
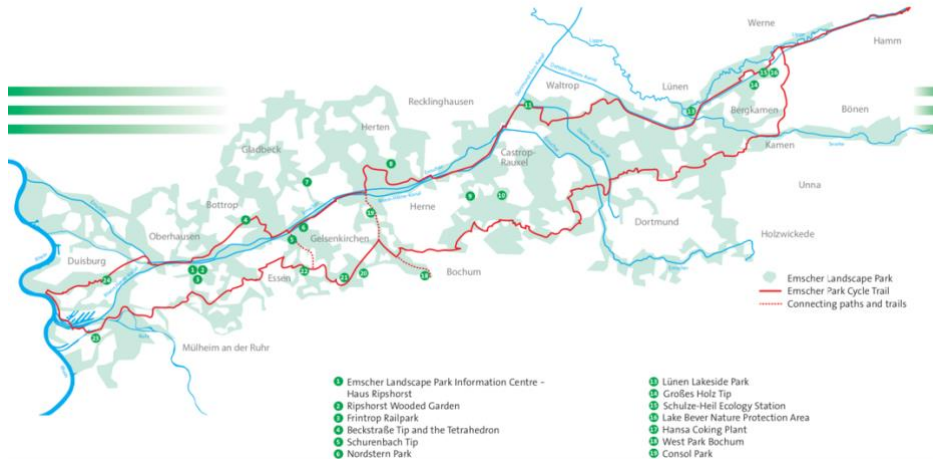


LANDSCAPE PARK DUISBURG-NORD - GERMANY

Section	 <p>CLEARINGHOUSE 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>
1	TITLE OF CASE STUDY AREA: Landscape Park Duisburg-Nord, Germany
2	<p>INTRODUCTION</p> <p>The Landscape Park Duisburg-North is part of the larger Emscher Landscape Park (472 km²) - that was started during the International Building Exhibition Emscher Park (IBA) between 1989 – 1999 - which links the urban landscape and several parks through green corridors, cycle paths and the Emscher river. Today, the Landscape Park is part of a permanent regional park system in the centre of the Ruhr metropolitan area with 7 regional green corridors (A-G/ North-South bound) and the New Emschertal (East-West green corridor) (See Figure 1 in 4 Location Maps).</p> <p>The Landscape Park Duisburg-North is located in the formerly very industrial Ruhr region of Germany and is centred around an old iron works. The Iron works buildings have been maintained and repurposed for sports, cultural events, historical significance, and tourism (with 700 000 people visiting per year). Some of the material bunkers have been cultivated and planted with various plants, others have been left wild and have grown over. Surrounding the central built area are large fields, forests, swamp and farms, which have been largely left to nature.</p>
3	<p>KEY FACTS AND FIGURES OF THE CASE STUDY AREA</p> <p>Biogeographic region¹: Atlantic Surface area: 180 ha Country: Germany Region/Province: Ruhr Area/ North Rhine-Westphalia (NRW)</p>
4	<p>LOCATION MAP(S)</p>  <p>Fig. 1: Map of Emscher Landscape Park</p>

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



Fig. 2: Map of Landscape Park Duisburg-North

5	<p>NAME OF MUNICIPALITY AND WEBSITE ADDRESS City of Duisburg: https://www.duisburg.de/ Landscape Park Duisburg-Nord: https://landschaftspark.de/</p>
6	<p>LEAD ORGANISATIONS NRW.URBAN GmbH & Co. KG (Property Owner) Treuhandverwaltung Revierstr. 3 44379 Dortmund</p> <p>Duisburg Kontor Hallenmanagement GmbH (The private land is managed by this company, staff: 22 people) Park Management Landscape Park Duisburg-Nord Emscherstraße 71 47137 Duisburg</p> <ul style="list-style-type: none"> • Organisation of Duisburg Kontor Hallenmanagement GmbH <ol style="list-style-type: none"> 1. Public Relations Office (Öffentlichkeitsarbeit) 2. Event Management (Veranstaltungsmanagement) 3. Area and Facility Management (Flächen und Gebäudemanagement; Bauhütte), e.g. technical maintenance 4. Management Landscape Park Duisburg-Nord
7	<p>LOCAL CONTACT(S) Lena Sieler Public Relations Office Address: Duisburg Kontor Hallenmanagement GmbH Park Management Landscape Park Duisburg-Nord, Emscherstraße 71, 47137 Duisburg Tel: +49-203-712 808 03 E-Mail: lana.sielier@landschaftspark.de</p>
8	<p>PRINCIPLE UF-NBS (Urban Forests as Nature-Based Solutions) ACTION(S)</p> <ul style="list-style-type: none"> • Western Ruhr Region Biological Station (for the 'Industrial Nature') <ul style="list-style-type: none"> ○ Covers all of the Western Ruhr Area and has several bases throughout the Ruhr region, including one in the Landscape Park; The station develops concepts for the preservation and development of the park, and other inner-city green spaces, focusing on research and conservation; ○ Looking after conservation areas; ○ Nature conservation, practical measures for species and habitat protection; ○ Land reclamation; ○ Technical advice; ○ Plan future interventions with the park authorities; ○ Data collection (record plant and animal species);

