
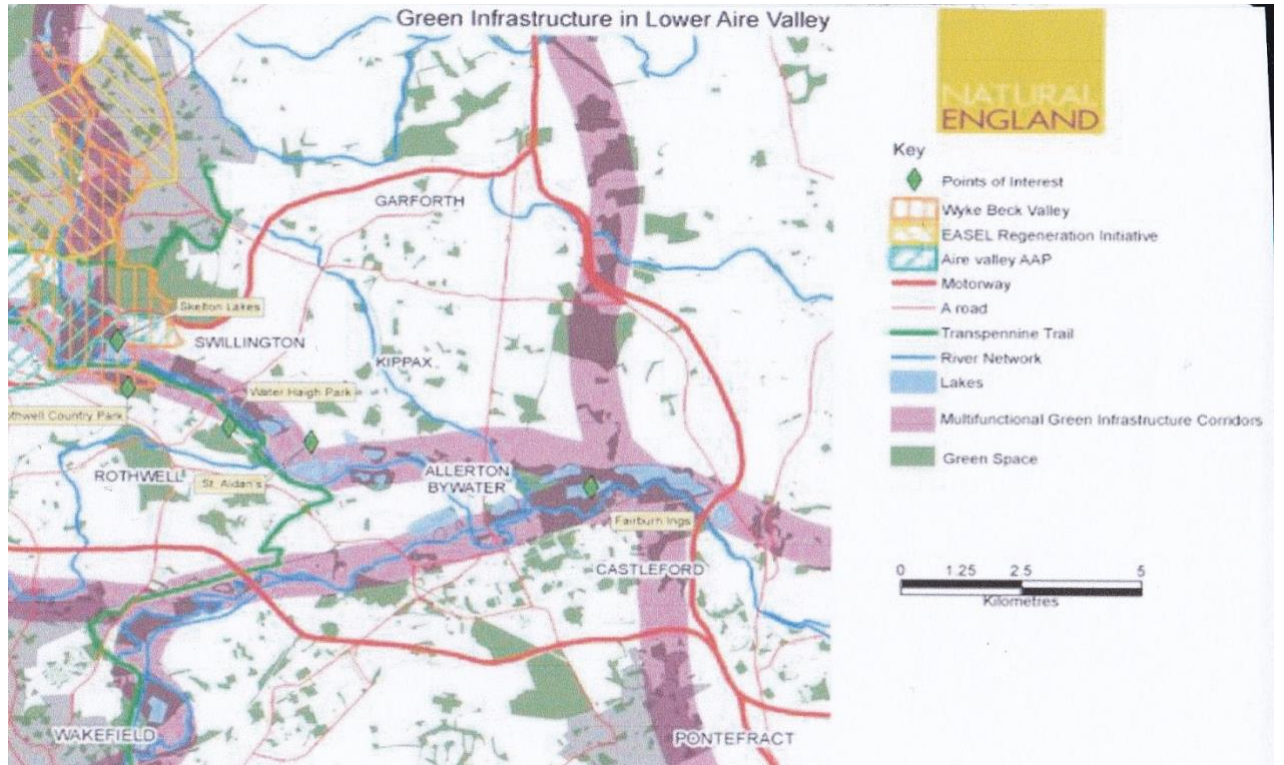


## WATER HAIGH WOODLAND PARK, LOWER RIVER AIRE VALLEY - LEEDS UK.

Section	 <p><b>CLEARINGHOUSE</b> 中欧城市森林应对方案</p> <p><i>This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 821242</i></p>
<b>1</b>	<b>TITLE OF CASE STUDY AREA:</b> WATER HAIGH WOODLAND PARK, LOWER RIVER AIRE VALLEY, LEEDS, UK.
<b>2</b>	<p><b>INTRODUCTION</b></p> <p>Following many years of coal mining along the valley of the River Aire to the south-east of the City of Leeds, large-scale landscape restoration began in the mid 1970's. This has resulted in the Lower Aire Valley emerging as a regionally important example of a multi-functional, landscape scale habitat creation. Now part of the White Rose Community Forest, it combines a mosaic of new UF-NBS (Urban Forests as Nature-Based Solutions) with extensively restored wetland habitats, allowing connectivity for wildlife and providing full public access and opportunities for improved health and wellbeing. The Case Study looks specifically at the Water Haig Woodland Park, an area of over 97 ha, that comprises over 30 ha of peri-urban woodland, and is one of three UF-NBS orientated parks that straddle the River Aire as part of Naturalised Flood Management. Although many organisations have been involved in restoring this area, it is now owned and managed by Leeds City Council.</p>
<b>3</b>	<p><b>KEY FACTS AND FIGURES OF THE CASE STUDY AREA</b></p> <p><b>Biogeographic region<sup>1</sup>:</b> Atlantic (River Aire Catchment Area Leeds)  <b>Surface area:</b> 97 ha (Water Haig Woodland Park)  <b>Country:</b> England, UK  <b>Region/Province:</b> Yorkshire / City of Leeds</p>

