

The value of green space in Bicester to local people

Summary

This note presents evidence on the value of Bicester's green spaces to local people, which was gathered by the University of Oxford using two different methods:

1. A public survey in summer 2017, using interviews, a focus group and an online app;
2. A new online tool called ORVal that estimates the welfare value of green spaces for recreation anywhere in England.

The public survey reached 136 people and gathered strong qualitative evidence that Bicester's green spaces provide benefits for health, wellbeing and community cohesion. It also collected information on factors that block delivery of these benefits, ranging from familiar problems such as litter to more general issues such as loss of green space to development, or lack of joined-up routes. The ratio of benefits to 'blocking factors' averaged 2.5 to 1, but ranged from a high of 4.7 to 1 in Bicester East and Launton to a low of just 1.7 to 1 in Bicester North and Caversfield.

The ORVal tool estimated that the green space in Bicester provides welfare benefits worth over £1.5 million per year.

About the study

This work is part of a project called "Tools for Planning and Evaluating Urban Green Infrastructure: Bicester and Beyond", which runs from February 2016 to April 2018. It is funded by the Natural Environment Research Council (NERC) and is being carried out by a partnership including the University of Oxford, Forest Research, Cherwell District Council, Bicester Town Council, Oxfordshire County Council, Bioregional and others. The study aims to find simple and practical tools that local authorities can use to assess the value of the green space in their areas and plan how to protect and enhance it.

The term 'green infrastructure' in the title of the study just refers to all the different types of green and blue space that provide services to people both in the town and the wider countryside. This includes parks, woodlands, churchyards, playing fields, playgrounds, allotments, grass verges, footpaths, cycle paths, rivers and lakes, as well as 'engineered' green and blue infrastructure such as green roofs, green walls and sustainable drainage systems such as swales and balancing ponds.

We have tested a range of different tools for mapping and assessing the many services provided by green spaces, including air quality regulation, flood protection and wildlife habitat, but this note focuses purely on the value of green space for recreation and other cultural benefits. This was assessed using two approaches: a public survey, and a free online evaluation tool called ORVal.

The public survey

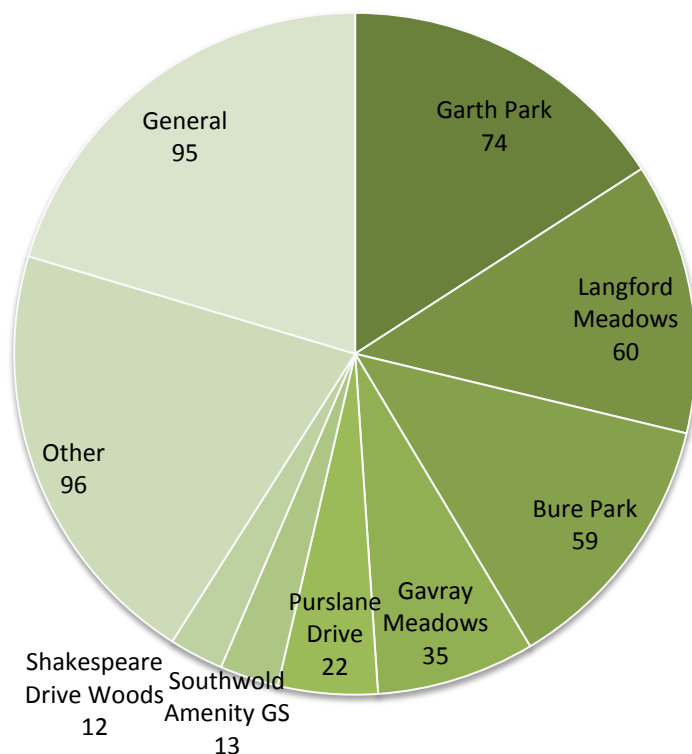
Public views on green space in Bicester were gathered using various methods:

- semi-structured interviews at the Bicester Big Lunch (4 June 2017);
- semi-structured interviews during a week-long drop-in consultation at Bicester Library (8-14 July 2017);
- a focus group workshop at the library (15 July 2017);
- an online questionnaire using the Map-Me app (July 2017).

The interviews, focus group and app were led by Helen Mason, as part of her MSc thesis. She asked people what green spaces they used, what activities they did there, what benefits they got from the green space and whether anything about the green space could be improved.

