



Case Studies





Contents

Citizen Science	04
Heybrook Revival	06
Fenscape	08
Declared National Nature Reserve Flashes of Wigan and Leigh	10
Pestfurlong Moss	12
Risley Moss	14
Rixton Claypits	16
Woolston Eyes	18
Paddington Meadows	20
Landscape Scale Restoration	22
Carbon Trail	24
Mossland Gateway – New Moss Wood	26
Flashes Gateway – Three Sisters Access for All	
Carbon Connections	30
Wanderland	32
Carbon Clever	34
RoundView	36
Digital Landscape	38
Sense of Place	
Carbon Skills	42
Carbon Volunteering	44
Carbon Trainees	46
Carbon Creative	48
Outdoor Champions	50

Carbon Landscape Partnership



24 projects

delivering a £3.2 million

programme within Wigan, Leigh, Salford and Warrington



776 hectares

of biodiversity and landscape enhancements



58

management interventions for nature



13 ponds

for great created newts



10 trainees

gained experience and moved on to full time employment



12,285 days

or 56 full working years from

1,500+ volunteers



14,162

participants engaged through

898 activities

talks, walks and events



2,792 trained

from

214

skills workshops



807

school children involved in education and learning activity



145

interpretation features including digital



112

local community groups



94½ km

of trails including wheelchair friendly and cycle routes

Citizen Science

Targets



Volunteers trained:

Target 56 / Achieved 393

Training workshops:

Target 15 / Achieved 45

Surveys:

Target 370 / Achieved 463

Volunteer hours:

Target 30k / Achieved 71.8k

Not originally envisioned:

- Development of Swift

 Greater Manchester Local
 Record Centre (LRC) and
 Cheshire LRC's online recording
 system for use in the field or at home/office.
- · Land ownership database.





Citizen Science collected biological data on key species of high conservation concern in the Carbon Landscape from 2017 – 2021. The focus was on farmland birds, wetland birds, dragonflies, plants, water voles and willow tits. The programme significantly overachieved its targets.

Experienced surveyors shared their skills, developed over many years, with new recorders. Many have had the opportunity to visit and explore new sites rich in wildlife, "reconnecting people with their landscape".

"A big thank you to [Steve Atkins and Debs Wallace] for your organisation of the Grasses ID Workshop. I thought it was beautifully organised and Deb's preparation for the event, teaching and running of it, were brilliant."

This volunteer continued to develop her ID skills and went on to carry out botanical surveys, with her husband, of the Bickershaw Southern Meadow in spring 2021. Following a joint visit with Greater Manchester Ecology Unit (GMEU) ecologists, GMEU recommended the site for selection, on ecological grounds, as a Site of Biological Importance (SBI).

The Biodiversity Data Manager built the Carbon Landscape Data Portal from scratch. The portal is a user-friendly system, which surveyors use to adopt survey squares to input their data. The Portal allows volunteers and partners 24/7 free access to the latest species distribution data.

Into the future

We have a network of skilled multi taxa volunteer surveyors who will support data collection in the future and we hope they will continue with their 1km squares.

The portal has already been expanded to facilitate the collection of ad-hoc survey data and extended survey coverage outside of the Carbon Landscape area.

The sharing data with our partners underpins the knowledge required for the restoration of habitats feeding into the Environment Act 2021 Nature Recovery Network principally through informing Environment Land Management schemes (ELM) and the county wide Local Nature Recovery Strategy (LNRS).



Hey Brook Revival

Targets



Wetlands SuDS created:

Target 2 / Achieved 2

Riparian habitat improvement:

Target 1.3ha / Achieved 1.3ha

Water quality improvement:

Target 2 / Achieved 4

Citizen Science water quality monitors:

Target 8 / Achieved 21

Not originally envisioned:

- Overachievement of water quality improvement techniques including reedbed planting for filtration, leaky dams to slow the flow, balsam removal and ponds for wildlife.
- · People engaged 220
- · Volunteer days 136



Hey Brook Revival delivered a pilot restoration of the riparian habitat within the Low Hall Local Nature Reserve through the creation of a Sustainable Drainage System (SuDS) between 2017 and 2021. The programme significantly overachieved its targets.

