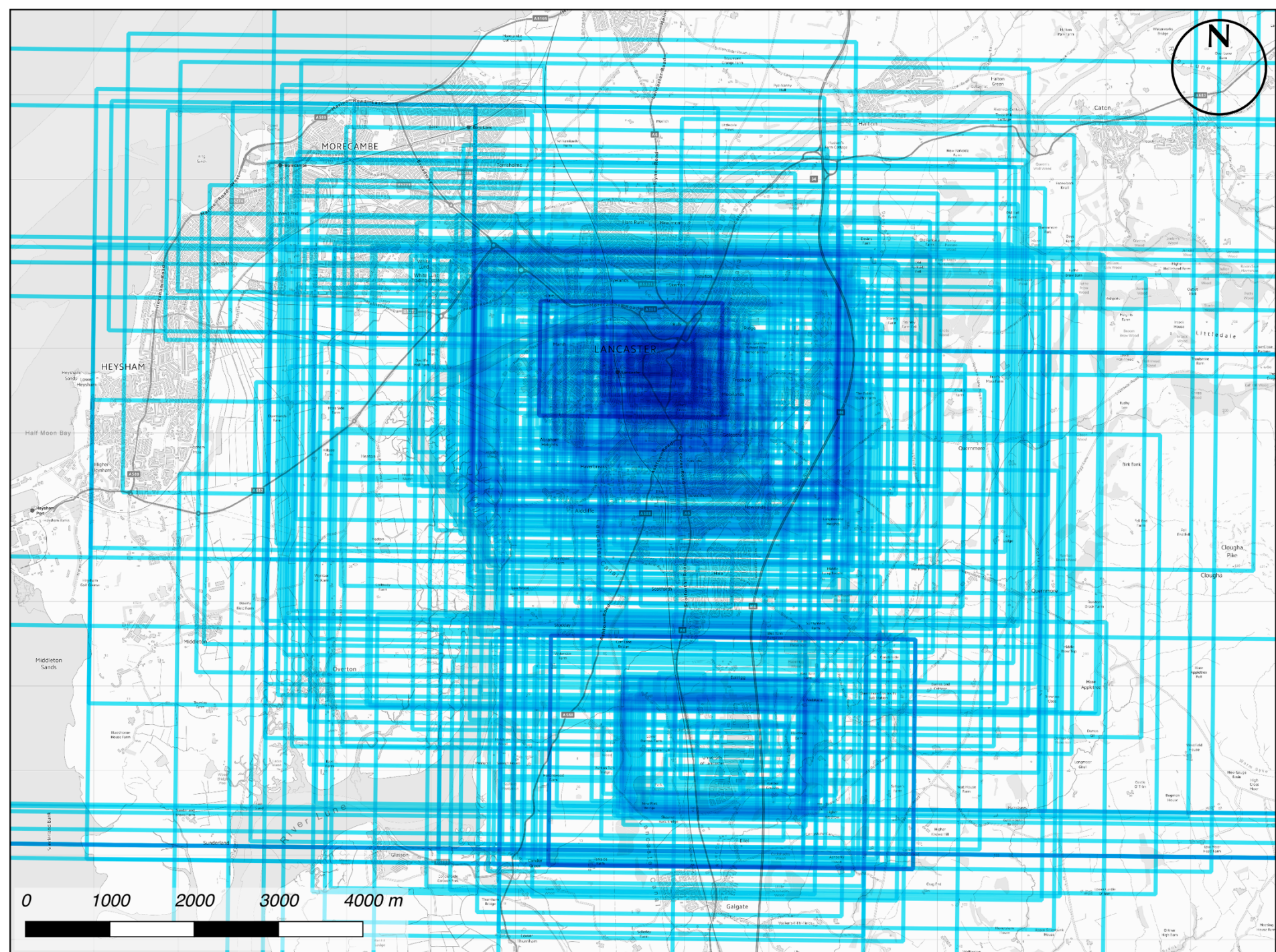


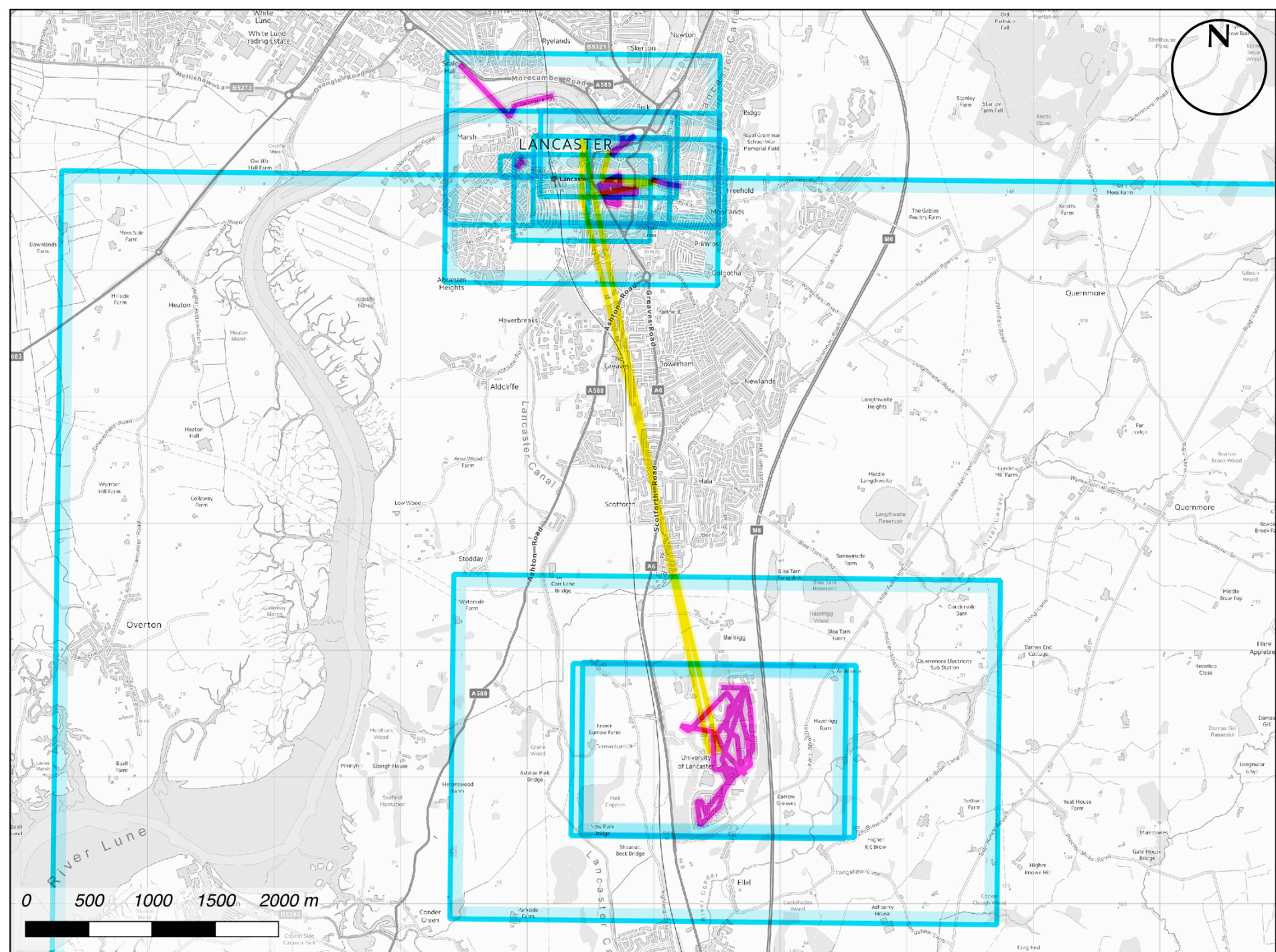