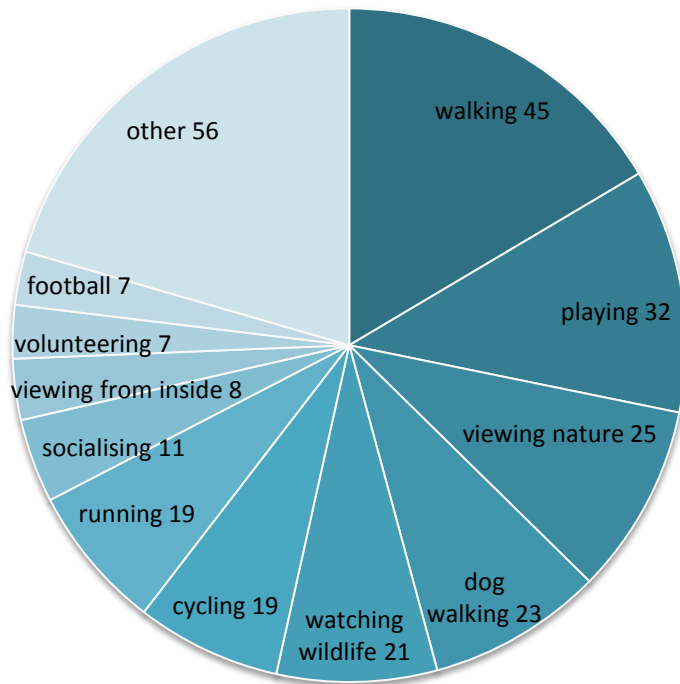
In total, 136 people were surveyed including 109 from the interviews, six at the focus group workshop and 21 via the online app. All the responses were entered into a database that recorded details of the person responding (age range, gender and electoral ward where they live) and the green space they were referring to. Helen then classified the comments according to the type of activity (e.g. walking, cycling, playing), the type of benefit (e.g. health, social connection, local identity), and whether the comment referred to a positive benefit or a negative (blocking) factor. If comments referred to more than one activity or benefit then they were split into separate responses. This produced a dataset of 540 responses related to 64 specific green spaces, as well as 104 comments on green space in general (Figure 1).

Figure 1: Number of responses related to different green spaces in Bicester



People said they used Bicester's green spaces for 33 different activities including walking (45 people), playing with children (32), viewing nature (25), dog-walking (23), watching wildlife (21), cycling (19) and running (19) (Figure 2; see Appendix Table 1 for full list).

Figure 2: What do people use Bicester's green and blue spaces for?



The results show that Bicester’s green spaces deliver a wide range of benefits, with local people reporting 390 examples of benefits across 28 categories (Figure 3). The most frequently reported category of benefits was for health and wellbeing, mainly from physical activity and recreation but also from relaxation, ‘calm and quiet’ and ‘escape and freedom’. The next most often reported category was from connection to nature, mainly from seeing wildlife but also from just being in a natural green landscape. Other commonly reported benefits included attractive views of nature (aesthetic value), opportunities for social connections, and a sense of local identity and heritage.

... the small playgrounds are a lifeline for single mums... [Female, 45-64, Avon Crescent]

Fantastic for wildlife - has been left wild and unmanaged - perfect! [Male, 65+, Skimmingdish Lane balancing pond]

Garth Park is always filled with locals and has a friendly atmosphere. People stop for a chat – there’s a sense of community [Male, 18-24]