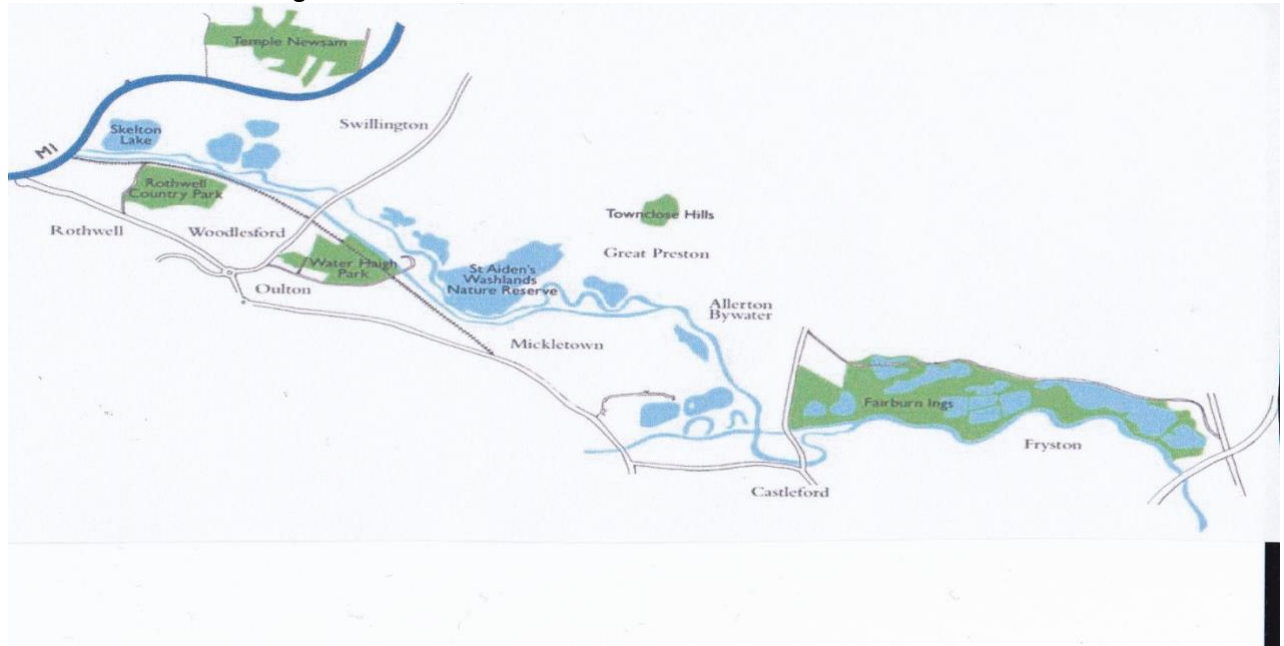
<sup>1</sup> <https://www.eea.europa.eu/data-and-maps/data/biogeographical-regions-europe-3>

