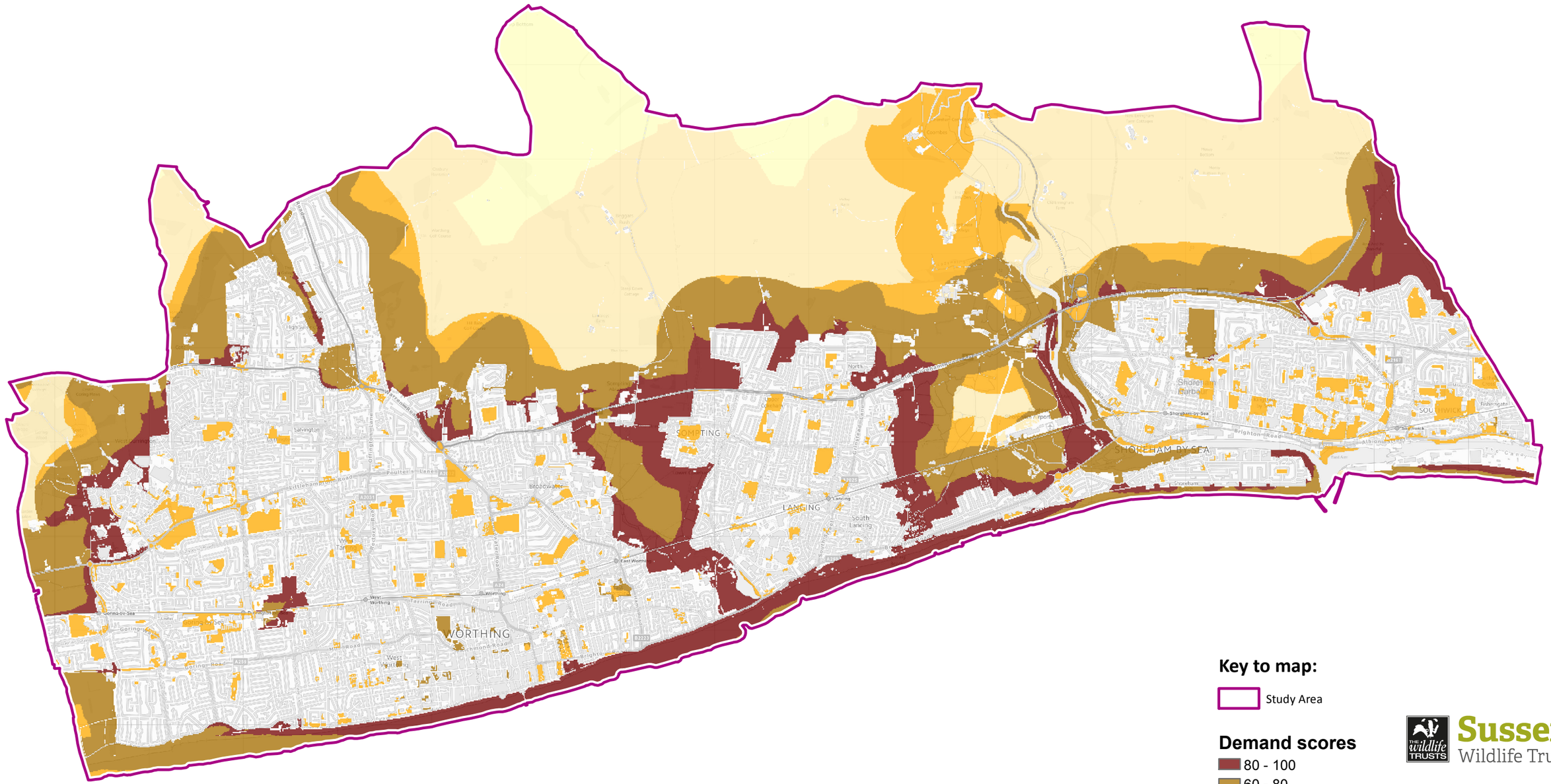
Accessible Nature - Demand

Accessible Nature occurs where greenspace or semi-natural habitats give health and well being benefits to people through regular access for walking, cycling or jogging.

EcoServ-GIS

(version 3.3)

Date: 04/07/2017



Key to map:

Study Area

Demand scores

- 80 - 100
- 60 - 80
- 40 - 60
- 20 - 40
- 1 - 20

N

0 1:43,000 2 Km

Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: Demand is mapped based on population size, health scores, greenspace size and accessibility. The Demand score is based on several combined indicators: population density, health scores and estimated visitation likelihood, based on greenspace size and distance. High values represent areas where there is a higher predicted benefit to those people likely to use each accessible nature site. Default local search neighbourhood values are used, but can be modified by the user. Local = 600 m, Landscape = 2400 m, Region = 12800 m. Greenspace size thresholds are applied: Local > 0.1 ha, Landscape > 10 ha, Region > 100 ha