	<ul style="list-style-type: none"> ○ Scientific research; ○ Providing information and education on environment and nature conservation to public; ○ Industrial Nature (nature on former steel and mining industrial land) is a key focus. ● Two separate farms: Ingenhammshof (farm) & Emstermannshof (more like a green area for walking) <ul style="list-style-type: none"> ○ Farm school from the workers organisation (AWO), teaching people, especially youth and School courses, from cities the principals of farming and animals ○ Animals (horses, donkey, chicken, goat) ○ Orchard, vegetables, herbs, flowers ● Enclosed “Bunker” Gardens <ul style="list-style-type: none"> ○ The bunkers are areas surrounded by high concrete walls, where the materials (e.g. coal, iron ore) were stored and remains left over ○ Different materials left in the bunkers were left to experiments with different soil types in different sections (e.g. Fine soil, or large chunks of concrete from buildings). This develops individual microclimates ○ Some planted, some naturally/wild seeded local plants ○ Some non-native – that come from the steel workers gardens, or were transported with the iron works raw materials ● Forested areas/plantations ● Densely vegetated areas <ul style="list-style-type: none"> ○ Nature left to itself ○ Visitors not allowed to enter these areas, to avoid disturbing the environment, and some parts can be dangerous ● Swamp areas ● Water works part of the new Emscher valley project <ul style="list-style-type: none"> ○ River divided into 5 parts; ○ Filled solely from rainwater – collected from all flat areas (e.g. Building rooves, terraced areas); ○ Some water carried along raised pipes (powered by old wind turbine), used to water plants in enclosed gardens, and collected in a water storage basin. Falls from height back into main canal, this oxygenates the water; ○ The canal is now clean enough and there are several fish species.
9	<p>OTHER PRINCIPLE NBS ACTION(S) – non-UF</p> <ul style="list-style-type: none"> ● Culture <ul style="list-style-type: none"> ○ Festivals & concerts ○ Lights (evenings) ● Leisure <ul style="list-style-type: none"> ○ Climbing walls and high ropes among old buildings ○ Indoor diving tank – filled from canal, in the gasometer ○ Bike rent; cycle path – extended connects surroundings encourage cycling ○ Footpaths ○ Skate and BMX park ○ Playgrounds ○ Pets corner ○ Playgrounds ○ Geocaching ○ Viewing platform ● History <ul style="list-style-type: none"> ○ Tours through iron works (Different target groups; themed topics e.g. steel furnaces (Hüttenführungen), Torch Tours (Fackelführung) ○ Viewing platform at top of old blast furnace buildings (Hochhofen 5, only one that can be accessed) ● Hospitality <ul style="list-style-type: none"> ○ Food and restaurants ● Youth hostel
10	<p>LOCAL STAKEHOLDERS LIST ONLY</p> <p>In total, there are 26 local institutions that provide jobs for about 420 people.</p> <p>1. Governing authorities:</p>

- Federal state of North Rhine-Westphalia (Involving several state departments as Urbanism, Housing, Economy, Traffic, Environment and Culture and the State Development Agency (LEG) / NRW Urban (Owner of the property)
- Duisburg City Council (operation and administration: 100% subsidiary)
- International Building Exhibition Emscher Park GmbH (IBA / 1989 – 1999). The IBA was a special development program of the state government of North Rhine-Westphalia for the northern part (= Emscherzone) of the Ruhr area, it was never itself a formal project sponsor and has supported more than 100 individual projects. The Duisburg-Nord Landscape Park was one of these 100 projects.