### LOCATION MAPS



### Green Blue Infrastructure Corridors along the River Aire, South-West of Leeds, UK

#### Location of the Water Haigh Woodland Park



	<p><b>WATER HAIGH WOODLAND PARK</b></p> <p>Water Haigh Woodland Park is an intricate mosaic of small interconnected landscaped woodlands, grasses, hedgerows and wetland that has been created on the site of the former Water Haigh Colliery.</p> <p>Centred on Fleet Lane and Saddington Bridge, and bordering St Andrew's Woodland Nature Reserve, Water Haigh Woodland Park is developing into a 'living' natural resource for people and wildlife. As well as seeking to restore and enhance the original countryside character of the previously heavily industrialised part of the Lower Airedale the Park also provides opportunities for healthy outdoor recreation.</p> <p>Restoration of the site began in the late 1970s and continues to this day with additional new woodland and hedgerow creation. The Park provides a natural and sustainable link between adjacent projects, such as St Andrew's Woodland Nature Reserve, Saddington Country Park and Saddington Lake, which together with Parkside (aka R270 Reserve to the north and Saddington Nature Reserve to the south, form an important green corridor through the heart of the Lower Airedale offering plants, animals and birds to roam freely.</p> <p>A platform of community benefits, many of them recently re-established, offers full access for everyone to enjoy. The Leeds City Council may actively encourage that to be restored (wherever possible) to provide a consistent quality in the wider countryside, nearby towns and villages and Leeds city centre.</p> <p>The young woodlands are composed of mostly pioneer tree species such as birch, sycamore, ash and alder, which are well established and growing well. The Park also provides a natural and sustainable link between adjacent projects, such as St Andrew's Woodland Nature Reserve, Saddington Country Park and Saddington Lake, which together with Parkside (aka R270 Reserve to the north and Saddington Nature Reserve to the south, form an important green corridor through the heart of the Lower Airedale offering plants, animals and birds to roam freely.</p> <p>The young woodlands are composed of mostly pioneer tree species such as birch, sycamore, ash and alder, which are well established and growing well. The Park also provides a natural and sustainable link between adjacent projects, such as St Andrew's Woodland Nature Reserve, Saddington Country Park and Saddington Lake, which together with Parkside (aka R270 Reserve to the north and Saddington Nature Reserve to the south, form an important green corridor through the heart of the Lower Airedale offering plants, animals and birds to roam freely.</p> <p>Water Haigh Woodland Park is owned and managed by Leeds City Council, Parks and Countryside Service and has been sponsored by the Leeds City Council, Yorkshire Combined Authority, the Department for Environment, Food and Rural Affairs (Defra).</p> <p>All enquiries should be addressed to Leeds City Council Parks and Countryside Service Unit, Hall Lane, Leeds LS12 2JH, Tel: 0113 276 5500.</p>
<p><b>5</b></p>	<p><b>NAME OF MUNICIPALITY AND WEBSITE ADDRESS</b> Leeds City Council: <a href="http://www.leeds.gov.uk/planning/conservation-protection-and-heritage">www.leeds.gov.uk/planning/conservation-protection-and-heritage</a></p>
<p><b>6</b></p>	<p><b>LEAD ORGANISATIONS:</b></p> <ul style="list-style-type: none"> <li>• Leeds City Council</li> <li>• Yorkshire Wildlife Trust</li> <li>• White Rose Community Forest</li> </ul>
<p><b>7</b></p>	<p><b>LOCAL CONTACT(S)</b> Glenn Gorner MICFor. Natural Environment Manager Leeds City Council, Leeds, UK. Tel: + 44(0)113 3786002 E-Mail: <a href="mailto:Glen.Gorner@leeds.gov.uk">Glen.Gorner@leeds.gov.uk</a></p>
<p><b>8</b></p>	<p><b>PRINCIPLE UF-NBS (Urban Forests as Nature-Based Solutions) ACTION(S)</b></p> <ul style="list-style-type: none"> <li>• Provision of connected multi-functional green and blue infrastructure that maximises ecosystem services</li> <li>• Peri-Urban Woodland plantations that contribute to the White Rose Community Forest and the Northern Forest Project</li> <li>• The planting of hedgerows, grasslands and wetlands to assist connectivity</li> <li>• A water retention basin to protect local residential communities from flooding</li> <li>• An annual tree planting programme</li> </ul>
<p><b>9</b></p>	<p><b>OTHER PRINCIPLE NBS ACTION(S) – non-UF</b></p> <ul style="list-style-type: none"> <li>• Over 14.5 km of Public Rights of Way, plus an extensive network of permissive paths which allow walkers, cyclists and horse riders to explore the whole valley.</li> <li>• The setting up of the Friends of Water Haigh Woodland Park, who organise a wide range of activities and events for local communities, and are involved in management decisions.</li> </ul>
<p><b>10</b></p>	<p><b>LOCAL STAKEHOLDERS LIST ONLY</b> <b>1. Governing authorities:</b> The Leeds City Council; West Yorkshire Combined Authority; Yorkshire West Local Nature Partnership.</p>

