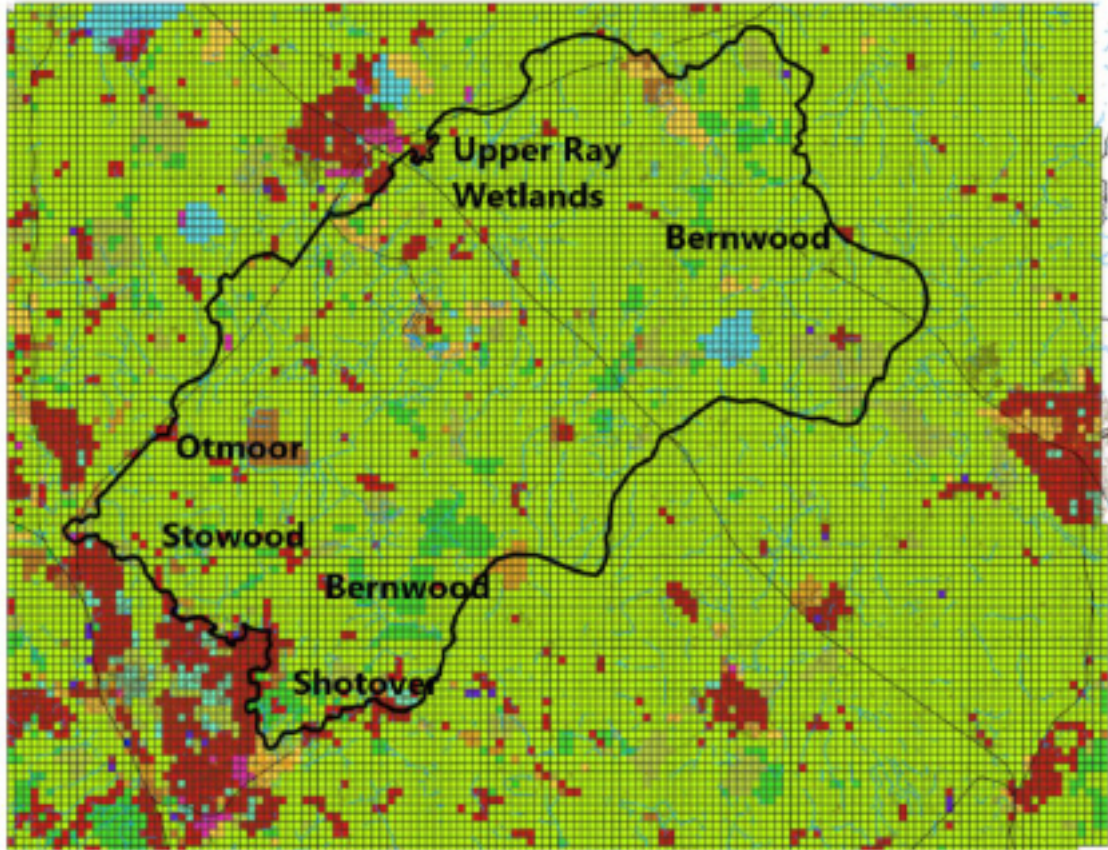


## 4.6 Addressing the threat to nature and Natural Capital located next to major urban areas and urban expansion



National Historic Landscape Characterisation 250M grid

	CIVIC PROVISION		CIVIC PROVISION
	COMMERCE		COMMERCE
	COMMUNICATIONS		COMMUNICATIONS
	ENCLOSED AGRICULTURE		ENCLOSED AGRICULTURE
	INDUSTRY		INDUSTRY
	MILITARY		MILITARY
	ORCHARDS HORTICULTURE AND AQUACULTURE		ORCHARDS HORTICULTURE AND AQUACULTURE
	RECREATION		RECREATION
	SETTLEMENT		SETTLEMENT
	UNIMPROVED LAND		UNIMPROVED LAND
	WATER SUPPLY AND FLOOD DEFENCE		WATER SUPPLY AND FLOOD DEFENCE
	WOODLAND AND FORESTRY		WOODLAND AND FORESTRY
	<i>all other values</i>		

There are uniquely large threats from development and visitor pressure in this location that need to be protected with spatial polices. The environmental resources in the RNP area are particularly vulnerable to impacts from the adjacent urban development –from the anticipated large population growth at Oxford, Kidlington, Bicester and Steeple Claydon. There is also a major threat to the area from the Oxford Cambridge Arc initiative with the development of the road and rail networks between Oxford and Cambridge, and the growth for new dwellings within the Arc whether it is from existing settlements, in new settlements or in an unplanned way.