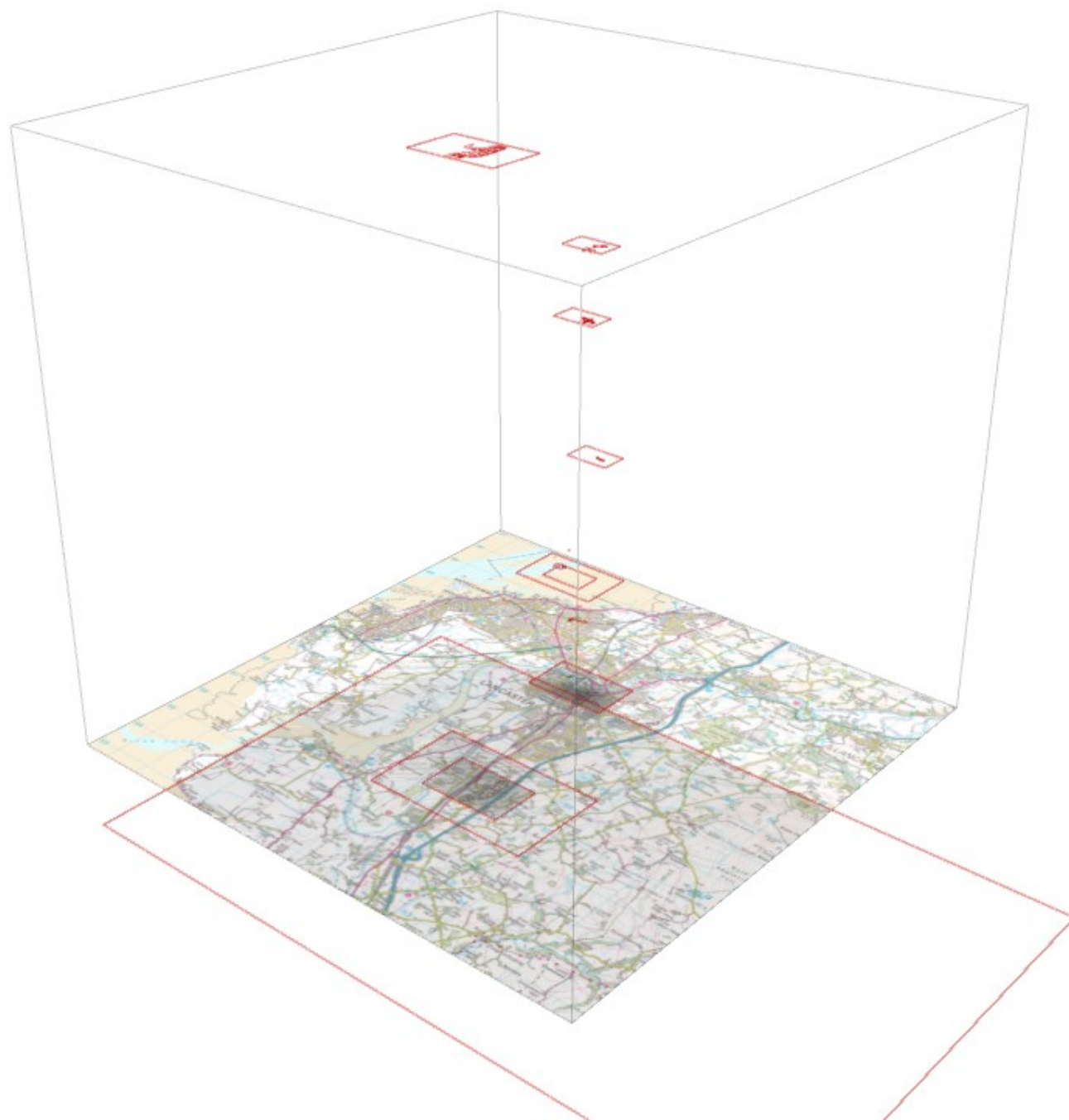


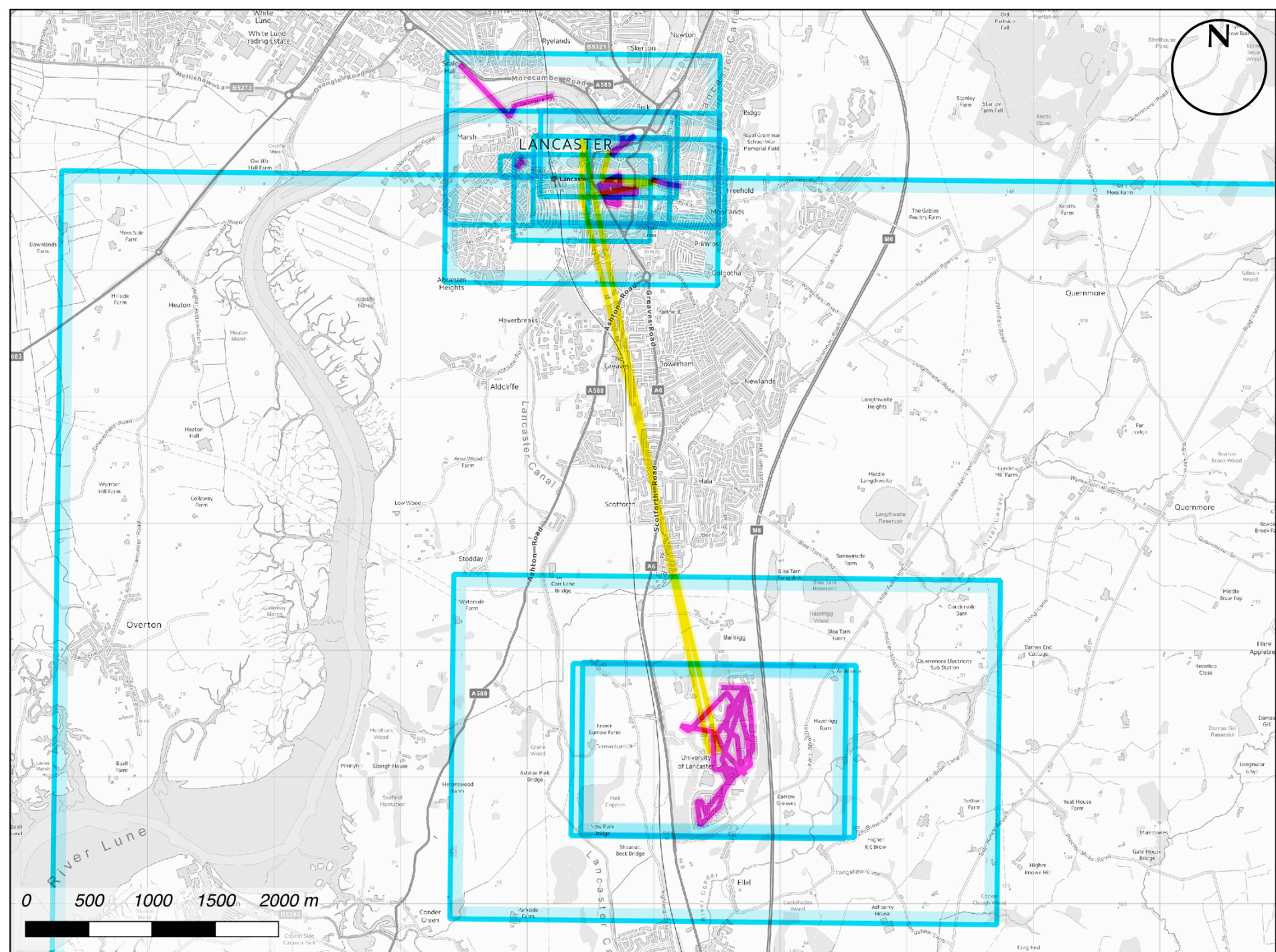
USER

DATA









DATA ANALYSIS

Variables

4 Websites

Base Map

Zoom Level

Question (Safe / Unsafe)

Question (First / Second)

Dependents

Dot Count

Time Spent

Zooming and Panning

Base Map Switching

Number of 'Places'