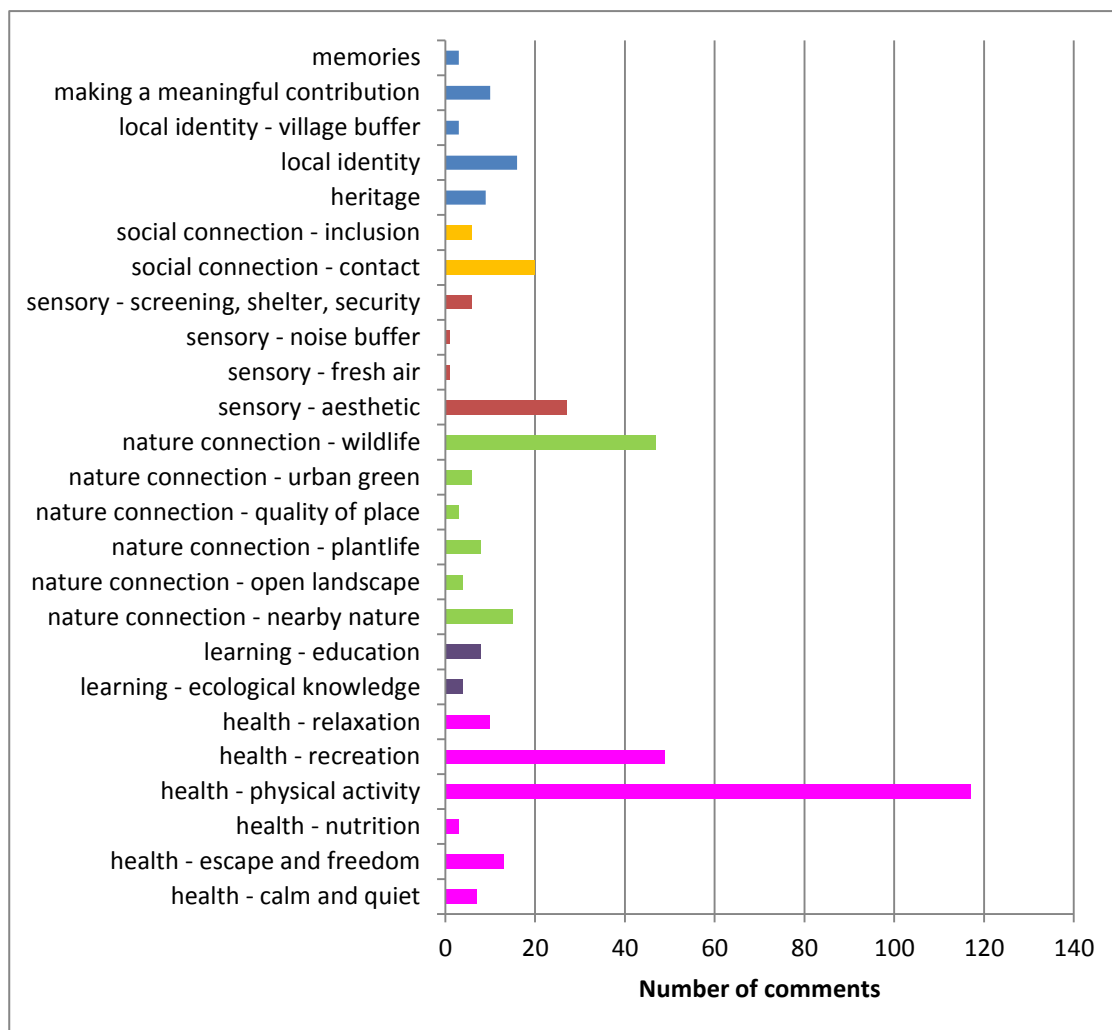
There is a lovely natural view from my house [Female, 45-64, Blenheim Drive]

We do an estate 'playground crawl' - these small spaces are often overlooked by the council but we use them loads! [Female, 25-44]

Gavray meadows is nice and wild-looking [Female, 45-64]

My son names all the parks - "can we go to Spider Park today?" - he sees Bicester as a series of places to play, explore, see wildlife - not a group of buildings! [Female, 25-44]

Figure 3: Benefits of green spaces in Bicester from the public participatory mapping exercise



These benefits apply to all types and sizes of green space, with 60 examples in Garth Park, 53 in Langford Meadows, 42 in Bure Park and 19 in Gavray Meadows, but also many benefits from smaller amenity green spaces, play areas, cemeteries, churchyards, allotments, playing fields, cycle paths, street planting, flowers on roadside verges and even a roundabout that is “a lovely dash of green” (Southwold).

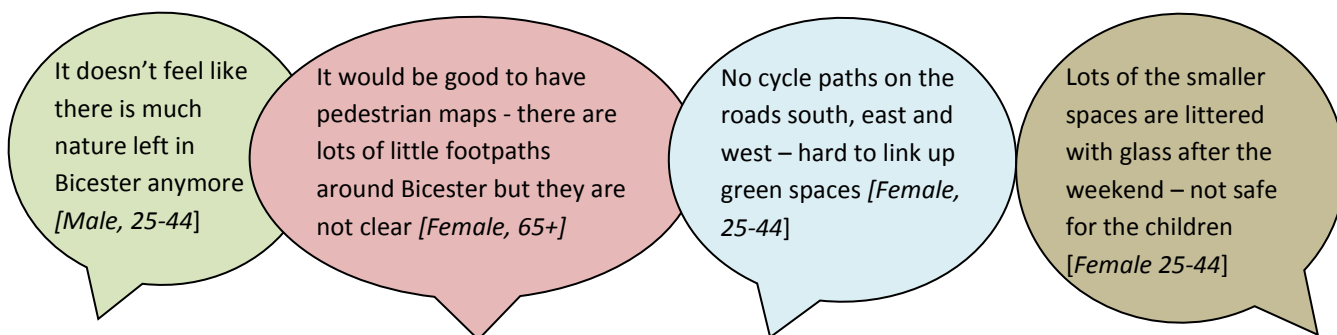
The survey reveals interesting detail and differences in views. For example, several people reported that they value the numerous small playgrounds in West Bicester, but this view was not shared by everyone - one focus group participant said that a larger play area was needed, with equipment suitable for children of different ages, and more space for picnics and meeting friends.