With this growth comes pressure for road infrastructure, infill development, through traffic and increased visitor numbers to existing sensitive nature reserves –areas already selected as best for nature restoration. These negative impacts are already a major problem for land managers and farmers. This localised pressure is present in all the spatial strategies –both because of the presence of existing major urban areas, but also because all spatial strategies include growth in Oxford, Bicester and Kidlington.

This particular threat to the nature and Natural Capital is considerably more serious because the resource in the RNP is of much greater value than the Natural Capital maps and Local Nature Recovery Network show.

The RNP would be much higher rated if the Natural Capital method and map took into account the ‘nearness to the need for ecosystem services’ (for services to people’s health and wellbeing, recreation, sense of place etc. this should be the nearness to people centres) and also take into account the potential to increase access to ecosystem services –for example through new walking and cycle routes and turning roads into shared ‘quiet’ lanes to increase recreational value.

The three tier Local Nature Recovery Network (LNRN) is too generalized to show the significance of this RNP area. It was not designed to identify high value sites lacking designation, or those sites most at risk from development and urban fringe issues. For example the National Nature Recovery Network, which is more detailed, shows that the Oxfordshire part of the RNP has in fact 25% of the ‘Restorable Habitat’ in Oxfordshire outside the AONBs! The Otmoor RSPB reserve is now hosting nationally important numbers of wintering golden plover and shoveler<sup>6</sup>. The LNRN does not give added weighting to the size of an area or habitat diversity. Protecting the larger sites of the RNP is vital (see below). The RNP’s diversity of habitats close together is important in conserving rarer species that use more than one habitat in their life-cycle.

The RNP can give protection to the many high value undesignated sites in its area. They are not protected by designations (SSSI or NNR or SAC) –for example the Otmoor RSPB reserve, other Otmoor meadows, ancient woodlands in the wider Bernwood area and the Upper Ray wet meadows.

---

<sup>6</sup> Personal communication from David Wilding, Site Manager RSPB Otmoor

The RNP will protect natural habitat types (for example sandy farmland, flood plain wetland) and local Landscape Character types –the Midvale ridge and the Upper Thames Valley that are not present in the protected Areas of Outstanding Natural Beauty (AONBs).<sup>7</sup>

---

<sup>7</sup> See Regional landscape Character Areas map at <http://owls.oxfordshire.gov.uk/wps/wcm/connect/occ/OWLS/Home/Oxfordshire+Regional+Character/>

## 4.7. Local Nature Recovery Strategies ( LNRS)

The following is a summary of the Local Nature Recovery Strategies from Wild Oxfordshire :

“In the [Environment Bill](#) ( Environment Act 2021), government will introduce new duties to support better spatial planning for nature through the creation of **Local Nature Recovery Strategies** (LNRSs). The intention is that the whole of England will be covered by LNRSs. Each will include a statement of biodiversity priorities for the area covered by the strategy and a local habitat map that [identifies opportunities for recovering or enhancing biodiversity](#). The natural world is the foundation of our wellbeing and prosperity, and provides an irreplaceable stock of natural capital but nature has declined significantly in recent times and continues to decline. For nature to recover we have to look beyond currently protected sites and take action to extend and link our existing sites – both to support wildlife and to recover the range of economic and social benefits that nature provides. The aim should be to make existing patches of habitat bigger and better, increase the number of valuable habitat patches, improve connectivity, and restore natural processes.

## 4.8 Providing wellbeing and health benefits where they are needed



There is an exceptional opportunity created by the RNP's nearness to major towns –it can meet the need where it arises for wellbeing and health benefits (such as recreation, interaction with nature, and access to new large natural public access areas), and access to characteristic and historic landscapes. The RNP can give these health benefits to those most in need –it abuts some of the most deprived wards in Oxford: Barton, Wood Farm, and Blackbird Leys. As well as being close to some of the more deprived areas of Aylesbury and Bicester. The financial savings to Oxfordshire's Gross Value added could be substantial since mental health, inactive lifestyle and obesity cost £1.5 billion a year<sup>8</sup>.

