

# Habitat Opportunity Mapping in Northamptonshire and Peterborough

*A range of maps have been produced showing opportunities to create new habitats for the benefit of both people and wildlife, across the whole of Northamptonshire and Peterborough.*

## Approach

Habitat opportunity mapping is a Geographic Information System (GIS) based approach used to identify potential areas for the expansion of key habitats. It aims to identify possible locations where new habitat can be created that will be able to deliver particular benefits, whilst taking certain constraints into account. These benefits are often referred to as ecosystem services and include regulation of flooding and air quality, and cultural benefits such as recreational opportunities.

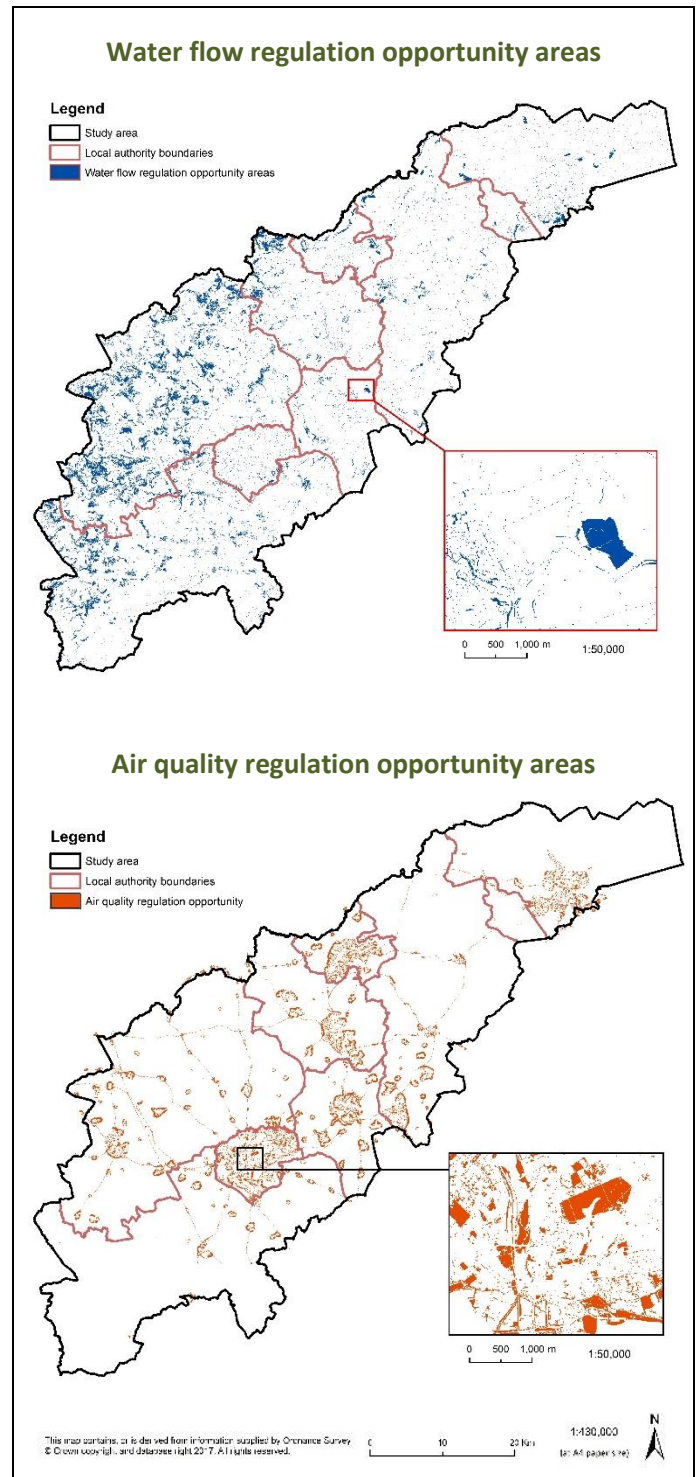
Opportunities have been mapped to:

- **enhance biodiversity** for three different broad habitat types (broadleaved and mixed woodland, semi-natural grassland, and wet grassland and wetland),
- **reduce surface water runoff** (and hence flood risk),
- **reduce soil erosion and improve water quality**,
- **ameliorate poor air quality**, and
- **increase public access to natural greenspace**.