2. Associations:

- Regionalverband Ruhr (Ruhr Regional Association, or RVR) (Regional association of the 53 Ruhr towns and 4 districts)
- Metropole Ruhr Tourismus (Regional association for tourism)
- EmscherGenossenschaft (EG) und Lippeverband (LV) (water companies) (Together: EGLV.de)
- RAG AG – RAG Stiftung & ThyssenKrupp Steel (Own the blast furnaces) (Steel and mining companies)

3. Citizens/actors:

- Latz + Partner, Latz-Riehl, G. Lipkowsky (Landscape architects, came up with original plan of park)
- Jonathan Park – Artist who created the permanent light exhibition in 1996, and since has done other light shows in the Park.

4. Municipalities:

- Duisburg City Council

5. Public/private institutions:

- ThyssenKrupp Steel (operate and maintain railway)
- Restaurierungsatelier "Die Schmiede" GmbH (Independent company, for restoration; also operates in other locations)

Sport:

- Deutscher Alpenverein Sektion Duisburg e. V. (Sport, climbing)
- Taucher im Nordpark Duisburg e. V. (Sport, diving)
- TauchRevierGasometer GmbH (Sport, diving)
- Revierrad: PIA-Stadtdienste gGmbH (Sport, bike hire, diving)
- Hundesportverein (Sport, Dogs)
- tri:ceps. GmbH (Sport)
- power-ruhrgebiet GmbH (Hochseilparcour); Climbing

Culture & history (tourism)

- Filmothek der Jugend NRW e. V. (Culture, films)
- Kinematik im Ruhrgebiet (Culture, films)
- Interessengemeinschaft Nordpark Duisburg e. V.
- RBG protection GmbH
- Tour de Ruhr GmbH (Guide, information and tours); Marketing of the steel furnaces (Hochofen 5)

Hospitality

- Gourmet Team Catering & Event GmbH (Hospitality, food)
- Jugendherberge Duisburg-Meiderich für Industriekultur (Hospitality, youth hostel)
- Restaurant Hauptschalthaus GmbH (Hospitality, food)

Conservation & societal

- AWO-Integrations GmbH Duisburg (workers welfare association) - Ingenhamshof
- GfB Gesellschaft für Beschäftigungsförderung mbH
- Landesarbeitsgemeinschaft Lokale Medienarbeit NRW e. V.
- planwerk+ (Data management)