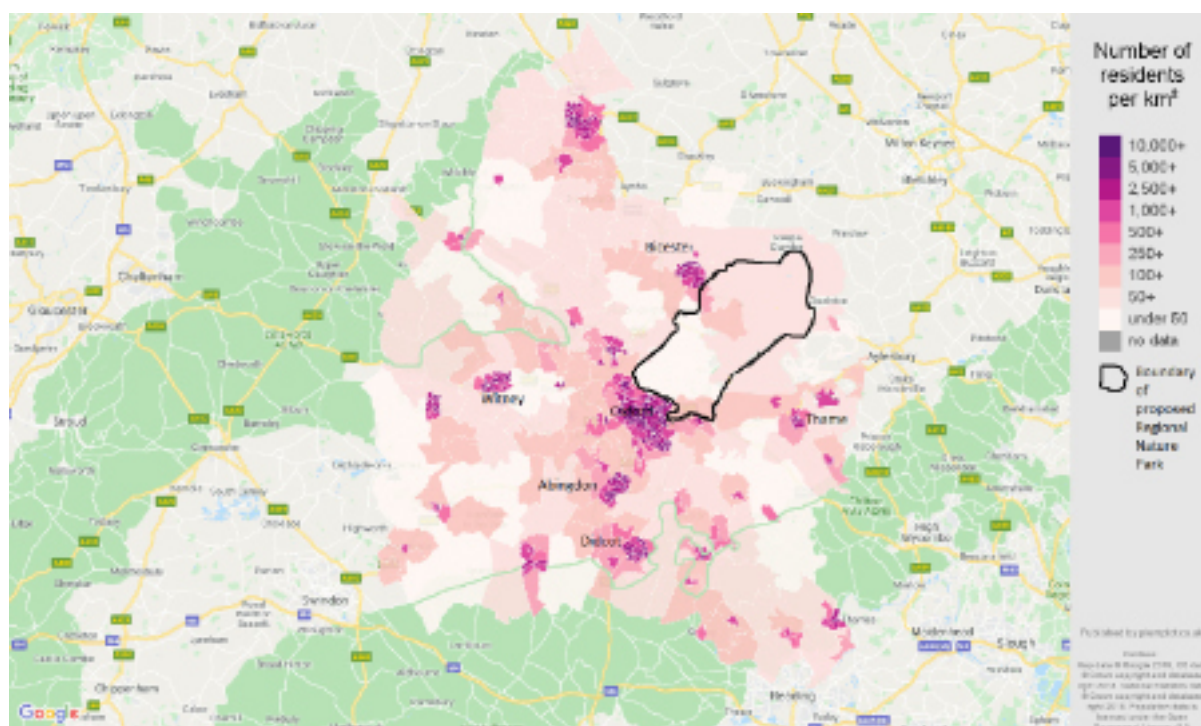
As Green Infrastructure close to urban areas, the RNP can contribute significantly to mode change from car use to active transport for leisure and commuting trips: by providing active travel infrastructure (footpaths, cycleways and 'Quiet' lanes) through attractive surroundings away from major roads. A population of 500,000 people are within striking distance of the RNP.

---

<sup>8</sup> Dr Ingo Schünder, 2020, Making the case for investment in Green Infrastructure' Brillianto, for Oxfordshire CC

## 4.9 Securing the significant benefits of a low population density here for Nature and Natural Capital

With a lower population density the RNP has fewer physical barriers (for example roads, urban areas) to landscape-scale action on nature and landscape restoration. It also provides a far higher quality of experience to visitors seeking countryside tranquility, interaction with nature, and enjoyment of landscapes without urban features. There is also room to create the public orientated large natural areas next to urban areas (a need identified in the Natural Capital report<sup>9</sup>). As this map shows, the RNP has a significantly lower population density compared to other surrounding areas, and in contrast to many of the other areas of high nature and Natural Capital value in Oxfordshire and Buckinghamshire.



The map is based on 2011 census updated to 2017 Super Output Areas. The RNP's population density is below 50 per km<sup>2</sup> next to Oxford. The Buckinghamshire part of the RNP is between 50 and 100 residents per km<sup>2</sup>.