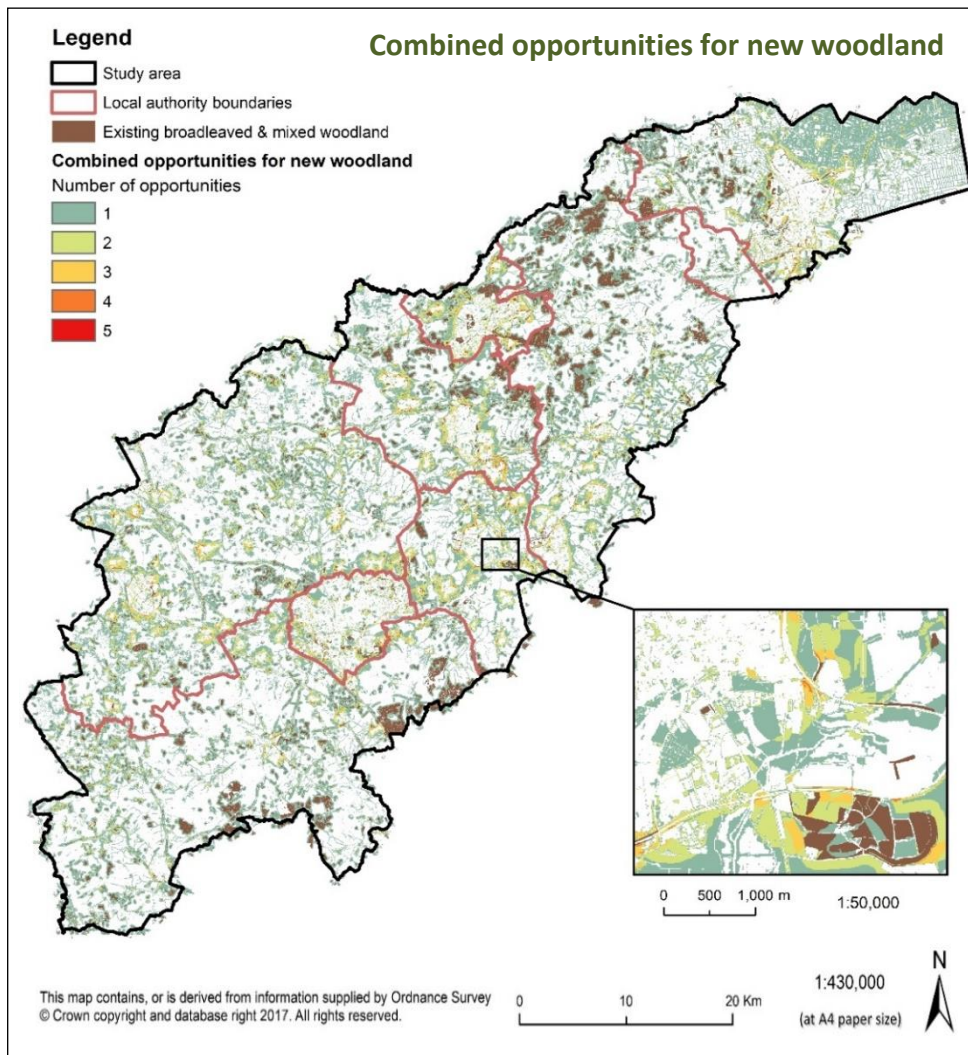
The biodiversity opportunity maps highlight areas that are best located in terms of their connectivity to existing habitat patches and are therefore most appropriate from an ecological point of view. The remaining opportunity maps highlight the top 10% of sites for each respective service, although it would be possible to consider a wider or narrower range of sites if desired, or look at specific areas.

## Results

The different opportunity areas vary in their geographic location; the greatest opportunities for reducing water flow are situated to the west of the study area on hillier terrain, whereas water quality opportunities tend to be adjacent to water courses. Air quality and accessible greenspace opportunities are focussed in and around the major towns.



Maps show the top 10% of areas with the greatest opportunity to reduce water flow (top) and ameliorate poor air quality (bottom), with constrained areas (e.g. buildings, infrastructure) excluded.



Broadleaved and mixed woodland biodiversity enhancement is centred around Rockingham and Salcey Forests. The wet grassland and wetlands are focussed on the floodplain of the Middle Nene, whereas opportunities for semi-natural grassland are more spread throughout the study area.

In addition to mapping individual opportunities, maps were also combined to highlight **opportunities to enhance multiple services** simultaneously. Planting woodland and trees, in particular, provides opportunities to deliver multiple benefits (such as reducing surface water runoff and improving air quality - see adjacent map). Key locations for delivering these multiple benefits were around the edges of the major towns. Maps showing the combined opportunities for new semi-natural grasslands, and new wet grassland and wetlands were also produced.

### A basis for decision-making

The opportunity maps can be used to assist with the development of green infrastructure strategies and planning, locating the best places for biodiversity offsetting and natural capital net gain initiatives, for agri-environment scheme targeting and habitat restoration projects, and as an important step towards producing a natural capital investment plan or strategy for the area. In addition, potential mechanisms to take this forward include natural flood risk management and catchment sensitive farming schemes, health and wellbeing initiatives, and UK Woodland Carbon Code projects. It is recommended that the maps are refined further in relation to existing plans and priorities, and that a workshop is held with local stakeholders to ground-truth locations, provide rules to target certain habitats or certain opportunities in different locations, and to prioritise locations to take forward.

The full report can be downloaded from [here](#).