	<p>6. Park planner and authorities:</p> <ul style="list-style-type: none"> • Flächen und Gebäude-Management – Bauhütte im Landscape Park (technical aspects, lights, restoration and construction) • Stadt Duisburg - Amt für Bodendenkmalpflege (history, protection of historical monuments) • NRW.Urban GmbH & Co.KG • Latz + Partner, Latz-Riehl, G. Lipkowsky (architects) – located in Kranzberg near Munich • Regionalverband Ruhr – Moderation and co-financing of the park maintenance <p>7. Technicians for park maintenance/monitoring and to educate and support citizens:</p> <ul style="list-style-type: none"> • Western Ruhr Region Biological Station (range of urban biotopes). Responsible for complex urban biotopes (e.g. industrial and commercial wastelands). In the station, concepts for the preservation and development of inner-city open spaces are developed and implemented. Protected area management, renaturation measures, contractual nature conservation, scientific research, data collection, scientific advice, species protection and the provision of information are also part of the tasks of the Biological Station Westliches Ruhrgebiet e.V. • Bauhütte: Management and maintenance of buildings and surrounding areas, including Electricity for the light exhibition • Netzwerk Weg & Raum (Path building) • Wirtschaftsbetriebe Duisburg (Management and maintenance of green areas and paths). 																
11	<p>UF-NBS FRAMEWORK</p> <table border="1"> <tr> <td data-bbox="177 945 236 1384">a.</td> <td data-bbox="236 945 512 1384">UF-NBS typology</td> <td data-bbox="512 945 767 1384"></td> <td data-bbox="767 945 1485 1384"> <p>Between the buildings and roads in the park:</p> <ul style="list-style-type: none"> • Forested areas • Brown fields • Informal green spaces, street verge • Extensive green roof, hedge, urban trees <p>In surrounding park area:</p> <ul style="list-style-type: none"> • Small farms, orchard, • Wooded railway banks • Canal, wooded riverbank • Urban grassland • Green playground • Wetland, water retention basin </td> </tr> <tr> <td data-bbox="177 1384 236 1823">b.</td> <td data-bbox="236 1384 512 1823">Integration</td> <td data-bbox="512 1384 767 1823"></td> <td data-bbox="767 1384 1485 1823"> <ul style="list-style-type: none"> • Riverbank with trees: Water system – part of IBA to change wastewater canal into only rain, spring and purified wastewater. Underground canal to draw off wastewater. • Trees integrated in the local infrastructure and next to local facilities. Local community and sports clubs use facilities – climbing walls, diving tank, paths, playgrounds, educational farm • Transport infrastructure with street trees – large car parks, large cycle path leads through the Landscape Park and connects IBA. It is mainly used by commuters and visitors. Several other foot and cycle paths exist. </td> </tr> <tr> <td data-bbox="177 1823 236 2101">c.</td> <td data-bbox="236 1823 512 2101">Network/connectivity</td> <td data-bbox="512 1823 767 2101"></td> <td data-bbox="767 1823 1485 2101"> <p>The Landscape Park is part of the much larger regional Emscher Landscape Park (ELP) , which connects over 120 individual projects in the Ruhrgebiet. The ELP is connected through green corridors, wild green areas, rivers (Emscher and its tributaries). A 230 km circular cycle path and 400km paths and trails (industrial nature trail) goes through the ELP and connects it to Rhine area projects. It is part of the European route of industrial heritage.</p> </td> </tr> <tr> <td data-bbox="177 2101 236 2132">d.</td> <td data-bbox="236 2101 512 2132">Multifunctionality</td> <td data-bbox="512 2101 767 2132"></td> <td data-bbox="767 2101 1485 2132"> <p>The Landscape Park fulfils a variety of green space functions.</p> </td> </tr> </table>	a.	UF-NBS typology		<p>Between the buildings and roads in the park:</p> <ul style="list-style-type: none"> • Forested areas • Brown fields • Informal green spaces, street verge • Extensive green roof, hedge, urban trees <p>In surrounding park area:</p> <ul style="list-style-type: none"> • Small farms, orchard, • Wooded railway banks • Canal, wooded riverbank • Urban grassland • Green playground • Wetland, water retention basin 	b.	Integration		<ul style="list-style-type: none"> • Riverbank with trees: Water system – part of IBA to change wastewater canal into only rain, spring and purified wastewater. Underground canal to draw off wastewater. • Trees integrated in the local infrastructure and next to local facilities. Local community and sports clubs use facilities – climbing walls, diving tank, paths, playgrounds, educational farm • Transport infrastructure with street trees – large car parks, large cycle path leads through the Landscape Park and connects IBA. It is mainly used by commuters and visitors. Several other foot and cycle paths exist. 	c.	Network/connectivity		<p>The Landscape Park is part of the much larger regional Emscher Landscape Park (ELP) , which connects over 120 individual projects in the Ruhrgebiet. The ELP is connected through green corridors, wild green areas, rivers (Emscher and its tributaries). A 230 km circular cycle path and 400km paths and trails (industrial nature trail) goes through the ELP and connects it to Rhine area projects. It is part of the European route of industrial heritage.</p>	d.	Multifunctionality		<p>The Landscape Park fulfils a variety of green space functions.</p>
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			<p>Functions:</p> <ul style="list-style-type: none"> • Water protection (freshwater storage and management and park distribution) • Ecological preservation (over 700 different species of plant, 45 species of birds, 100 species beetles recorded), • Socio-cultural economic benefits (education, culture, sports, history).
e.	Multi-scale		<p>The Landscape Park Duisburg North is part of the Emscher Landscape Park (ELP), which is planned, maintained, and largely financed at different levels through Duisburg City, the other involved 19 cities in the Ruhr Region, the NRW state and the Regionalverband Ruhr and is funded by the European Union. The Landscape Park Duisburg North is home to 26 local institutions.</p>
f.	Strategic planning processes		<p>Aim to renature the industrial landscape. To redevelop the area while keeping as much of the existing structure as possible, to make it a nicer place to live, and boost the economy after the fall of the industry for example by encouraging tourism.</p> <p>Park planning and realisation were carried out by landscape architect Peter Latz. He was the winner of an international competition for landscape architects in 1991, and thus commissioned.</p>
g.	Inter- and transdisciplinary		<p>The Landscape Park interlinks several disciplines, through its several stakeholders: Conservationists, water management, policy makers, architects, and community using the facilities.</p>
h.	Social cohesion and biocultural diversity		<p>The Landscape Park is free to enter and open at all times, meaning it is accessible to anyone at any time. The Landscape Park works closely with AWO (worker welfare community) especially on the farm Ingenhammshof. The Park aims to help the (esp. young) people to learn about the environment and farms.</p> <p>Biocultural diversity: Different areas of the park have different types of plants and environments; Forested area, farm area etc.; There is variety in the planted plants, and naturally seeded ones; Some naturally seeded plants are local while others presumably occur due to raw material used for iron production, and some plants developed from the workers gardens.</p>
i.	Governance arrangements	I. Project management structure	<p>Landscape Park Duisburg Nord GmbH, is owned by Duisburg City, the responsible entity for the park. It is managed by Duisburg Kontor Hallenmanagement GmbH, an operating company. North Rhine-Westphalia state and the Ruhr Regional Association also have an impact on the management. Originally it was run by State Development Company North Rhine-Westphalia (LEG) on behalf of the City of Duisburg.</p>
		II. Local community engagement and the nature of their engagement.	<p>Primarily through the Biological station and sports clubs.</p>
		III. City-scale and/or region-wide	<ul style="list-style-type: none"> • The blast furnaces belong to ThyssenKrupp Steel (Steel and mining company) • Planungsgesellschaft IBA Emscher Park GmbH Emscher park, NRW