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

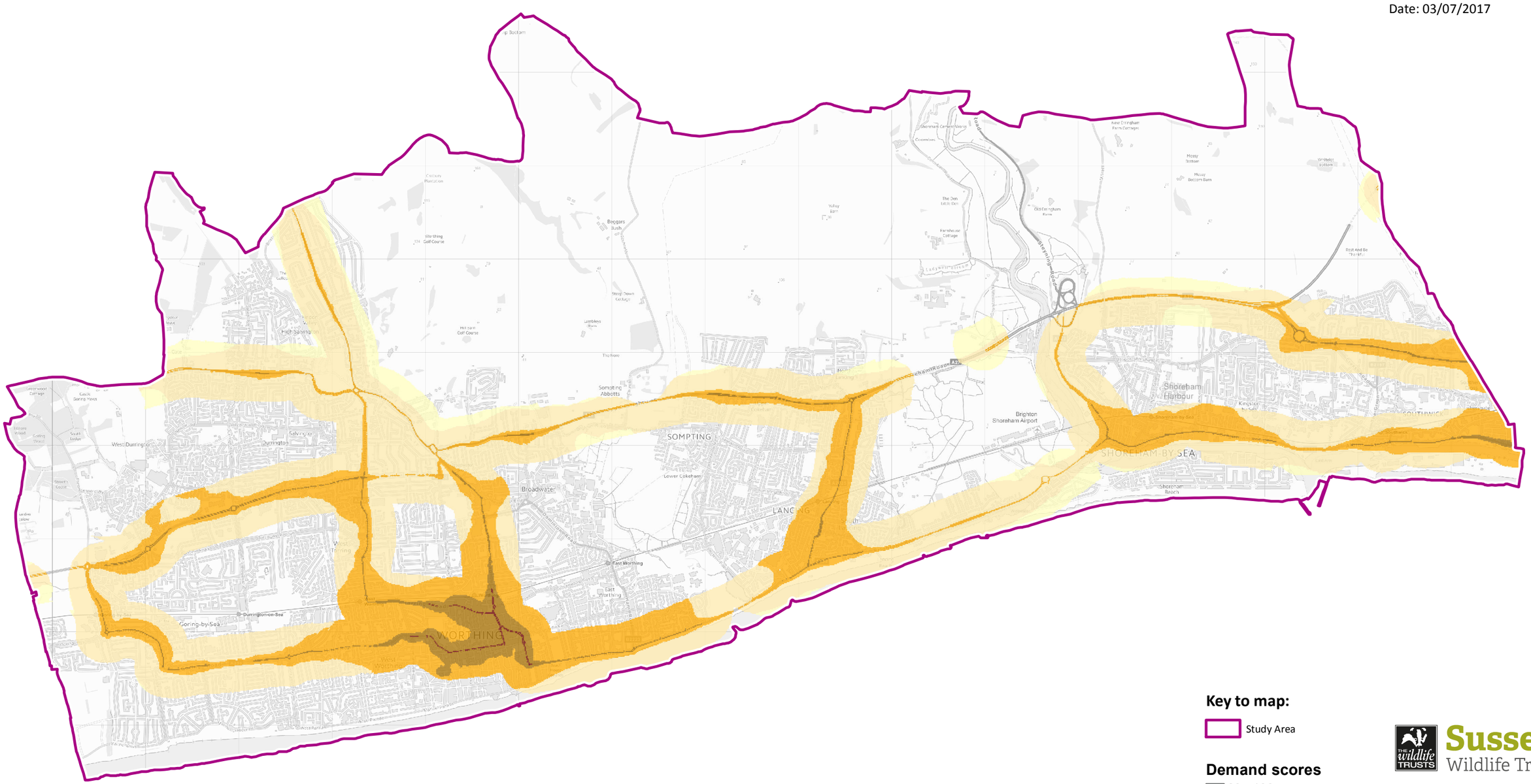
Air Purification - Demand

Air Purification occurs where habitats help to intercept or absorb airborne pollutants produced from road traffic.

EcoServ-GIS

(version 3.3)

Date: 03/07/2017



Key to map:

Study Area

Demand scores

- 80 - 100
- 60 - 80
- 40 - 60
- 20 - 40
- 1 - 20

N

0 1:43,000 2 Km

Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: High values represent areas where there is a combination of higher population density, higher health deprivation scores and higher predicted air pollution levels based on proximity to roads. Threshold and search neighourhood values can be modified by the user. Default values are: Maximum air pollution occurence distance from roads = 400 m, Manmade surface cover = 400 m radius, Population density = 300 m, Health scores = 300 m

