green infrastructure and regeneration

In June I chaired a Government Events conference on brownfield regeneration which made me reflect on how much the relationship between green infrastructure and regeneration has evolved over the last 20 years or so. It also reminded me of my motivation for researching green infrastructure.

I studied environmental science in the late 1990s, and during that time the New Labour government established a suite of initiatives for greening derelict sites. Although the reclamation of mineral extraction and landfill sites pre-dated this, it felt like there was a shift in the scale, location and objectives for this greening.

The focus during that period in the late 1990s and early 2000s was very much on improving the aesthetic appearance of post-industrial towns and cities, as a way to increase inward investment, clean up the land, and provide amenity space for local people in areas that had relatively poor access to green space. Programmes—often led by the Regional Development Agencies or English Partnerships, working with other government agencies such as the Forestry Commission—were funding new green spaces or community woodlands on sites across the country.

In many places the scale of derelict land and the lack of development meant that green space establishment was seen as a cost-effective way to clean up land and improve the appearance of the sites. It was also recognised that these new spaces provided much-needed recreation opportunities, means of water management, and biodiversity enhancements; but, in my experience, these were additional co-benefits as opposed to the main drivers.

Danielle Sinnett

Part of the regenerated Paintworks area of Bristol

It was clear from the June conference that there is still this legacy of sites in need of regeneration, and often green space is still the most appropriate solution. For example, we heard about the work that the Land Trust has been doing to transform the former Avenue Coking Works site in Derbyshire from a derelict, heavily contaminated site into a parkland and nature reserve.[1]

Other familiar themes that came through the presentations and discussions included the importance of partnership, multi-disciplinary and multi-agency working to get sites redeveloped. These partnerships included those with expertise in contaminated land, but also other environmental professionals such as drainage experts and ecologists key to the delivery of high-quality green infrastructure.

Buro Happold's presentation about Mayfield Park in Manchester highlighted the key role that the Environment Agency played in delivering the site, bringing together colleagues from across the Agency (for example those working in flood risk management, and in contaminated land) in a 'green growth and sustainable places' team. The project has delivered a new 6.5 hectare park as the anchor to a larger, 9.7 hectare mixed-use development on former industrial land,[2] and engagement with the team at the Environment Agency is estimated to have reduced the time taken to achieve planning permission by around nine weeks. Similarly, the regeneration of 45 hectares in Leeds relied on a partnership between two developers and Leeds City Council.

Although working with communities has long been a focus of green space creation on brownfield sites, it seems that these more recent examples are working more closely with local people, and much earlier in the process. Most of the presentations highlighted the importance of a partnership approach that includes local communities to develop a shared vision for the area. In several examples, engagement with young people and those from disadvantaged neighbourhoods proved to be key to this. For example, Gravesham Borough Council has been working with the local youth council in developing plans for the town's regeneration.

What came across from the case studies was the importance of green infrastructure to local people, and the fundamental part it played in the shared vision — not just the new green spaces, but also retaining existing trees and planting new ones, and greening the walking environment and wider public realm, as in the regeneration of Bristol's Broadmead shopping centre and the Birmingham's redevelopment scheme at Perry Barr,[3] for example.

Phillipa Hughes

Mayfield Park in Manchester, on which multi-agency working was highly beneficial

This wider consideration of green infrastructure, beyond green spaces, was a key feature of most of the presentations. This was interesting, as it wasn't the focus of the conference specifically, but came up again and again as a mechanism for achieving objectives such as reducing health inequalities, flood risk and air pollution, as well as enhancing biodiversity, facilitating active travel, and adapting to the changing climate.

For example, Leeds City Council's scheme includes Killingbeck Meadows,[4] a natural flood management project to increase the developable area of the site and mitigate flood risk to existing communities. This includes a 2 hectare wetland habitat, a 1 hectare wildflower meadow, and a 0.7 hectare woodland. An interesting feature of the regeneration is that the two developers pooled their resources to enable £1 million of green infrastructure improvements, and the council developed neighbourhood frameworks to improve the connectivity between sites and prioritise areas for this investment.

In addition to some of the site-specific priorities, the role of regeneration and green infrastructure in achieving strategic objectives such as net zero and biodiversity net gain were also a common thread through the case studies.

Another key development highlighted at the conference is the importance of good evidence, which has increased in availability and quality over the last 20 years. The case studies used evidence in two ways: to demonstrate both the scale of challenge in their areas and the potential social, environmental and economic impacts of the regeneration in tackling these challenges and delivering additional benefits.

For example, Bristol City Council has used the Keeping Bristol Cool mapping tool[5] to make the case for additional trees. The benefits were often presented in terms of social and economic value creation. This was estimated at £267 million from the regeneration of Perry Barr and £200–300 million over 30 years from the creation of Mayfield Park, in addition to an uplift in commercial rents. The Land Trust has estimated that around £950,000 of benefits could be delivered per year through the creation of a country park on the former Cronton Colliery in Knowsley, through benefits to health and wellbeing and gross value added from employment and training.

The opportunities for brownfield regeneration to achieve biodiversity net gain were also highlighted— something that is really important in constrained urban sites which may already have relatively high ecological value. Mayfield Park is estimated to deliver 90% biodiversity net gain through the creation of 26 different habitats, involving the planting of 140 new trees and 120,000 plants, and Gravesham's plans for regeneration at Albion Waterside aim to achieve 271%.

All the case study examples had relied to some extent on public funding and/or capacity to de-risk the development of brownfield sites. In many examples, the local authority took on a key role in developing a shared vision, pulling together multi-disciplinary teams, securing funding and political buy-in. The research carried out by my colleagues at UWE Bristol,[6] funded by the Planning Advisory Service, provided a comprehensive overview of the role of local authorities and the Brownfield Land Release Fund, for example. Other public funding streams included the Shared Prosperity Fund, Section 106 agreements, and the Levelling Up Fund.

And aspects such as having a clear vision for place-led regeneration, innovation, going beyond building regulations and delivering other key objectives such as net zero and ensuring inclusive places were also highlighted in the presentation from the Local Government Association as key to securing funding from the Brownfield Land Release Fund.

What was clear from the examples presented at the conference was that green infrastructure is key to successful (brownfield) regeneration projects. This involved much more than just encouraging inward investment and improving the appearance of the sites, with schemes truly recognising the multi-functionality of green infrastructure and the diversity of features required to deliver place-led regeneration at scale.

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Notes

1   See the Land Trust's 'Avenue Country Park' webpage, at https://thelandtrust.org.uk/space/the-avenue-country-park/

2   See Buro Happold's 'Mayfield regeneration' webpage, at www.burohappold.com/projects/mayfield-regeneration/

3   See Birmingham City Council's 'Perry Barr 2040: A vision for legacy' webpages, at www.birmingham.gov.uk/info/50253/perry_barr_regeneration/2388/perry_barr_2040_a_vision_for_legacy/2

4   See Leeds City Council's 'Major flood alleviation scheme in east Leeds officially unveiled' webpage, at https://news.leeds.gov.uk/news/major-flood-alleviation-scheme-in-east-leeds-officially-unveiled

5   Keeping Bristol Cool mapping tool. Bristol City Council. https://bcc.maps.arcgis.com/apps/instant/portfolio/index.html?appid=986e3531099f48d393052fab91ceff51

6   See the Planning Advisory Service's 'Brownfield land regeneration' webpages, at www.local.gov.uk/pas/plan-making/d-case-studies/brownfield-land-regeneration