Although the survey shows that green spaces have the potential to deliver a wide range of benefits for health, wellbeing, social connections and local identity, people also mentioned factors that block or reduce the delivery of these benefits. These factors include widespread concern over the degradation and loss of green space and trees due to development, both large-scale development and also smaller scale (e.g. felling of trees in the Avon Crescent area by a private developer hoping for planning permission). There were 147 reported examples of factors blocking delivery of benefits, including:

- footpaths and cyclepaths being overgrown, badly surfaced, not signposted and not mapped;
- poor footpath access out to the surrounding countryside and villages; access to dog walkers being restricted at the airfield;
- conflicts between walkers / cyclists / quad bikes / dog-walkers / children / wildlife / fishermen;

- lack of seating / shade / interpretation signs / appropriate play equipment in certain locations;
- problems with litter, needles and broken glass in a few places, including Shakespeare Drive and Charbridge Way;
- lack of accessible woodland, with people looking forward to opening up access to Graven Hill and planting the new Burnehyll Community Woodland at Chesterton;
- lack of large areas of green space, with 40 out of the 136 respondents mentioning that they travelled out of Bicester to visit green space;
- general lack of wildlife, and the Bure Park Nature Reserve being “too manicured”;
- lack of access to the Wetland Reserve and to Gavray Meadows;
- poor water quality and silting up of Langford Brook;
- the concrete water play area in Garth Park was felt to be unsafe (sprinklers would be better).

There were many comments about the connectivity of footpaths and cycle paths in and around Bicester. The existing network was appreciated, e.g. the cycle paths in Langford Village, the new ‘blue line’ 5km health walk and especially the Skimmingdish Lane cycle path, because of the screen of trees providing a buffer from the road. There was demand for more paths like this, especially along Howes Lane, and also demand for safer crossing points at Middleton Stoney Road. Many people felt ‘trapped’ in Bicester, with a circle of busy roads and lack of links to the wider countryside – they wanted to be able to go on longer walks, runs or bike rides away from traffic, and to get to and from the villages more easily and safely.



Across Bicester as a whole, there were more than twice as many benefits as blocking factors, with an overall ratio of 2.3 to 1. However, this ratio varied from over 4.0 for those living in Bicester East and Launton to as little as 1.7 in Bicester North and Caversfield (Figure 5 and Figure 6). In other words, people living in Bicester North and Caversfield appear to experience more negative factors blocking their enjoyment and use of green spaces compared to people in Bicester East and Launton.

Figure 4: Number of reported benefits and 'blocking factors' in different wards of Bicester