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

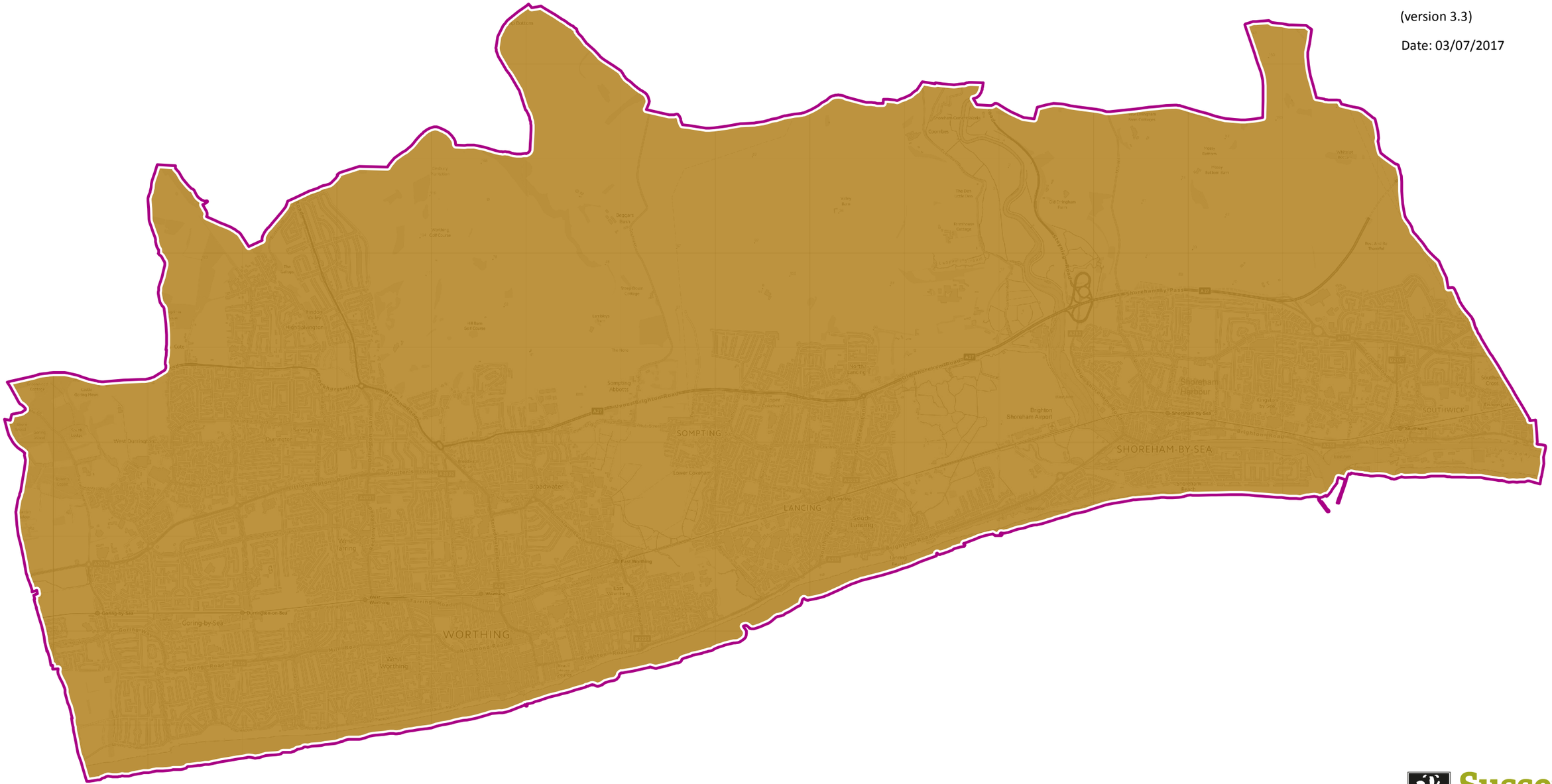
Carbon Storage - Demand

Carbon storage occurs in vegetation and soil.

EcoServ-GIS

(version 3.3)

Date: 03/07/2017



N

0 1:43,000 2 Km

Key to map:

Study Area

Demand scores

100

Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: This toolkit maps the estimated amount of carbon stored in different ecosystem or habitat types. Because the benefits of carbon storage are global, all areas are mapped as high demand.