		governance for the project and/or UF-NBS (city and regional stakeholders and character of their engagement)	<ul style="list-style-type: none"> • RAG AG & RAG Stiftung • Other companies that use the site, for example event holders (named above) • Ruhr Regional Association (RVR)
		IV. National and international governance context (national and international stakeholders and character of their engagement)	The Landscape Park is part of the European route of industrial heritage that connects former industrial sites, mainly in Europe but also covering sites in Central Asia.
		V. Other (specify)	
j.	Institutional frameworks	I. Project staff responsibilities.	<p>Duisburg Kontor Hallenmanagement GmbH is responsible for the entire park and maintenance, including restoring and maintaining the iron works.</p> <p>Biologische station – responsible for nature conservation and research (see section 8).</p>
		II. Project Management Committee (Y/N) if Y.	<p>Yes, through a working group meeting. For the development (including financial and political coordination/aspects) of the park it brings together 6-7 people from:</p> <ul style="list-style-type: none"> • Duisburg Kontor GmbH (For the city of Duisburg; e.g. responsible for week markets in city; Head: Uwe Kluge) • Kontor Hallenmanagement GmbH (responsible for indoor areas, parks (CityPalais, Landscape Park)) • Parkleitung und Eventmanagement
		1 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"> • The Landscape Park is part of the regional Emscher Landscape Park. • Duisburg City owns the project, part of the Ruhr district • The regional government is in Düsseldorf, NRW state (Landesentwicklungsgesellschaft, now NRW urban GmbH) • Regionalverband Ruhr (Ruhr Regional Association, or RVR)
		2 Private companies that work on behalf of/or are embedded within the project.	<ul style="list-style-type: none"> • Regionalverband Ruhr (Ruhr Regional Association, or RVR) • EGLV - Emschergenossenschaft and the Lippeverband (Water companies) • Deutsche bahn (Railway) • Latz + Partner