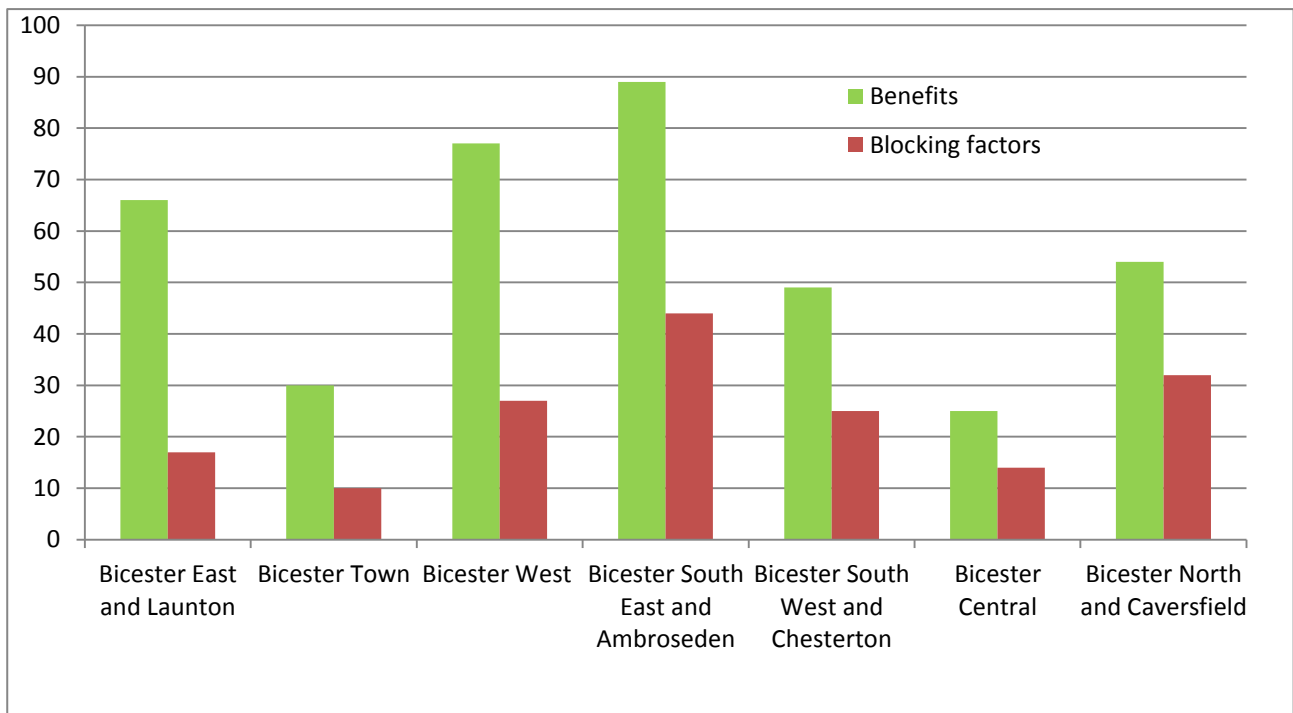


Figure 5: Ratio of benefits to 'blocking factors' in different wards of Bicester

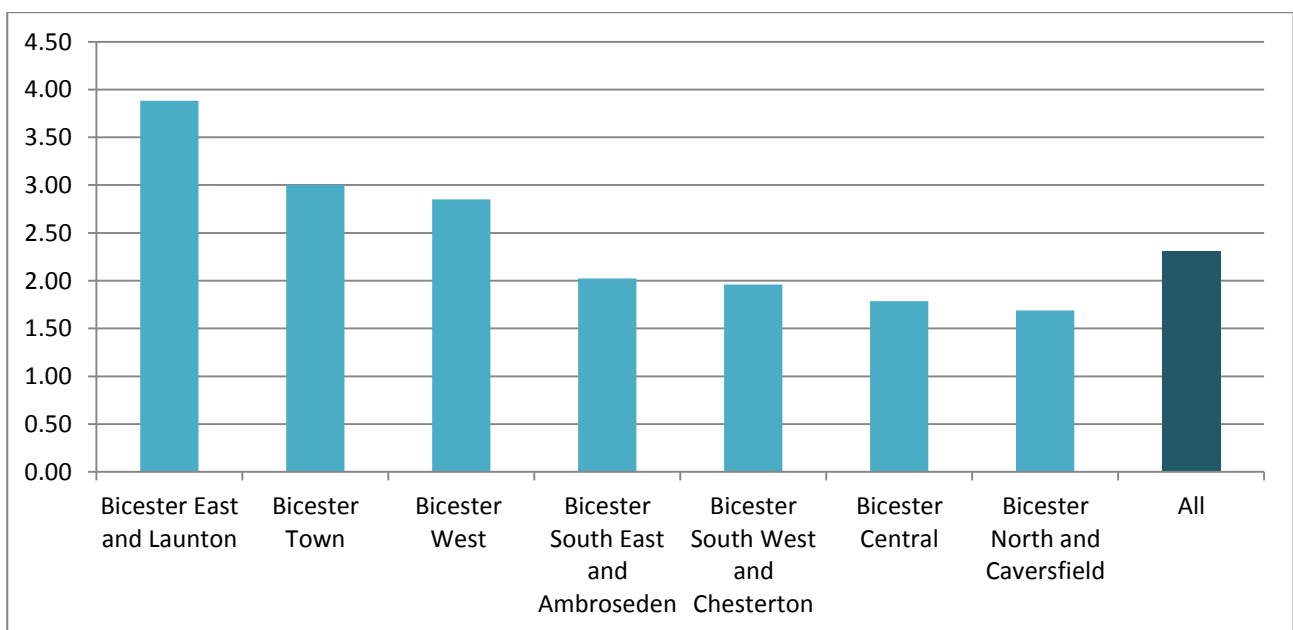
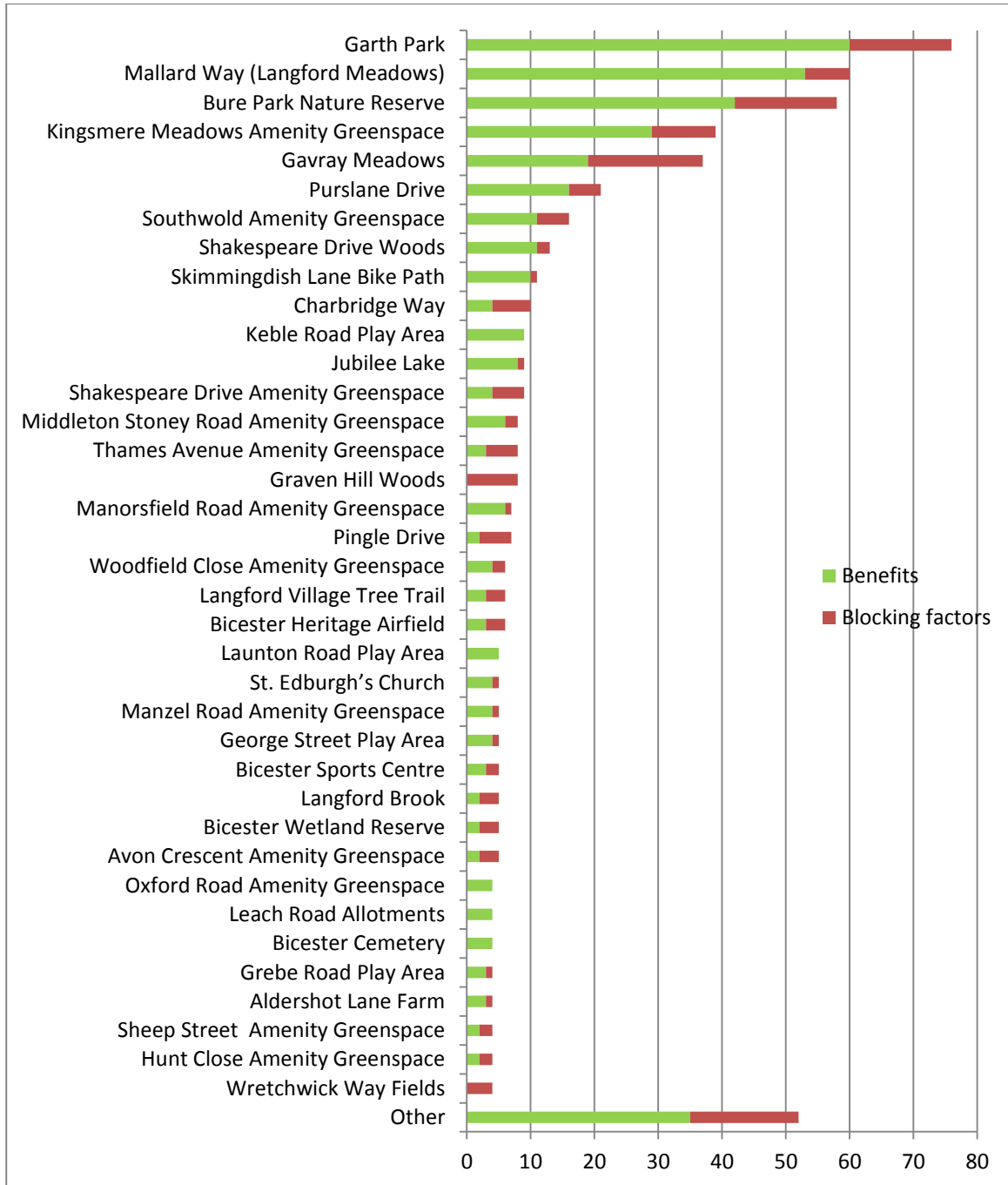


Figure 6 shows the ratio of benefits to blocking factors for all the green spaces that had at least four responses. Most spaces had far more reported benefits than blocking factors, but some reported more blocking factors than benefits. These included:

- Gavray Meadows: restricted access, overgrown paths, poor signposting, lack of permission for conservation volunteers to maintain the habitats; threats from development; pollution in the Langford Brook upstream.
- Graven Hill Woods: currently no access - people hope that access will be opened up as part of the new development; concern over loss of green space to development; perceived loss of nightingales that used to be in the woods.