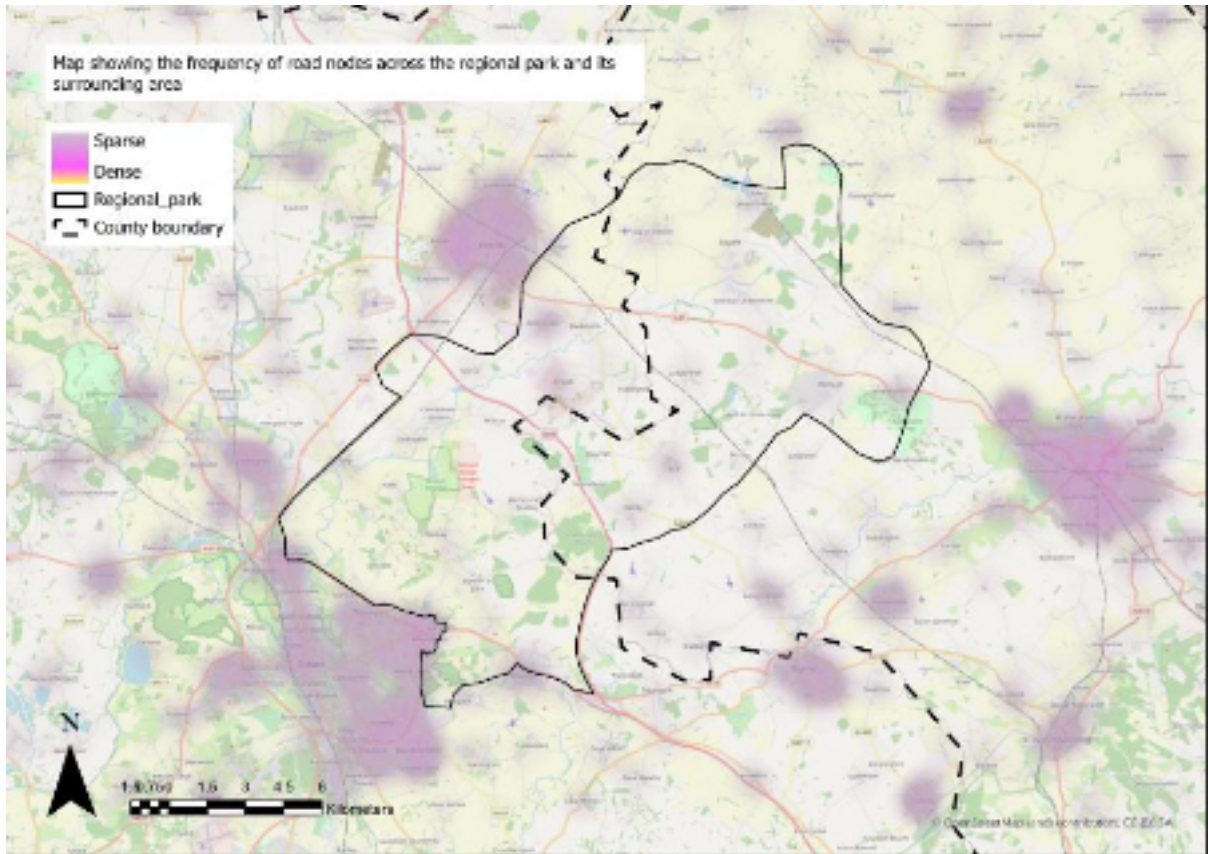
The RNP's low population density next to the major urban settlements is a unique opportunity to safeguard and improve access for the two county's residents. The RNP proposal is in line with the Oxfordshire Environment Board proposal for large-scale (at least 50 km<sup>2</sup>) nature areas.<sup>10</sup>

<sup>9</sup> Alison Smith, Feb 2020 Natural Capital in Oxfordshire (Short Report) Environmental Change Unit, University of Oxford

<sup>10</sup> "OxEB supports the call for the establishment of one or more large nature areas of at least 500ha in size in Oxfordshire. This is also in line with the Accessible Natural Green Space Standards where everyone needs access to a 500 ha site within 10 km of their home and a 100 ha site within 5 km". <https://www.wildoxfordshire.org.uk/proposed-policies-for-op2050/>

Some areas within the RNP have extremely low population densities (including just outside Oxford) with 20 people per square kilometre) and the area around Boarstall with a population density of 11 people per square kilometre.

As well as very low population the area also has low traffic volumes and a low number of road nodes



Map by Sasha Liwicki

## 4.10 Achieving the uniquely strategic benefit of an extra –large area of natural habitats and Natural Capital

The RNP is the only opportunity for Oxfordshire and Buckinghamshire to create an area of regional importance for nature and for ecosystem services associated with natural habitats, and landscapes without urban influence and infrastructure. The RNP located here, taken with the low population density, can achieve regional importance by taking advantage of the significant benefits of its size and shape covering a large area –of 270 km<sup>2</sup> in a block (i.e. not a corridor)<sup>11</sup>.

The large RNP can support larger populations of rarer wildlife species. All wildlife species populations vary, with environmental changes causing poor breeding years, but larger populations are much less likely to fall to unsustainable levels and become locally extinct. Larger sites will also have less proportion of their area near boundaries where they are degraded by disturbance and pollution.