First vs Second Question

C.1.5x

Maps

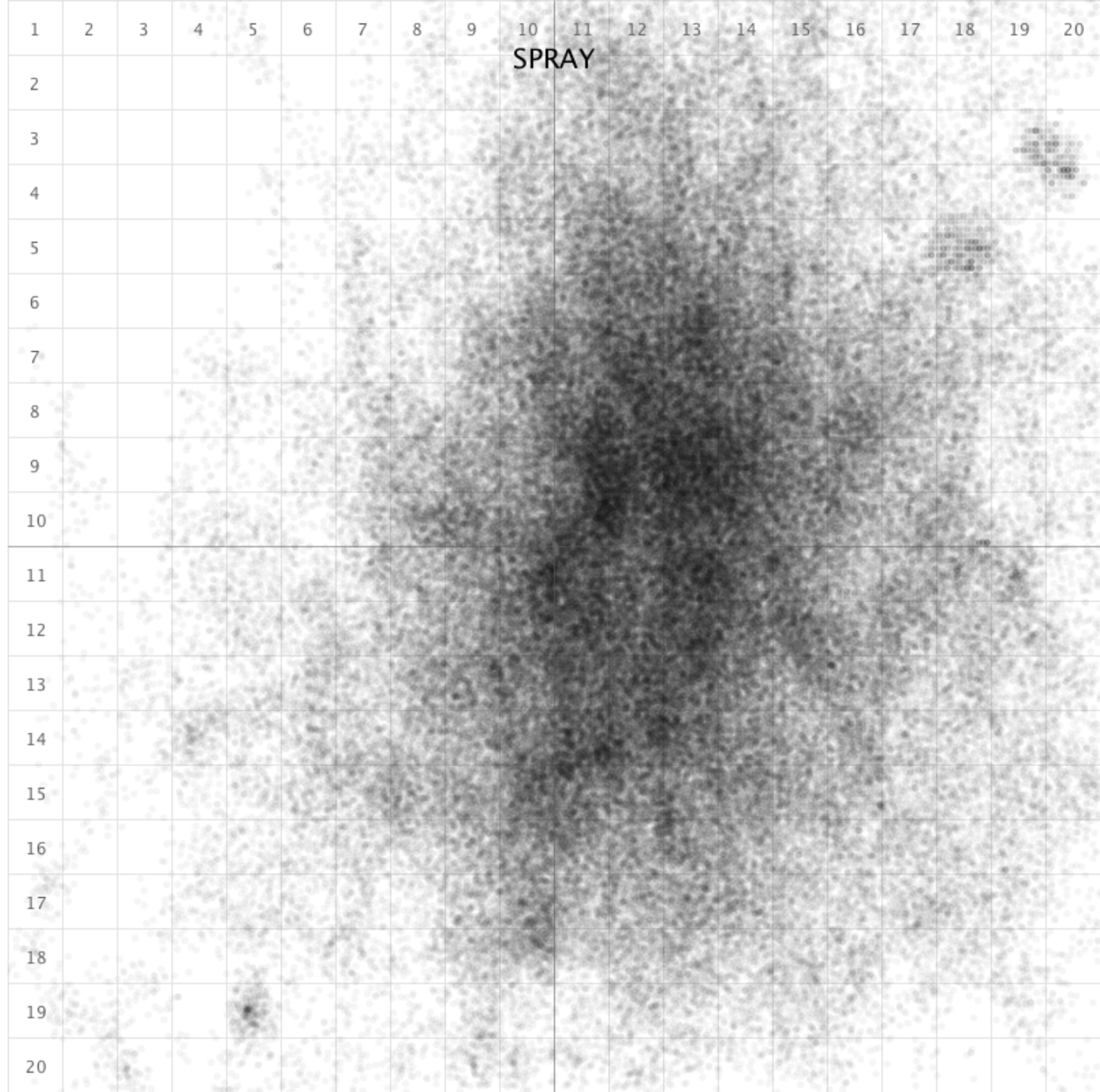