			<ul style="list-style-type: none"> RAG AG & RAG Stiftung & ThyssenKrupp Steel (the blast furnaces belong to) (Steel and mining companies)
		I. Trade representative organisations that are involved in the project	<ul style="list-style-type: none"> Tour de Ruhr GmbH (Visitor Centre, provides tours around park including cycle tours, nature tours, children's tours and tours to blast furnace) Hospitality (Restaurants)
		II. Regulatory frameworks that the project operates within (i.e. bylaws, municipal laws, national laws, licences and leases, partnership agreements etc)	<ul style="list-style-type: none"> Nature Protection Acts (Naturschutzrecht) Historic Monuments Regulation (Denkmalschutz) Infection Protection Act (Infektionsschutzgesetz) Guidelines on the granting of benefits in contractual Nature conservation (framework guidelines for contractual Nature Conservation) (German: Vertragsnaturschutz) Law on the Ruhr Regional Association (RVR): The Emscher Landscape Park and its infrastructure (Cycle path system / visitor centers / landmarks / heaps) are moderated, financed and operated by the Regionalverband Ruhr. The local ELP projects are supported by the 20 municipalities involved. The Duisburg-Nord landscape park is one of these local projects.
		III. Other (specify)	
k.	Economic frameworks	I. Community fundraising	The Biological station is partly funded through donations.
		II. Project delivered services and monies raised by project	<p>About 41 percent of the maintenance of the park comes from the park's own income. Earnings derive from:</p> <ul style="list-style-type: none"> Permanent rental and leasing Temporary rental (events) Services (events) Own venues and events Film and photography, merchandising <p>Average cost of maintenance per year: 6 Mio. Euros. Expenses:</p> <ul style="list-style-type: none"> Repair, services, caring, construction measures and qualifications (about 65 percent) Staff (about 18 percent) Others (Operating, insurance, marketing) (17 percent)
		III. City, regional general funds	<p>The construction of the Landscape Park Duisburg North was financed as part of the regional Emscher Landscape Park since the early 1990s and was supported by the International Building Exhibition Emscher Park (IBA).</p> <p>It was financed by Duisburg City, Federal state of North Rhine-Westphalia (NRW), Landesentwicklungsgesellschaft NRW GmbH (NRW-Urban) and the European Union.</p>

			<p>The financial participation for maintenance of the park comes from:</p> <ul style="list-style-type: none"> • NRW state (30 percent) • Regionalverband Ruhr (18 percent) • City of Duisburg (11 percent) • Operation of Landscape Park (41 percent)
		IV. Special funds e.g. National Lottery, Challenge funds	n/a
		V. National government funds	n/a
		VI. Private sector investment	König-Baudouin-Stiftung
		VII. International funds e.g. European Union structural funds, LIFE + etc.	<p>Many projects in the Emscher Landscape Park were funded with the help of the “Ecology Program-Emscher-Lippe” (ÖPEL) by the state government of North Rhine-Westphalia, which in turn used EU funding for this (Objective 2 program / ERDF / ESF). The Duisburg-Nord Landscape Park was also funded with ÖPEL funds.</p> <ul style="list-style-type: none"> • International Funds: European Regional Development Fund (ERDF), also via Ruhr Tourismus GmbH
		VIII. Other (specify)	Sponsoring for a specific purpose e.g. events (Schauinslandreisen, König Pilsener, Sinalco)
I.	Sino/European comparative relevance		<p>Relevance to other industrial, steel or mining regions in Europe and China, including sites still operating in Duisburg, near the Landscape Park.</p> <p>No other comparative relevance known.</p>
m.	UF-NBS valorisation		<p>The value of this park comes mainly from the unusual transformation and design of the urban and industrial landscape (Industrie-Natur und Industrie-Kultur) – including the former industrial buildings and infrastructures – to prevent and integrate the industrial and natural heritage of the place, which is the unique basis today for tourism and cultural undertakings. Through the hospitality, cultural, historical and sports use. And from the biodiversity found there.</p> <p>The Landscape Park has won several awards, including Green Good Design Award (2009), EDRA places Award (2005), Play & leisure Award (2004), the Guardian selected Landscape Park as top 10 parks globally). These contribute to public awareness and potentially higher visitor numbers.</p>
n.	Procurement of UF-NBS		Most of the UFNBS strategies are implemented by the biological station, or through the park authority
p.	Ecosystem services (list the three most important services being provided in no more than 50 words)		<ol style="list-style-type: none"> 1) Physical/Experiential use of the landscape: The provision of recreation and educational facilities for local residents and visitors, and the encouragement of tourism to the area 2) Surface water for non-drinking purposes: Water system clean up, Emscher river from sewage canal to fresh water system.