Because the RNP is large and square it can support larger networks of similar habitats, with connections in all directions. The RSPB, the Freshwater Habitats Trust (FWHT) and BBOWT have shown how effective habitats restoration and creation can be at Otmoor, Bernwood and near Oxford at Cutteslowe. The Forestry Commission, working with others (including the Natural History Museum in Oxford) and the FWHT show the potential for increasing rare invertebrates on woodland rides and associated wet meadows .

In addition the RNP is of a size that it can tackle a key problem caused by climate change – the need to store water, from reduced rainfall in more infrequent events, to feed key wetlands –at Shotover, Sydlings Copse (and new calcareous fens in Elsfield) and the Otmoor and Upper Ray wetlands, through reservoirs.

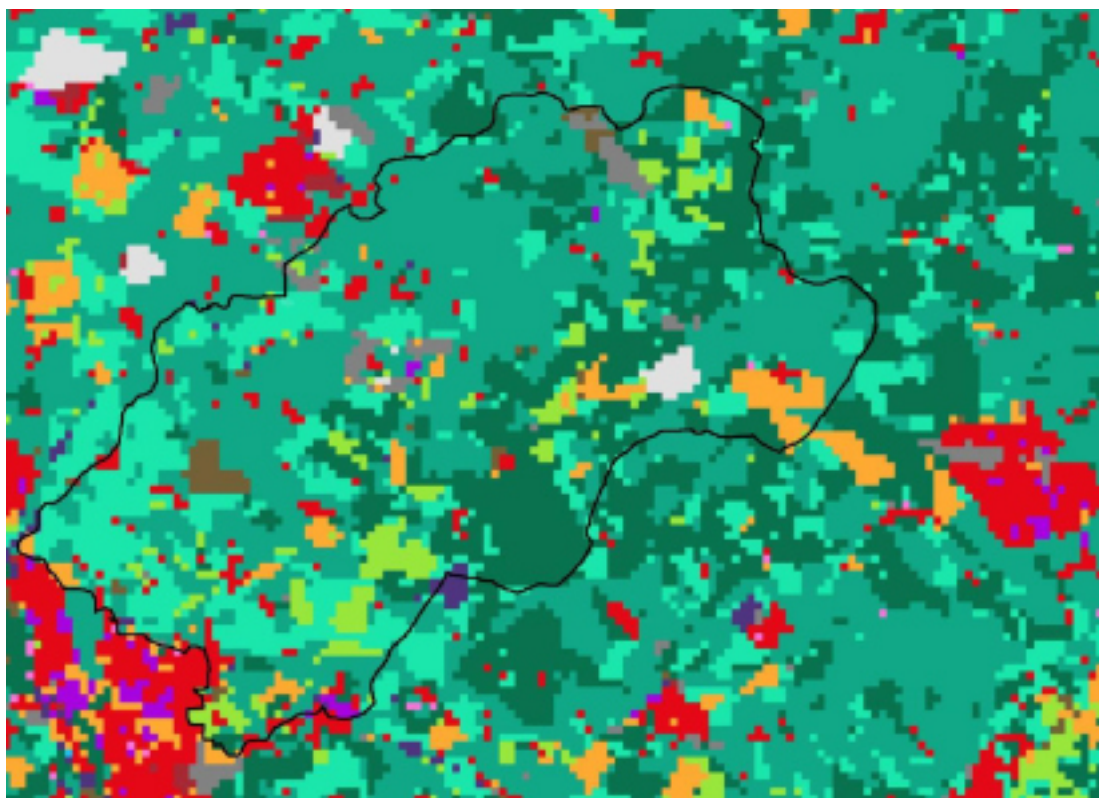
---

<sup>11</sup> Based on Island biographical effects, extended scope for connections between habitat sites and increase diversity of habitats supporting rarer species needing more than one habitat in their life cycle



#### 4.11. Achieving restored landscapes

The map below shows the large continuous area of intact enclosed ancient form landscape in the RNP – this together with the extant ancient woodland is mostly in the ancient Bernwood areas around Oakley and Brill and the upper Bernwood areas between Grendon Underwood and the Claydons. The map highlights the historic (recreated / unimproved) open land at Otmoor. The map also shows the large continuous areas of enclosed pre – modern form landscape in the RNP which dominates the Upper Ray and Aylesbury Vale areas.