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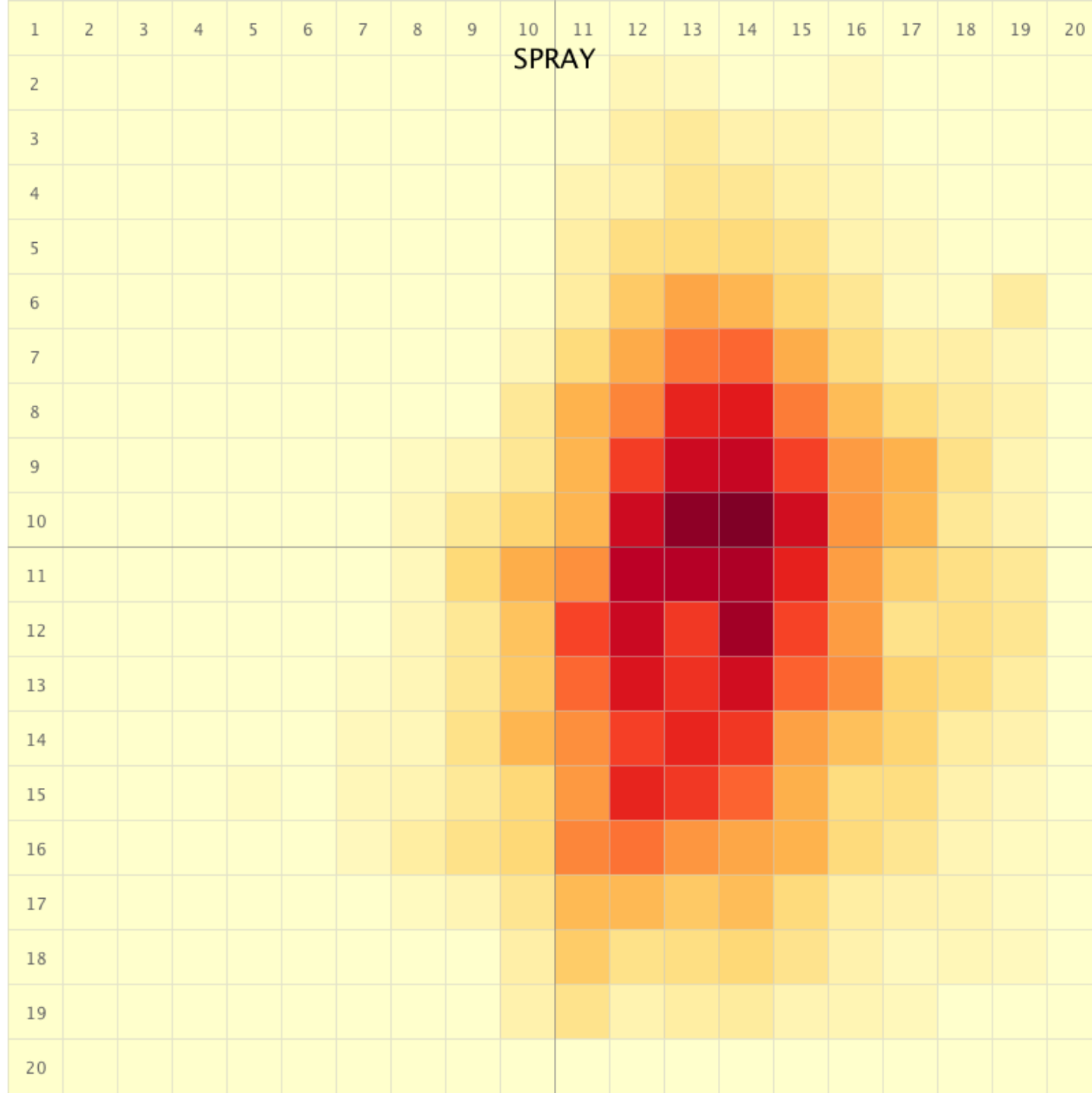
Road Map: 2.1