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

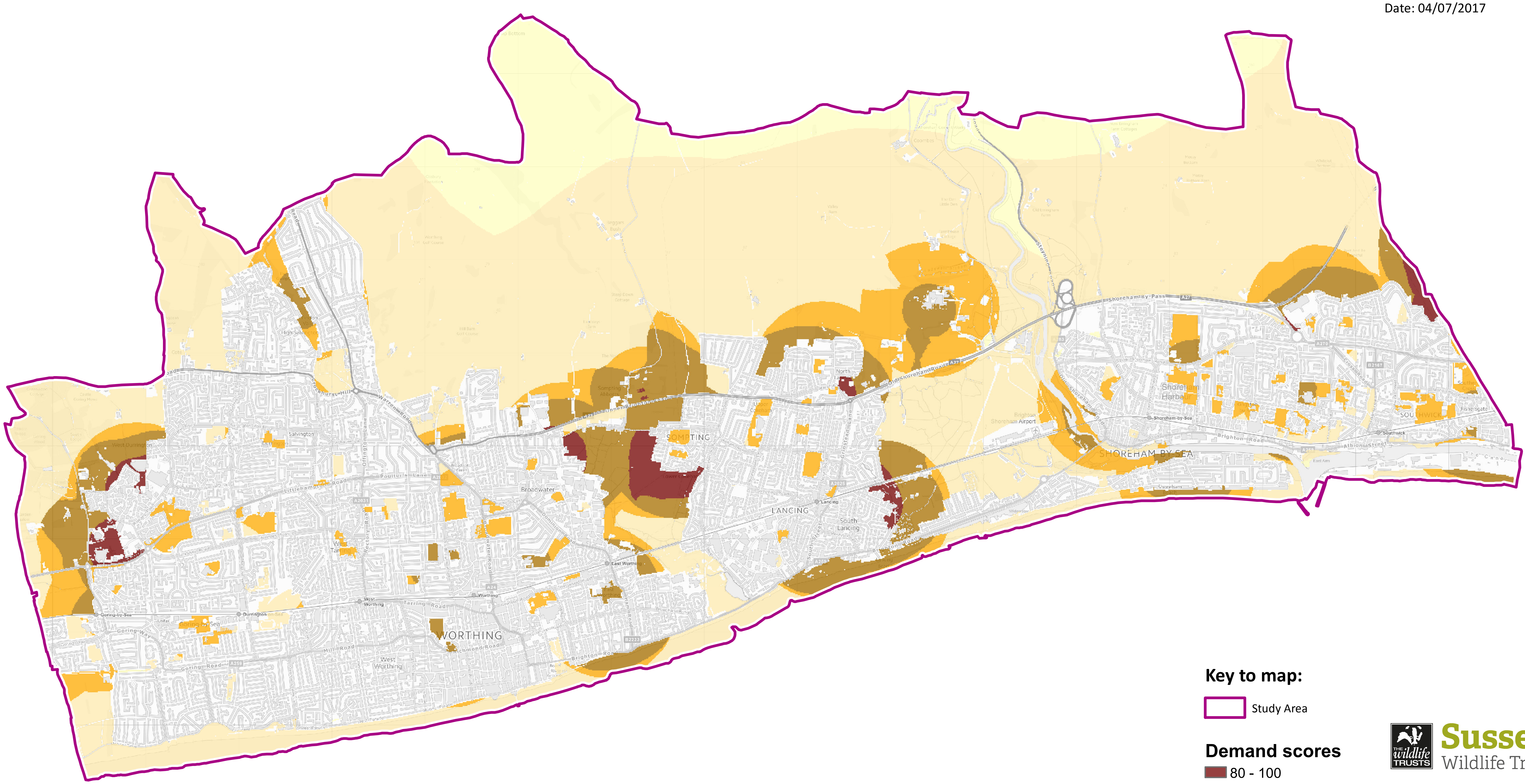
Education and Knowledge - Demand

Areas where young people can benefit from the education and knowledge opportunities of diverse semi-natural habitats.

EcoServ-GIS

(version 3.3)

Date: 04/07/2017



N

0 1:43,000 2 Km

Key to map:

Study Area

Demand scores

- 80 - 100
- 60 - 80
- 40 - 60
- 20 - 40
- 1 - 20

Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: Education and knowledge demand is mapped by combining two social indicators: the number of young people that live nearby, and the distance to nearby schools. Analysis examines greenspace sites at three spatial scales. Analysis defaults are: Young people <15yrs, Local scale: 600 m, Landscape scale: 3000 m. Region scale: 8000 m. Population thresholds are applied to remove areas of very sparse population. Defaults are: Local scale: > 50, Landscape scale: > 500, Region scale: > 1000