Regional Nature Park with large areas of ancient form landscape with ancient woodland, and large areas of pre - modern enclosed farmland, parkland, open land. National Historic Landscape Characterisation 250m grid



## Bernwood Forest

The RNP –being a large area of protection with low population density and not narrow –is best placed to deliver restored landscapes big enough to be distinctive and to express their historic nature. We experience landscapes through views and through being immersed in them. In both cases you need to see a large area with enough restored or retained features and with far ranging views. This is possible in the RNP and it delivers that immersive experience on a big scale. It has a largely intact historic landscape: its enclosed wooded farmland character plus flood plain (Otmoor), forest dominated areas around Middle Claydon and Wootton Underwood, the extensive views from the ‘Stowood Hills’ (Elsfield – Beckley –Woodperry –StantonSt John –ForestHill ridge) as well as the panoramic views from Brill and Muswell Hill to both the south Bernwood and to the North to the Upper Ray Meadows and Waddesdon.

The detailed historic landscape analysis by the County Council shows the relatively small gaps of features any restoration can easily fill, while underplaying the impact of having many ancient woodland blocks –a dominant pre 1650 historical landscape feature.

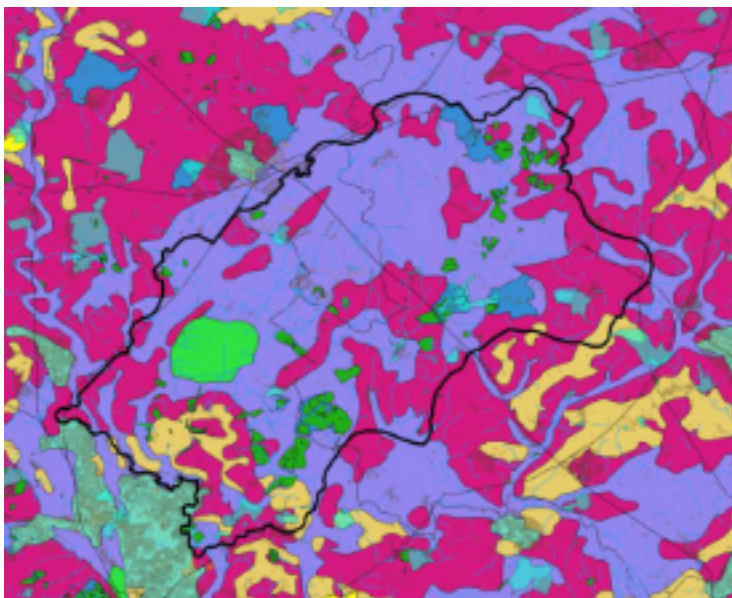
Within the RNP, the size and diversity of natural areas (existing and restorable) and distinctive historic landscape has a direct impact on the experience of visitors –offering varied experiences for recreation and interaction with nature. As a result visitors can get away from the stresses of urban features and traffic, enjoy interaction with nature in the wooded enclosed landscape (screening other visitors from view) and through visits to large natural habitats.

## 4.12. Unsuitability for major housing, transport or employment development

The BOR landscape, because of its high environmental value, and poor road access, is not suitable for any other strategic development apart from Countryside Leisure and biodiversity. The agricultural land quality is generally low and the topology is a mixture of low flood plains and relatively prominent hills where any development would be highly visible.

### Farmland

In the proposed RNP the vast majority of the land is either grade 4 (purple) or grade 3. Otmoor is Grade 5 (Green). There is a small amount of grade 2 land (yellow) in the Southwest of the RNP on the outskirts of Oxford.



✓		Exclusion	Exclusion
✓		Grade 1	Grade 1
✓		Grade 2	Grade 2
✓		Grade 3	Grade 3
✓		Grade 4	Grade 4
✓		Grade 5	Grade 5
✓		Non Agricultural	Non Agricultural
✓		Urban	Urban
✓		<i>all other values</i>	