- Pingle Fields: part has been lost to development including a wetland area and the rugby club pitches (people now have to drive out of town to train).
- Shakespeare Drive Amenity Space : problems with litter, broken glass; too many dog walkers.
- Charbridge Way: Langford Brook silting up; quad bikes not good for wildlife.

Figure 6: Number of reported benefits and blocking factors for each green space



The ORVal valuation tool

ORVal (Outdoor Recreation Valuation) is a new online tool developed by the University of Exeter, freely available at <http://leep.exeter.ac.uk/orval/>.

ORVal estimates the welfare value of green spaces based on data in the national MENE database (Monitor of Engagement with the Natural Environment). MENE is an ongoing survey run by Natural England which conducts 800 face to face interviews every week throughout the year with randomly chosen people in England, asking them about their visits to green space within the last seven days. It has been running since 2009. ORVal uses this database to estimate the typical time that people take to travel to particular green spaces, and then converts this time into an equivalent monetary value using Department for Transport guidelines (ranging from £2.30 per hour for trips under 8km to £9.45 per hour for trips over 160 km). This is added to the estimated fuel cost that would be involved in driving to the green space (assuming a value of 9p/km). This travel cost is used as input to an econometric model that estimates the welfare value of a typical green space anywhere in the country, taking into account the size of the green space, its type (e.g. natural green space, golf course, sports field etc), its land cover (e.g. % woodland, grassland, etc) and what other alternative green spaces are nearby.

There are some limitations to this method. Firstly, it will undervalue green spaces that are 'on the doorstep' and thus involve no travel cost. Secondly, the MENE database is only used for day trips, not for overnight visits such as weekends away or holidays. Thirdly, the model is very complex and uses a long series of assumptions and estimates to correct for various issues with the MENE data, such as the fact that individual green spaces are not always identified precisely by the respondents, so the model has to 'guess' which of the green spaces within, say, a 2 km range has actually been visited. Therefore the output should be treated with caution. The model is currently being revised and a new version is expected shortly, but the results presented here are based on the first version to be released.

Despite these caveats, the ORVal tool is recognised and supported by Defra. It is very easy to use. It presents a map of England, and you can click on any green space to get an instant estimate of the total welfare value and the split by socio-economic class. You can also estimate the value for all the green spaces in an administrative district (aggregated by middle super-output area). Finally, the tool also estimates value for segments of path networks between 'access points' where paths intersect roads. Figure 7 shows the estimate for Bure Park: ORVal estimates that it attracts 28,000 visits per year which are valued as being worth £113,096 per year in terms of recreational use.

Figure 7: The ORVal tool, showing the estimated welfare value of Bure Park as £113,096 per year