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

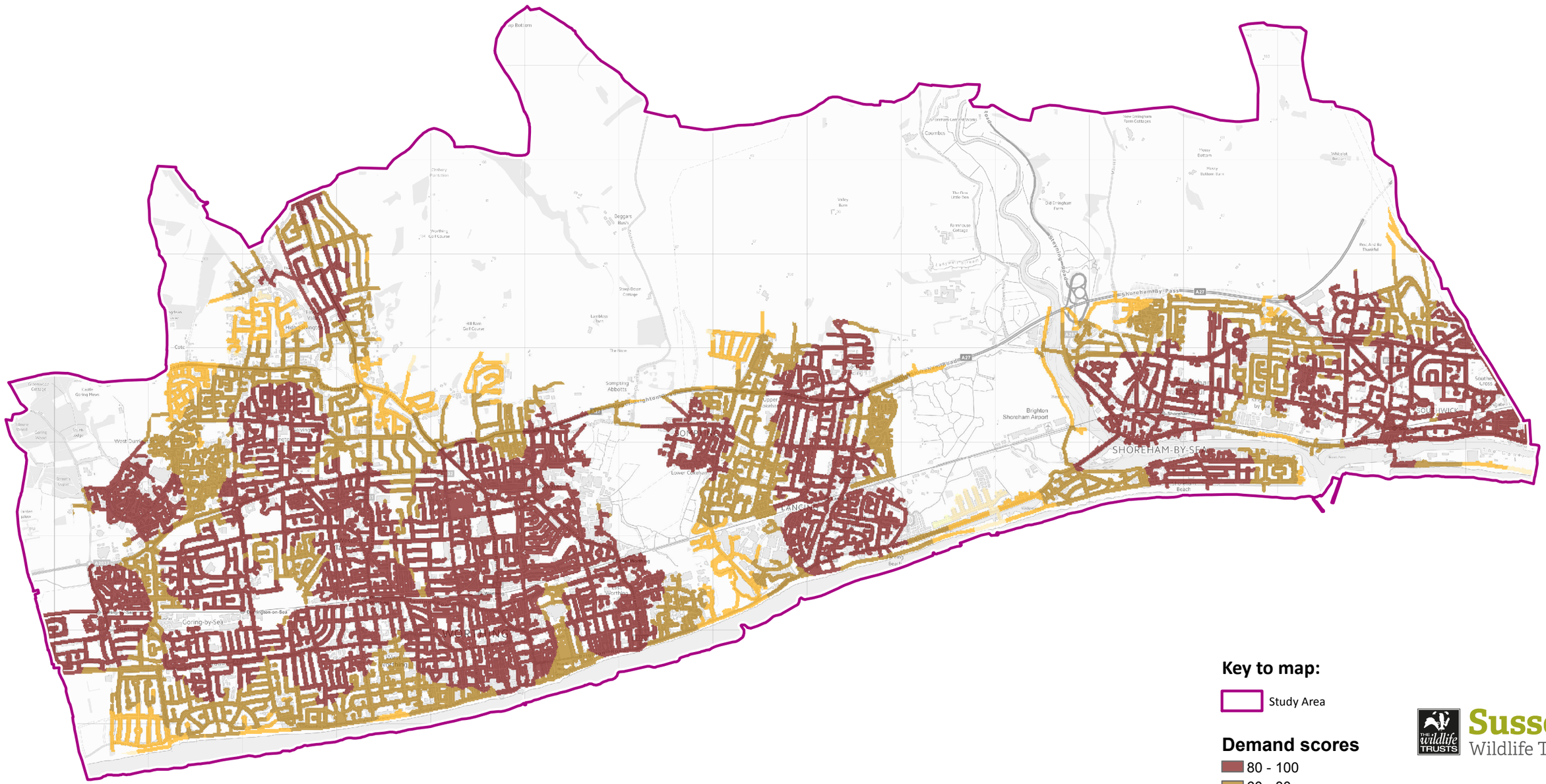
Green Travel - Demand

Green Travel routes are linear travel networks with a high cover of green infrastructure where people may benefit from a safer, calmer or more aesthetically pleasing travel route.

EcoServ-GIS

(version 3.3)

Date: 04/07/2017



Key to map:

Study Area

Demand scores

80 - 100
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40 - 60
20 - 40
1 - 20

N

0 1:43,000 2 Km

Sussex Wildlife Trust

Sussex Biodiversity Record Centre

Demand for Green Travel routes is mapped using a least-cost analysis, along the linear travel network. Travel destinations used are rail stations, town centre locations and schools. The maximum travel distance used can be altered by users. The default maximum travel distance is 4,500 m.