				<p>3) Micro and regional climate regulation, especially as part of the Emscher Landscape Park.</p>
12		Renaturing		<p>Covers the entire park: Industrial steel works, waste pits, gasometers, and rail tracks. All repurposed in the park – buildings to collect water, and as sports and cultural areas, pits left to grow wild, rail to cycle paths.</p>
13				<p>12 LESSONS AND TRANSFERABILITY</p> <p>The Landscape Park received international recognition and was the lighthouse project of the IBA Emscher Park between 1990 to 1999 and the regional Emscher Landscape Park. The Landscape Park can be seen as a successful example of structural change, from heavy industry to a large open space for the population which improves quality of life in the city in the long-term. Different elements of urban forests as nature-based solutions in combination with the historic elements of the location (Riverbanks, trainline, blast furnaces, “bunkers”) are a way of keeping the sense of place and at the same time as contributing to the preservation of flora and fauna, providing space for recreation and events, and offers a sports and leisure opportunities. Financially this was a huge effort by all the actors involved, especially the Federal state of NRW, the City of Duisburg, the Ruhr Region and the effects of European funding.</p> <p>13 REFERENCES (Harvard style)</p> <p>Landscape Park Duisburg-Nord, available at: https://www.landschaftspark.de</p> <p>Kowarik, I. and Körner, S. (editors) (2005) Wild Urban Woodlands. Berlin Heidelberg: Springer-Verlag.</p> <p>Konijnendijk, C. (2008) The Forest and the City. Springer Science + Business Media B.V.</p> <p>Place branding and industrial heritage: Spatial Strategies and Interventions in the Ruhr area, available at: https://www.researchgate.net/profile/Evangelos-Asprogerakas/publication/337657676-Place-branding-and-industrial-heritage-Spatial-Strategies-and-Interventions-in-the-Ruhr-area/links/5de3cfa7a6fdcc2837fbdeca/Place-branding-and-industrial-heritage-Spatial-Strategies-and-Interventions-in-the-Ruhr-area.pdf (accessed: 04/08/2020)</p> <p>Emscher Landscape Park: Visitor’s guide, available at: https://climate-adapt.eea.europa.eu/metadata/case-studies/a-flood-and-heat-proof-green-emscher-valley-germany/11305605.pdf (accessed: 04/08/2020)</p> <p>Duisburg Nord Landscape Park, DE Latz+Partner, available at: https://www.latzundpartner.de/en/projekte/postindustrielle-landschaften/Landscape-Park-duisburg-nord-de (accessed: 04/08/2020)</p> <p>The GREEN SURGE Handbook, available at: https://ign.ku.dk/english/green-surge/ (accessed: 04/08/2020)</p> <p>Wild Urban Woodlands: Addressing the Emergent Typology of Post-Industrial Forest Succession, available at: https://etd.ohiolink.edu/pg_10?0::NO:10:P10-ACCESSION-UM:ucin1368024538 (accessed: 04/08/2020)</p> <p>A forest built on coal, available at: https://vimeo.com/11717129 (accessed: 04/08/2020)</p> <p>Emscher kunst: Emscher Landscape Park, available at: https://www.emscherkunst.de/en/emscher-river/emscher-Landscape-Park/ (accessed: 04/08/2020)</p> <p>Landscape Park Duisburg-Nord, available at: https://wiki2.org/en/Landscape-Park-Duisburg-Nord (accessed: 04/08/2020)</p>



Lernbauernhof-Ingenhammshof, available at: <https://www.awo-duisburg.de/familie-und-jugend/schule-und-ausbildung/bauspilBAlaetze/lernbauernhof-ingenhammshof> (accessed: 04/08/2020)

Green surge: A typology of urban green spaces, ecosystem provisioning services and demands, available at: <http://www.e-pages.dk/ku/1334/html5/> (accessed: 04/08/2020)