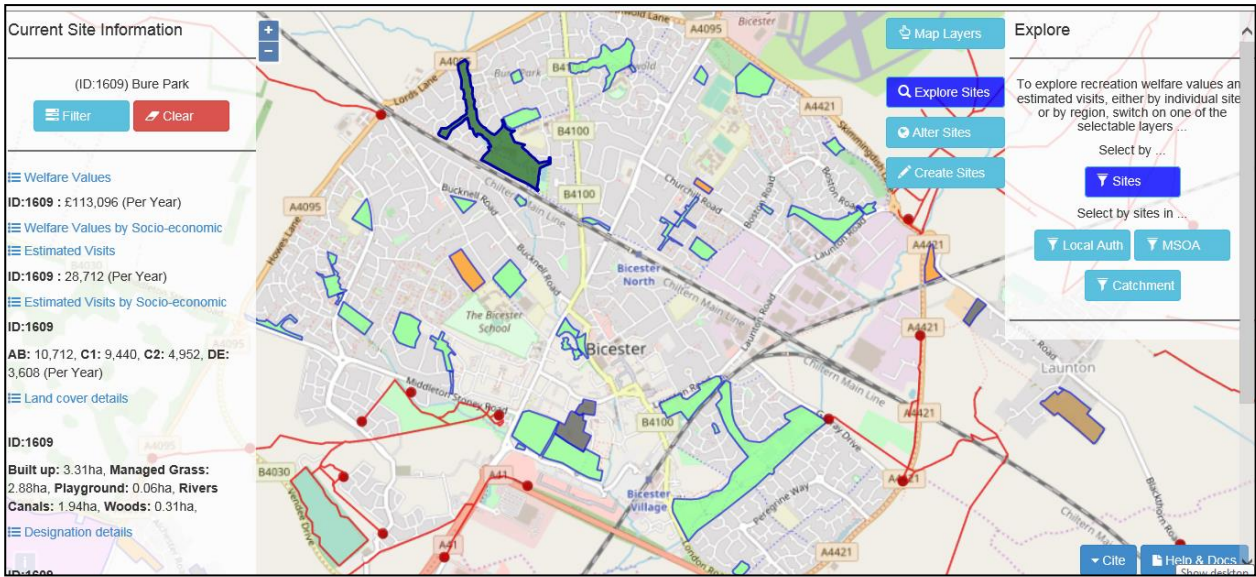
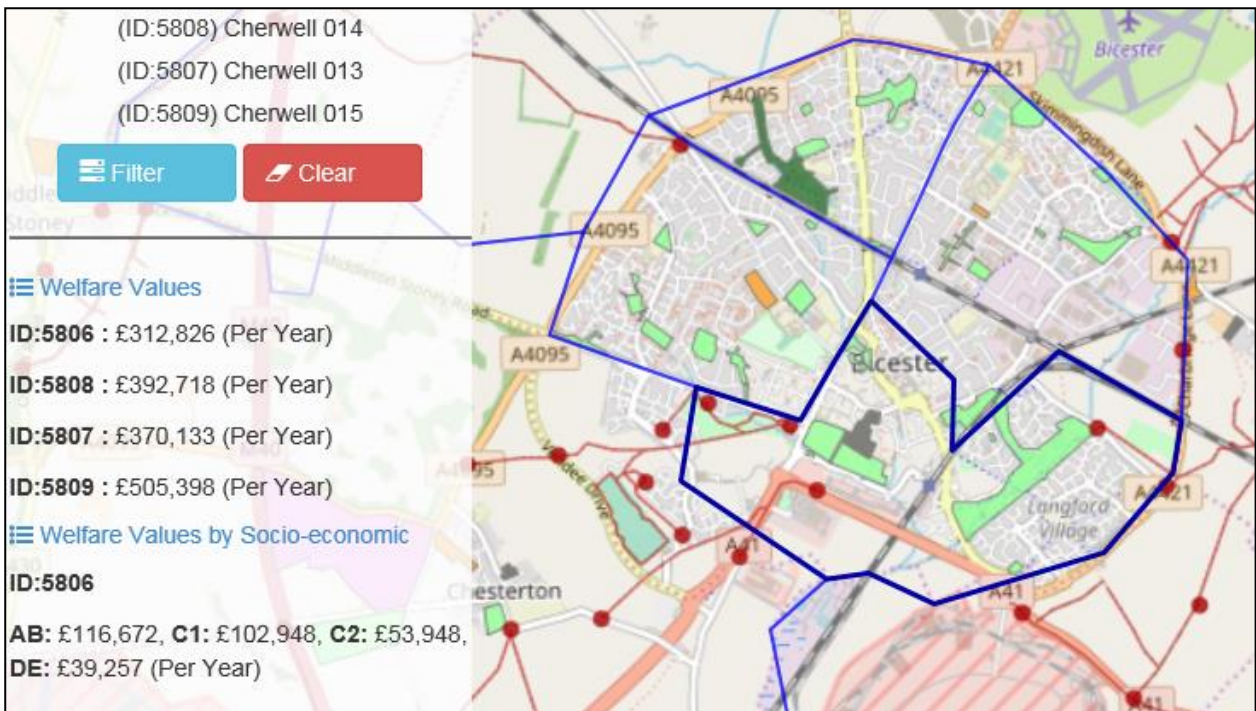


Figure 8 shows the estimated total value for all the green spaces in four wards of Bicester, which are estimated to attract 410,000 visits per year valued at £1.58 million / year.

Figure 8: ORVal, showing total values for four wards of Bicester



Appendix 1

Number of people mentioning different activities in Bicester's green spaces

Activity	Number of people mentioning the activity
walking	45
playing	32
viewing nature	25
dog walking	23
watching wildlife	21
cycling	19
running	19
socialising	11
viewing from inside	8
volunteering	7
football	7
other	56
visiting cafe	6
birdfeeding	5
environmental education	5
sitting	4
picking berries	3
picnic	3
growing food	3
listening	3
reading	3
skating	3
visiting historical sites	2
watching gliders	2
relaxing	2
basketball	2
outdoor gym	2
bug collecting	2
drone photography	1
organised activities	1
fishing	1
tennis	1
kite flying	1
tree climbing	1