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

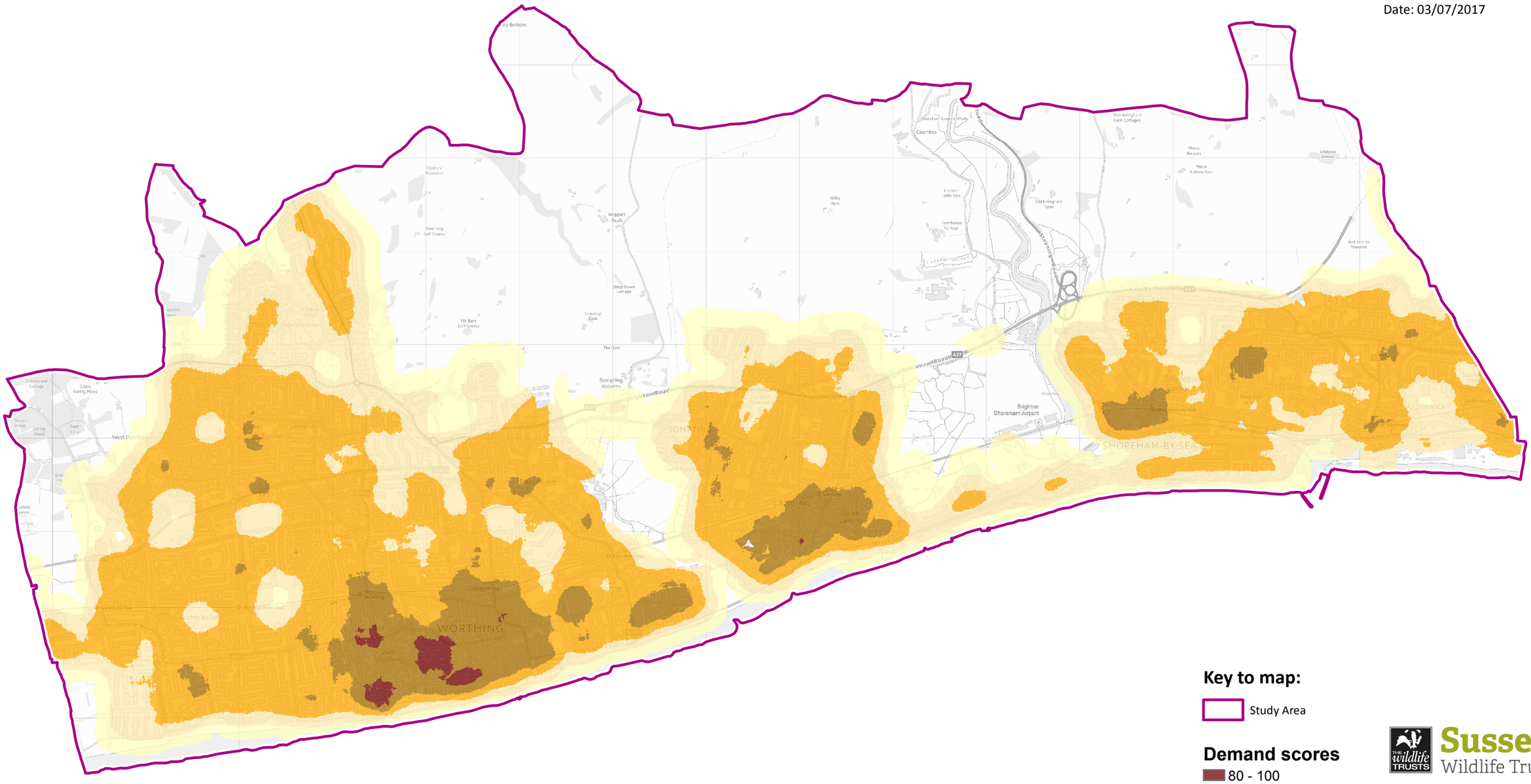
Local Climate Regulation - Demand

Local climate regulation reflects the ability of different ecosystems and habitats to absorb or intercept sunlight and reflected heat, controlling local temperatures & reducing the urban heat island effect

EcoServ-GIS

(version 3.3)

Date: 03/07/2017



Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: Larger urban areas are assumed to have demand for Local Climate Regulation. Demand is mapped based on cover of man made surfaces, population density and the proportion of the local population potentially susceptible to heat waves (based on age). There is assumed to be no demand in non-urban areas or areas below the mapped population density thresholds. Thresholds are applied to limit the area of mapped Demand. Defaults are applied, but can be varied with custom settings. Local search distance (population size) = 200 m Local search distance (age risk score) = 200 m. Minimum population size (local scale) > 50 people. Urban areas with heat islands (> 1,000 ha). Local cover of man made surfaces = 200 m

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

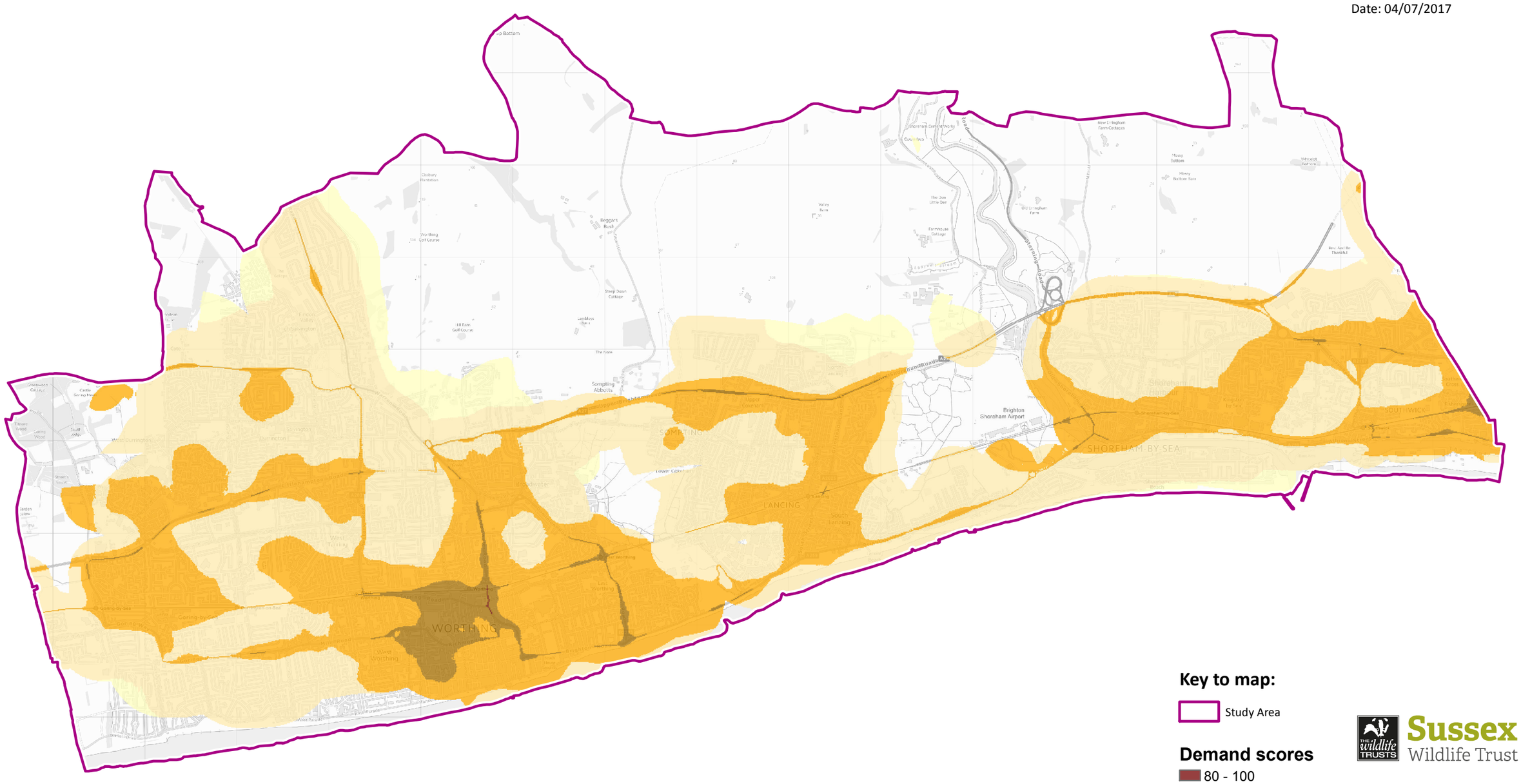
Noise Regulation - Demand

Noise regulation demand reflects the predicted need for noise regulation. This is based on modelled noise levels, population density and health data.