	<p>2. <b>Associations:</b> The White Rose Community Forest; Yorkshire Wildlife Trust; Royal Society for the preservation of Birds; the Friends of Water Haigh Woodland</p> <p>3. <b>Citizens:</b> Volunteers from the Friends of Water Haigh Woodland Park; Educational establishments who provide organised groups of school children.</p> <p>4. <b>Municipalities:</b> Council Wards of Garforth and Swillington; Kippax and Methley; Rothwell. Allerton Bywater Parish Council.</p> <p>5. <b>Public/private institutions:</b> Public institutions: City Planning, Urban Design, Urban Forestry and Landscape Officers; Leeds Beckett University; Leeds University; Office of Urban Planning;</p> <p>6. <b>Park planner and authorities:</b> Leeds City Council Departments of Planning / Design, Highways, Health and Social Care; Finance; Environmental Management.</p> <p>7. <b>Technicians for park maintenance/monitoring and to educate and support citizens:</b> Leeds City Council Department of Environmental Management.</p>		
11	<b>UF-NBS FRAMEWORK</b>		
a.	<b>UF-NBS typology</b>		<ul style="list-style-type: none"> <li>• Riverbank green</li> <li>• Green playground</li> <li>• Large urban park (Public parks and recreation areas)</li> <li>• Shrubland (Grasslands and meadows)</li> <li>• Green sport facility (football ground)</li> <li>• New hedgerows</li> <li>• Urban forest</li> <li>• Urban trees (Retention of existing trees, areas of new tree planting, use of native and non-native species (climate change issues))</li> <li>• River/Creek (Restored wetland habitats; reed beds)</li> </ul>
b.	<b>Integration</b>		<ul style="list-style-type: none"> <li>• A 1.5 ha / 6 million m<sup>3</sup> flood attenuation pond</li> <li>• 14.5 km of public footpaths and cycleways</li> <li>• Car Park</li> <li>• Children's Play Area</li> <li>• Football Ground</li> <li>• New adjacent Housing Estate</li> </ul>
c.	<b>Network/connectivity</b>		<ul style="list-style-type: none"> <li>• The case study site is the meeting place of a network of five green – blue infrastructure corridors, which link up with the urban fringe and the built environment of South Leeds and the heart of Leeds City Centre.</li> <li>• The corridor sites are a multi-functional, landscape-scale habitat creation, with extensively restored wetland habitats, and a mosaic of new woodlands that extend and enhance the areas of retained mature woodland.</li> </ul>
d.	<b>Multifunctionality</b>		<ul style="list-style-type: none"> <li>• The case study site provides connected multi-functional green space that maximises ecosystem services for the sites and the local communities. This was achieved by adopting and maximising a multi-disciplinary approach to the design and subsequent management of the sites.</li> </ul>
e.	<b>Multi-scale</b>		<ul style="list-style-type: none"> <li>• Although the site is specifically related to the adjacent local communities of South Leeds, it</li> </ul>

			has been designed and is managed as a strategic part of the Leeds City Region Green and Blue Infrastructure Strategy 2017-2036.
	<b>f. Strategic planning processes</b>		<ul style="list-style-type: none"> <li>Although many organisations, both public and private, have been involved in the Strategic Planning Process of this area, local communities have also been involved. They have not been ‘consulted’, as this all too often implies a top down approach to getting communities involved. Thus, local communities have been ‘engaged’, so that they can see that what they have bothered to say has been addressed both politically and from the design point of view.</li> </ul>
	<b>g. Inter- and transdisciplinary</b>		<ul style="list-style-type: none"> <li>The case study area has benefitted from having a very broad range of people and organisations involved in its conceptual thinking, consultations, planning, design, implementation and management. This has included the Government’s Environment Agency, UK Coal, Haworth Estates, The Leeds City Region, Leeds City Council, the White Rose Forest and Local Communities, as well as a range of design, ecological, urban forestry, engineering and management professionals.</li> </ul>
	<b>h. Social cohesion and biocultural diversity</b>		<ul style="list-style-type: none"> <li>The communities that are immediately adjacent to the case study site are multi-ethnic and of fairly low economic standing. Thus, the demands on the case study site are high, especially as there is a range of accessibility via well-surfaced footpaths, more casual footpaths, cycleways and bridlepaths for horses. The site is open and available 24/7, and more specific public and interest group events take place in the Water Haigh Woodland Park. As the site is part of a green infrastructure network, visitors from far afield also use the experiential qualities of the case study site.</li> </ul>
	<b>i. Governance arrangements</b>	I. Project management structure.	<ul style="list-style-type: none"> <li>The case study site is now fully managed by Leeds City Council, in association with the Yorkshire Wildlife Trust, the Environment Agency and local community groups.</li> </ul>
		II. Local community engagement and the nature of their engagement.	<ul style="list-style-type: none"> <li>Local communities are involved in the on-going design and management of the case study site, very much on the basis that ‘management is the tool by which design never ends’. The communities are engaged by their Local Ward Councillor, who reports directly to the City Council committees. Talks by local university lecturers and other professional are also organised for interested groups on updated research, etc., to keep the community up to date on all matters to do with UF-NBS. Volunteer Groups are also</li> </ul>