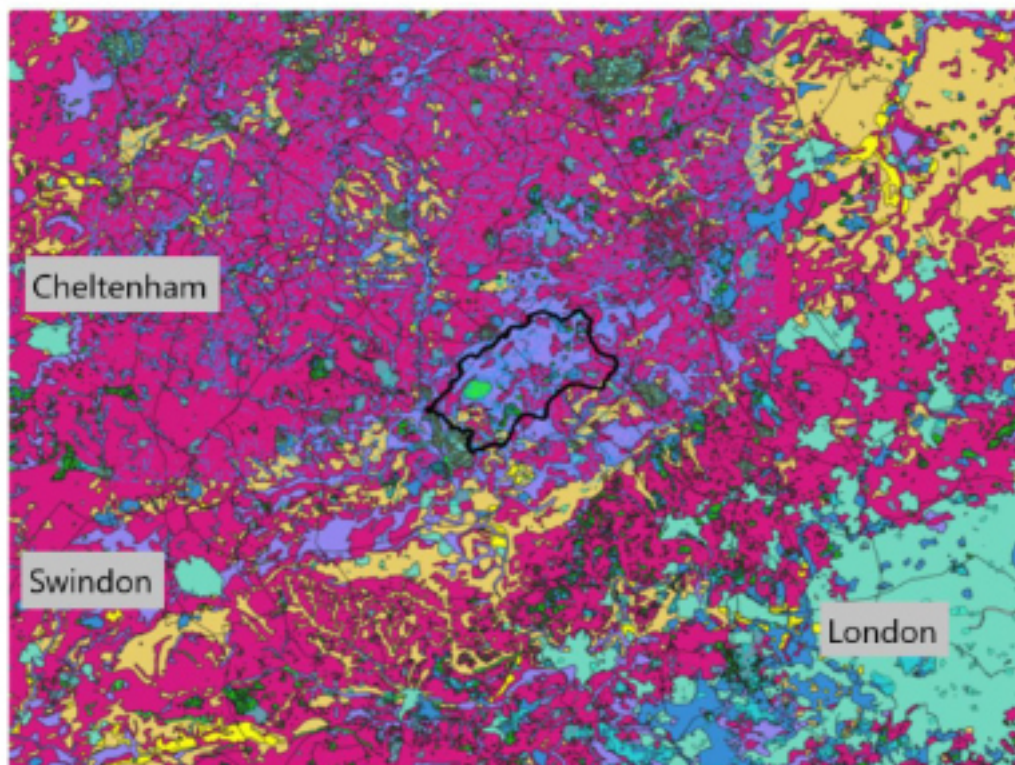
### Grade 4- Poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops or level of yields. It is mainly suited to grass with occasional arable crops (for example cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties using the land. The grade also includes arable land that is very dry because of drought.

### Grade 5 - very poor quality agricultural land

Land with very severe limitations that restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