EcoServ-GIS

(version 3.3)

Date: 04/07/2017



Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: Local search distance (population size) = 300 m, Minimum population size (local scale) = 50, Local search distance health scores = 300 m, Max noise distance from airports = 1500 m, Max noise distance from motorways = 800 m, Max noise distance from railways = 650 m, Max noise distance from A roads = 600 m, Max noise distance from B roads = 550 m. Thresholds are applied to limit the area of mapped Demand. Defaults are applied, but can be varied with custom settings.

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

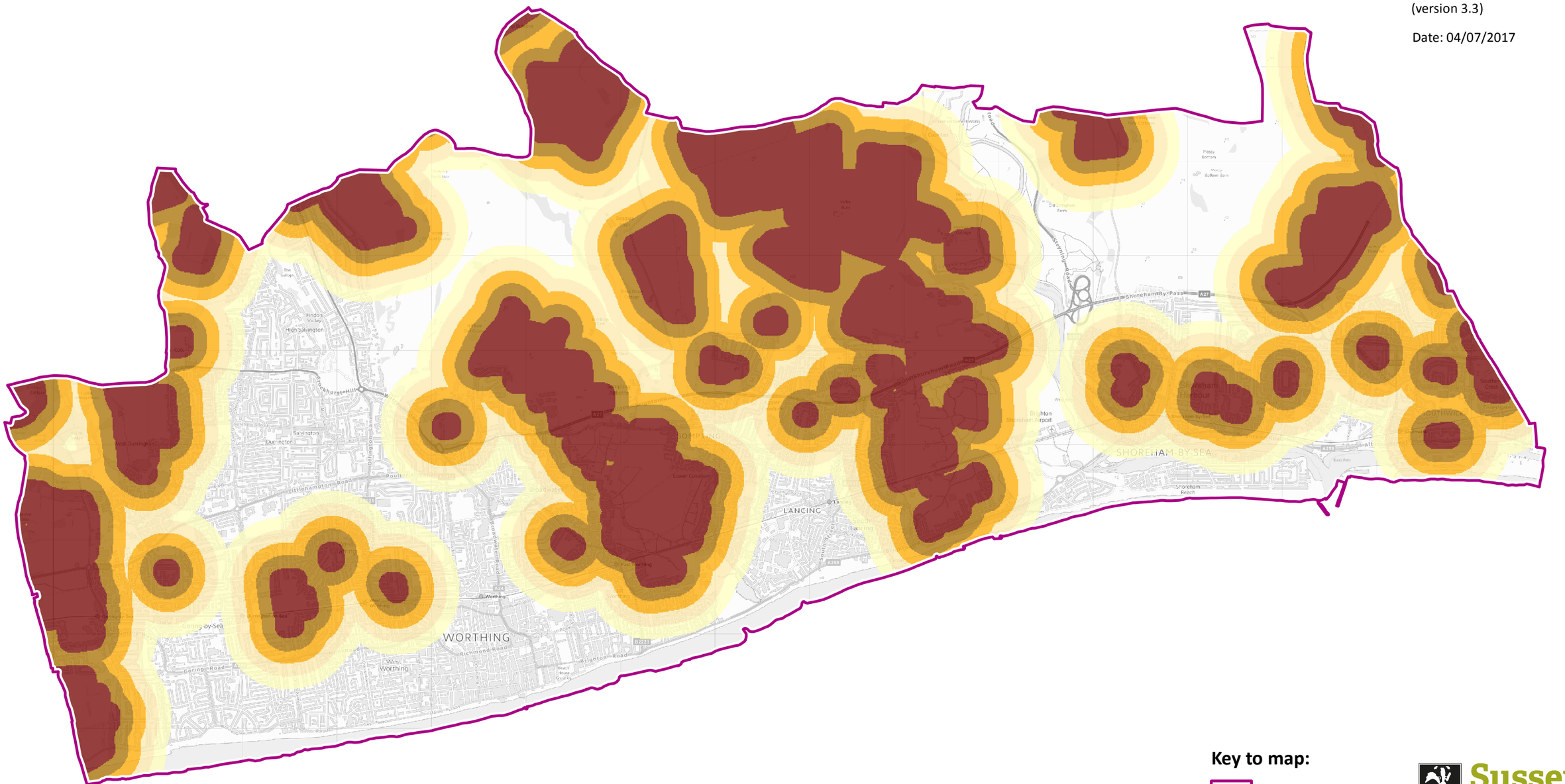
Pollination - Demand

Pollination demand indicates areas of land that are expected to benefit from wild pollinators.

EcoServ-GIS

(version 3.3)

Date: 04/07/2017



Key to map:

Study Area

Demand scores

- 80 - 100
- 60 - 80
- 40 - 60
- 20 - 40
- 1 - 20

N

0 1:43,000 2 Km

Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: Pollination demand is mapped from the locations of arable land, allotments and orchards.