				involved in the physical management of the sites.
		III. City-scale and/or region-wide governance for the project and/or UF-NBS (city and regional stakeholders and character of their engagement)		<ul style="list-style-type: none"> <li>The Leeds City Council own and are responsible for all matters to do with the governance of the Case Study site. This is primarily through the Parks and Countryside Group, who are part of the Planning and Sustainable Development Department.</li> <li>A number of other regional organisations are also involved through their green infrastructure policies and UF-NBS – Yorkshire Water, The Leeds Local Economic Partnership (LEP); the Yorkshire West Local Nature partnership (LNP) and The West Yorkshire Combined Authority (WYCA).</li> <li>The Case Study site is part of the Allerton Bywater Parish Council, and three Council Wards – Garforth and Swillington, Kippax and Methley and Rothwell.</li> <li>Local Community Groups are involved in a Community Committee, chaired by the local Ward Councillor, and in selected management and daily visual observation of the site.</li> </ul>
		IV. National and international governance context (national and international stakeholders and character of their engagement)		<ul style="list-style-type: none"> <li>The UK Government’s Environmental Agency is responsible for all matters to do with flood control, natural flood management (NFM) and the management of the river from an engineering point of view, in conjunction with Yorkshire Water. Natural England, the Government’s Conservation Organisation is also involved, as is the Forestry Commission.</li> </ul>
		V. Other (specify)		n/a
j.	<b>Institutional frameworks</b>	I. Project staff responsibilities.		<ul style="list-style-type: none"> <li>Day-to-day management is the responsibility of the Natural Environment Manager, who is part of the Parks and Countryside Department. They are responsible for delivering the Council’s policies within the limitations of the financial budget set by the council. Two other Departments have an interest – the City Development Department and Planning and Countryside.</li> <li>The Local Enterprise Partnership (LEP) and the Yorkshire West Local Nature Partnership (YWLNP) are also involved, as they have developed and approved the Green and Blue Infrastructure Strategy 2017-2036, which covers the Leeds City Region. The White Rose Community Forest has Director status on the YWLNP.</li> <li>Local Community Groups, chaired by the Local Ward Councillor, are responsible for assessing and reporting back on Council policy, and for assessing the success or otherwise of such policies on the ground.</li> </ul>

		II. Project Management Committee (Y/N) if Y.	n/a
		III. Frameworks <u>above the project</u> that exert influence on the project and/or UF-NBS e.g. Municipality, National Forestry Department.	<ul style="list-style-type: none"> <li>The UK Government's Ministry of Housing, Communities and Local Government's National Planning Policy Framework has influence on the project in determining planning policies.</li> </ul>
		IV. Private companies that work on behalf of/or are embedded within the project.	<ul style="list-style-type: none"> <li>Yorkshire Water</li> </ul>
		V. Trade representative organisations that are involved in the project	n/a
		VI. Regulatory frameworks that the project operates within (i.e. bylaws, municipal laws, national laws, licences and leases, partnership agreements etc)	The case study site had to comply with the overall planning policies of Leeds City Council, which include a Local Plan. National changes in planning policies are currently being considered by the UK Government. The site also has to comply with the Leeds City Region Green and Blue Infrastructure Strategy 2017-2036, as well as legal agreements between the City Council and the Environment Agency and Yorkshire Water, specifically concerning flood management and NBS.
		VII. Other (specify)	n/a
<b>k.</b>	<b>Economic frameworks</b>	I. Community fundraising	The Community Group called The Friends of the Water Haigh Woodland Park hold occasional fund-raising events to supplement the funding from Leeds City Council. Funding for the management of urban/peri-urban green space in the UK has been significantly reduced over recent years, so local communities can play a crucial role in supplementing local authority funding.
		II. Project delivered services and monies raised by project	n/a
		III. City, regional general funds	Some funding from Leeds City Council, and in the past from the EU Regional Development Fund.
		IV. Special funds e.g. National Lottery, Challenge funds	The White Rose Community Forest receives grant funding from a number of sources, and thus funds new tree planting and prospective management in and around the case study site.
		V. National government funds	n/a
		VI. Private sector investment	n/a