For more information on agricultural land grades see Appendix 2

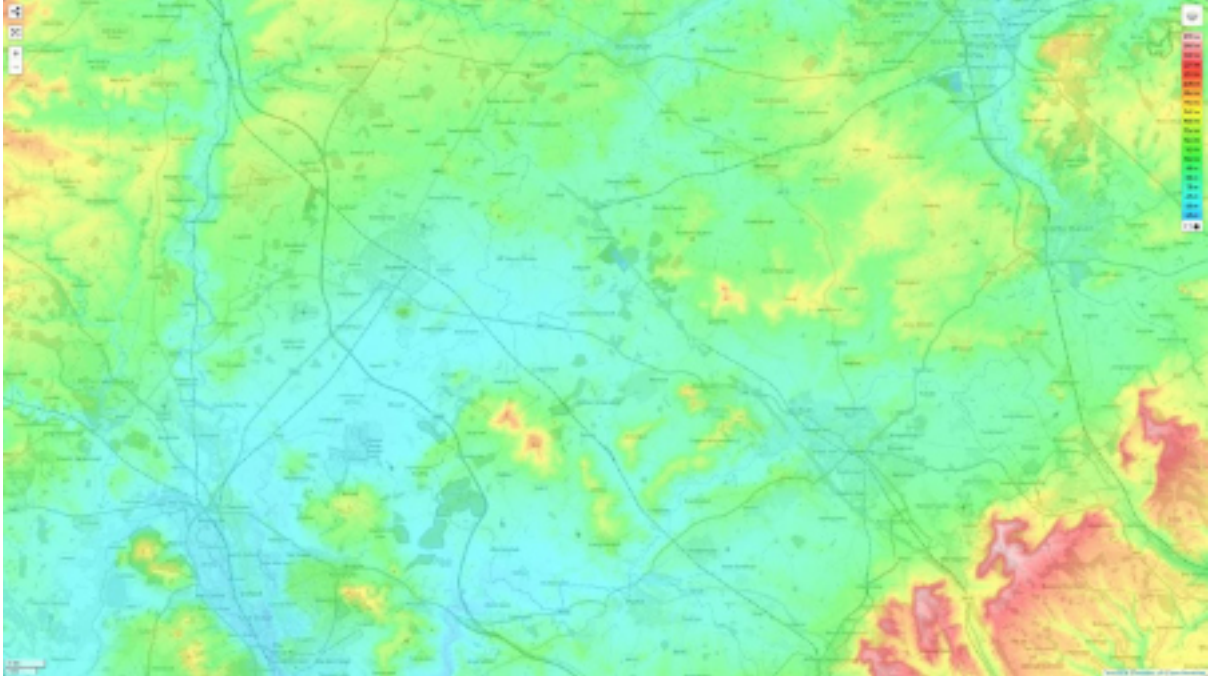


In the wider Southeast the suitability of the area from an agricultural impact perspective is quite striking. The RNP is the only extensive area of grade 4 / grade 5 land in central southern England.

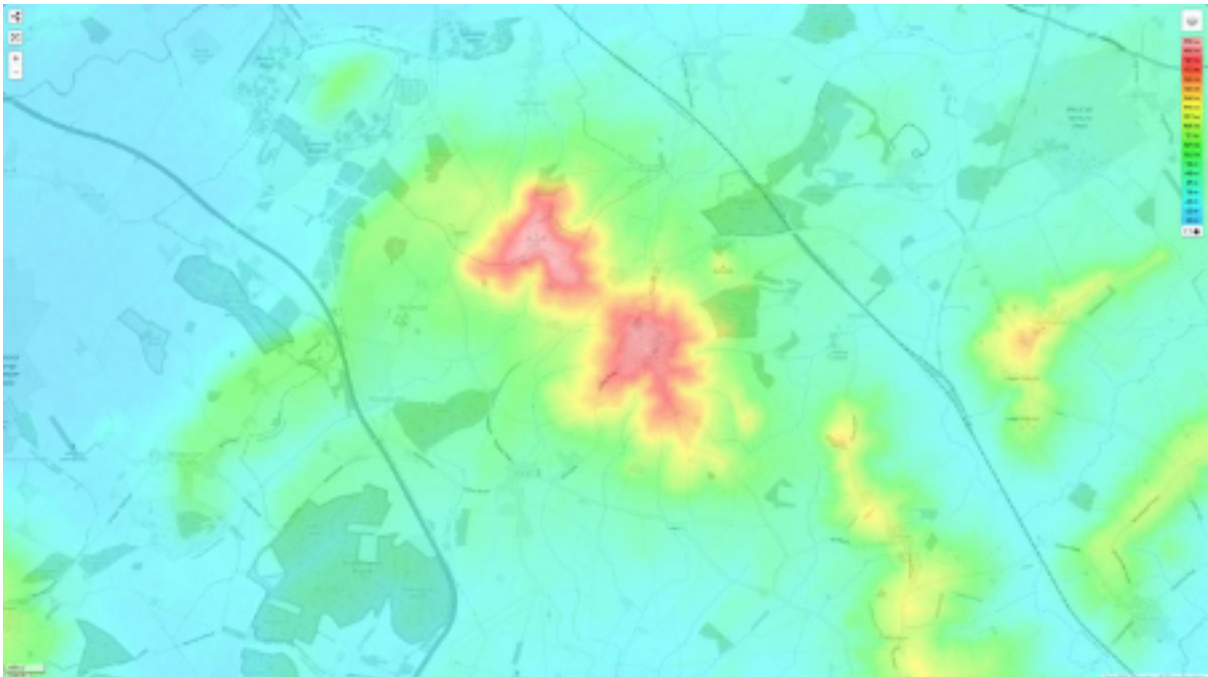
✓	Red	Exclusion	Exclusion
✓	Yellow	Grade 1	Grade 1
✓	Orange	Grade 2	Grade 2
✓	Red	Grade 3	Grade 3
✓	Purple	Grade 4	Grade 4
✓	Green	Grade 5	Grade 5
✓	Blue	Non Agricultural	Non Agricultural
✓	Cyan	Urban	Urban
✓	Light Green	<i>all other values</i>	

## Topology

Topological map of the RNP area. This shows the generally low and flat land of Otmoor, Menmarsh, the Cherwell valley and the Upper Ray. This landscape picture is punctuated by the hills of Shotover, the land around Beckley (Oxford Heights East ) and the Brill and Muswell Hill area.



The Brill and Muswell Hill area stands out from the wooded plain providing a focal point from the surrounding area. Any development in this area would be highly visible from a great distance.



Flood risk maps of Otmoor and the Upper Ray showing significant flood risk in these low lying areas.