LIMITATIONS: Often, depending on the input data used, arable land may be poorly mapped. Not all crops grown within areas of arable land will require pollination. If alternative data sources are available, they can be used to map the location of pollination demand. EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.

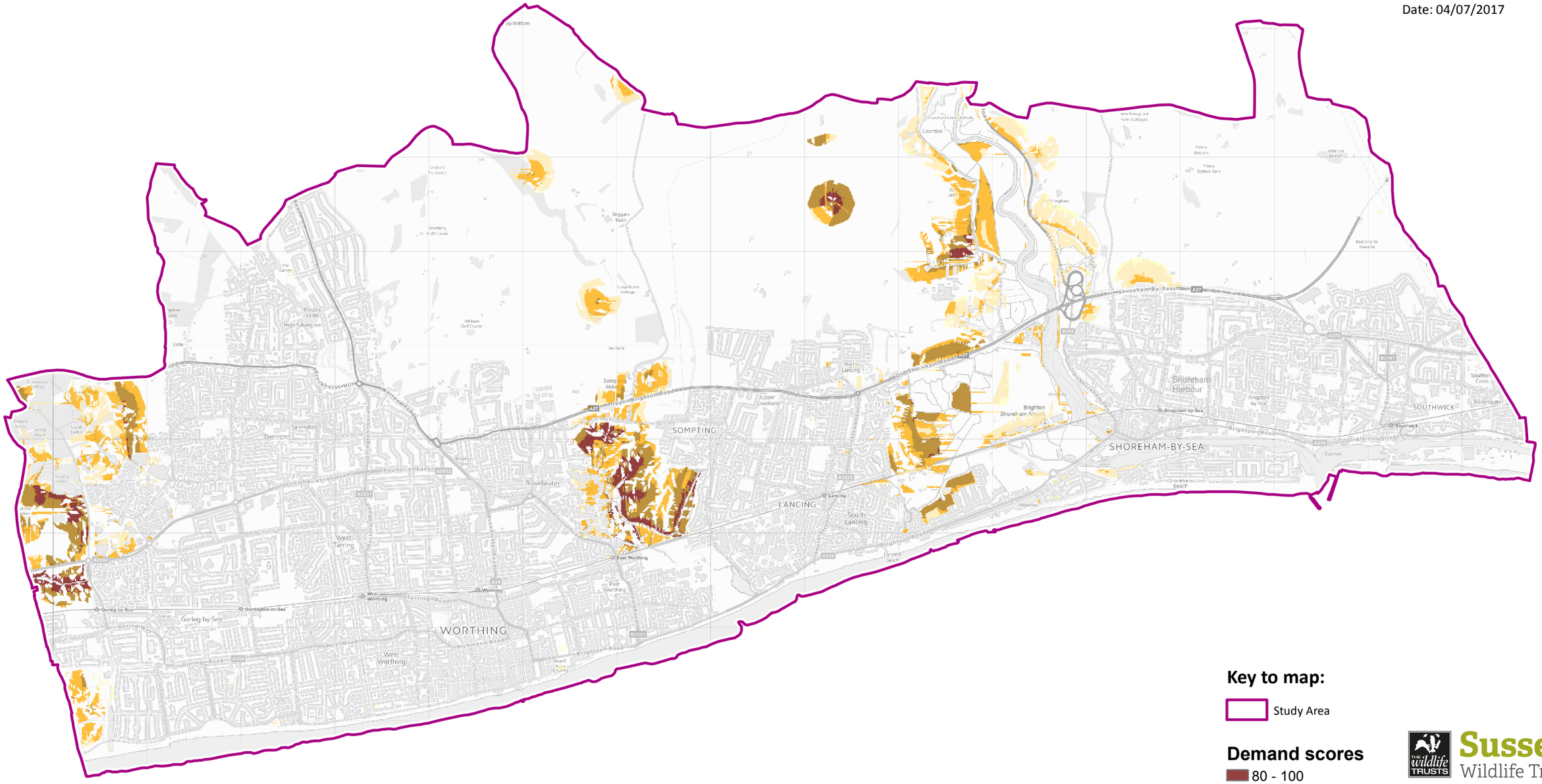
Water Purification - Demand

Areas of land that may generate pollution risks to watercourses

EcoServ-GIS

(version 3.3)

Date: 04/07/2017



Key to map:

Study Area

Demand scores

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- 1 - 20

N

0 1:43,000 2 Km

Sussex Wildlife Trust

Sussex Biodiversity Record Centre

METHODS: Demand is mapped based on a modified USLE equation, further adapted from a method presented in Sivertun and Prange (2003). Thresholds are applied to limit the area of mapped Demand. Defaults are applied, but can be varied with custom settings. Maximum risk distance from watercourses = 250 m. Potentially polluting land use types = Arable land, improved grassland, urban areas. Flow accumulation threshold used to identify streams, from which to map watersheds (catchments) = 20,000

LIMITATIONS: EcoServ-GIS relies on indicators to predict levels of capacity and demand. Results are relative to the study area and cannot be compared to other areas. Local knowledge must be used to interpret what the values mean in absolute terms.