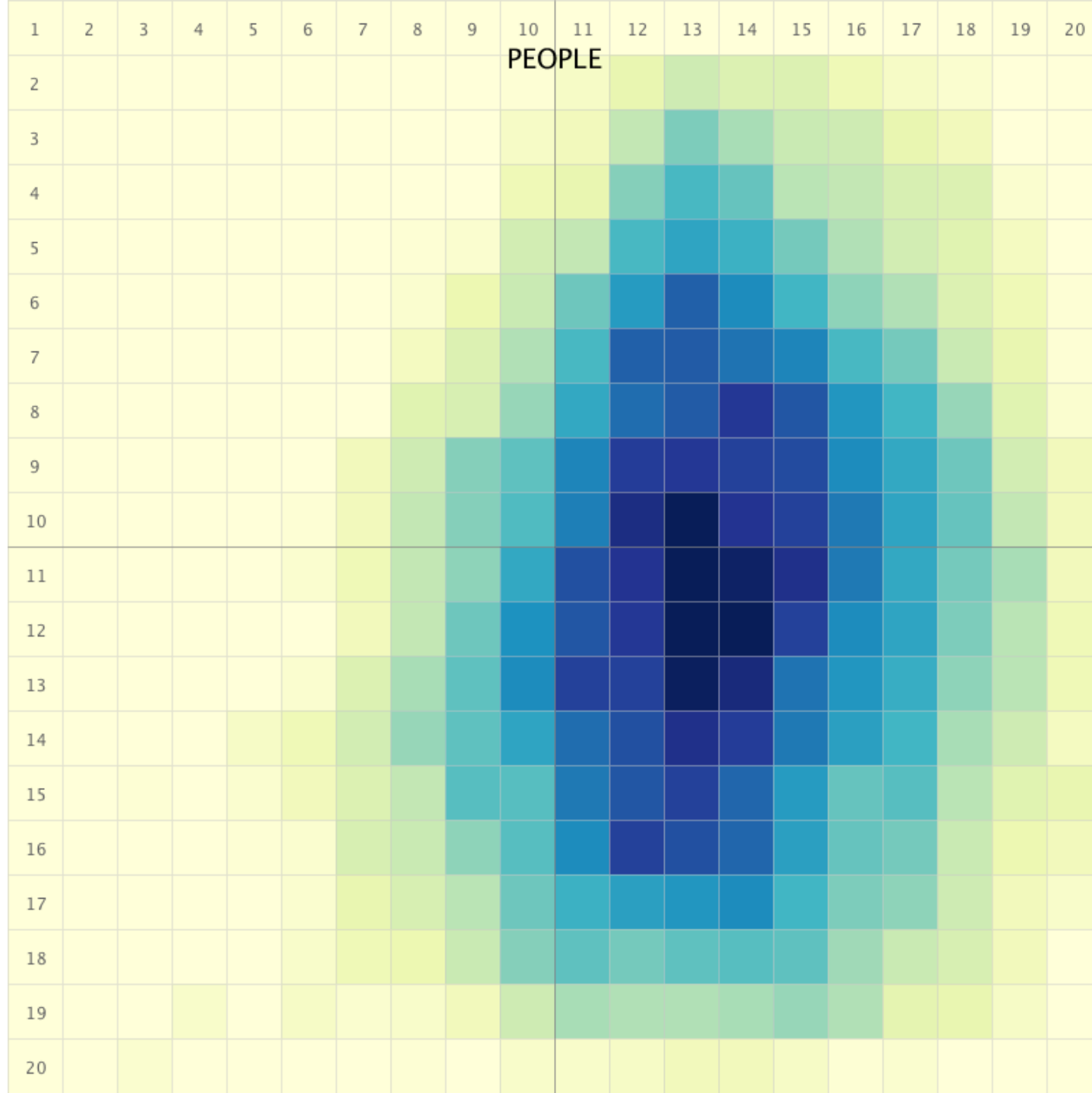
Hybrid: 2.4

Satellite: 3.8

RELATIVE POSITION







SO?

WORK
TO DO

<http://map-me.org>