		VII. International funds e.g. European Union structural funds, LIFE + etc.	Funds have been available in the past from the EU Regional Development Fund, but this will cease once the UK has left the EU.
		VIII. Other (specify)	n/a
<b>i.</b>	<b>Sino/European comparative relevance</b>		In European terms, the Water Haigh Woodland Park is not a large project. That said, the scheme has succeeded on a number of levels, not least in demonstrating the importance of UF-NBS, the value of having the White Rose Community Forest involved and the value of trans-disciplinary working in delivering it. This has shaped the process for planning, designing and managing a wide range of green and blue infrastructure works alongside other developments in and around the City of Leeds and the Leeds City Region, including further large-scale flood defence systems, residential and city centre developments and highway improvements. This case study can therefore be cited as a good example of creating viable European urban futures.
<b>m.</b>	<b>UF-NBS valorisation</b>		The communities around the Water Haigh Woodland Park are relatively low-income communities, and one of the potential issues of investing and providing facilities such as the park can be the ‘gentrification’ of the community. This has not happened however, as the park was not ‘imposed’ on the communities from on high, but was planned, designed and implemented with the local communities very much involved. UF-NBS was also promoted as an optimistic activity that believes in a viable future, and this significantly affects positively the health and well-being of the local communities. Local schools also use the facilities of the park on a regular basis, thus improving the quality of their educational experience. The value of the UF-NBS work has also been acknowledged as having contributed to the Leeds City Region targets on reducing air pollution and preparations for climate change.
<b>n.</b>	<b>Procurement of UF-NBS</b>		UF-NBS has been promoted by the White Rose Community Forest (WRCF) to various committees of the Leeds City Region and Leeds City Council, and has ‘led by example’ in the UF-NBS work that it has promoted and carried out in and around the City Region, and as part of the Northern Forest project. This has influenced both local politicians and local communities, both in terms of policy and community demands. As a result, all 10 of the local authorities that comprise the Leeds City Region are in the throes of creating their own UF-NBS Strategy.
<b>p.</b>	<b>Ecosystem services (list the three most important services being provided in no more than 50 words)</b>		<ul style="list-style-type: none"> <li>The provision of regionally important landscape scale natural habitats, encompassing mixed woodlands, hedgerows, grasslands and wetlands.</li> </ul>



			<ul style="list-style-type: none"> <li>• The provision of unlimited public access via footpaths, cycle ways and bridle ways.</li> <li>• The health and well-being benefits enjoyed both by the local communities and other visitors.</li> </ul>
	q.	Renaturing	<ul style="list-style-type: none"> <li>• The reclamation by UF-NBS of previously mined industrial land and its transformation into a mosaic of new woodlands, with extensively restored wetland habitats.</li> </ul>

12	<p><b>LESSONS AND TRANSFERABILITY</b></p> <p>The success of the green and blue infrastructure work that has been carried out along the Lower Valley of the River Aire in Leeds has significantly influenced the adoption of UF-NBS by Leeds City Council as its prime means of established quality green space in and around the city, especially not ‘over designing’ the schemes. This has also resulted in the acceptance that ‘community consultation’ is all too often seen as ‘top down’ and that ‘community engagement’ provides a far better ownership of the schemes by the community. These benefits are now being recognised and accepted across the whole Leeds City Region.</p>
----	--

13	<p><b>REFERENCES (Harvard style)</b></p> <p>Barker, A, Churchill, D &amp; Crawford, A, (2018). Leeds Parks Survey: Full Report. Arts and Humanities Research Council. University of Leeds.</p> <p>Cox,E, Raikes, L &amp; Carella, L, (2016). The State of the North 2016: Building Northern Resilience in an Era of Uncertainty. Institute of Public Policy.</p> <p>Leeds City Region Green and Blue Infrastructure Strategy 2017-2036 (2010). Leeds City Region Enterprise Partnership. Available on the-lep.com/research-and-publications</p> <p>Simson, A J, (2017). Urban Greenspace in the UK - future governance in austere financial times? Modern Environmental Science &amp; Engineering. Vol 4, No 3. pp197-202. Academic Star Publishing Company.</p> <p>Simson, A J, (2017). Landscape Structure Planning and the Urban Forest in Poly-Centric City Regions. Earth and Environmental Science. Vol 61, conf 1. <a href="http://iopscience.iop.org/issue/1755-1315/61/1">http://iopscience.iop.org/issue/1755-1315/61/1</a></p>
----	---