We installed reedbeds, created a new pond and re-landscaped four existing ponds in Low Hall Local Nature Reserve. As well as landscaping, we cleared large areas of Himalayan Balsam and scrubland and installed leaky dams to help reduce flood risk. The ponds are now larger and functioning better. The reed beds are now acting as a filter to help improve the water quality in Hey Brook which eventually feeds into the River Mersey.

"It's a fab bit of work, it will look great by this time next year.

Hopefully it will give us more insects, reptiles and fish too.

Well done" Facebook comment

The twenty one volunteers that we trained as 'River Guardians' now have the skills and equipment to monitor and gain knowledge about their local watercourses, which has enabled them to take ownership of their local water environment. An interpretation panel was installed next to one of the relandscaped ponds in January 2021.

With the kick sampling training, 100% of trainees felt inspired to play an active role monitoring their local river. 80% of attendees would be interested in encouraging others to monitor their local river.

"Thank you so much for putting on the training session yesterday, it was a great day. Looking forward to getting the kick sampling and water quality sampling surveying started."

Into the future

Mersey Rivers Trust has begun to look at the Glaze catchment as a whole and identified more areas for similar works to reduce flood risk, improve habitat and address water quality issues.



Fenscape

Targets



Fen habitat restored:

Target 12ha / Achieved 33.5ha

New ditching:

Target 1.5km / Achieved 1.15km

Scrub removal:

Target 27ha / Achieved 21.5ha

Volunteer day:

Achieved 511

Wet grassland training courses:

Target 3 / Achieved 4

Wet grassland events:

Target 2 / Achieved 6

Talks to local groups:

Target 5 / Achieved 6

Volunteers surveying:

Target 100 / Achieved 195

Not originally envisioned:

- Slow the Flow Flood
 Alleviation to 83 properties
- Rewetting 3 hectares of woodland to improve suitability for willow tits
- District Level Licensing (DLL) pond creation for Great Crested Newts
- Forerunner for the Declared Flashes of Wigan and Leigh National Nature Reserve.



Fenscape created a corridor of fen habitats and other similar wetlands within the urban area of Wigan and Leigh through essential capital works and volunteer engagement. The programme significantly overachieved its targets.

This is the Lawton Principles of "Bigger, Better and More Joined Up" in practice where Dr Mark Champion (Lancashire Wildlife Trust), Martin Purcell (Wigan Council) supported by Natural England became the designers of a ground-breaking programme that has eventually led to a National Nature Reserve.

Fenscape involved multiple techniques. For example:

- rewetting woodland at Amberswood to improve suitability for willow tits.
- Reedbed "water channels" to stop dogs disturbing birds like water rail at Amberswood and allowing the cetti's warbler to move in.
- Reedbed lowering which supported bitterns breeding at Bryn Marsh in 2022.
- Slow the flow stone weirs at Bickershaw by breaking a concrete culvert and restoring meanders which saw fish return instantly and opportunities for kingfishers and water voles.
- Flood plain creation for marshland plants, alleviating floods and protecting 83 properties.
- · Ponds for great crested newts.

Into the future

A big part of our work is reaching out into the academic and education community. Fenscape has become a living lab. However, the work is most definitely rooted within the community. Whilst the major capital works are complete, we move into a maintenance phase. We will be eternally grateful to our Friends groups and regular walkers who are the eyes and ears and supporters of the work. Together we will continue the essential work to support the NNR ambition.





Declared National Nature Reserve Flashes of Wigan and Leigh



Despite the enormous barriers posed by lockdown, we realised we hit a real latent demand for improving the recognition of the unique character of the Flashes from Wigan to Leigh with potential National Nature Reserve status. We engaged the local communities in this journey right from the start.

"I join around 10 webinars per week and yours was sincerely the best. The most engaging, inclusive, organised and fun!"

"I went to Hawkley Hall High School. We used to go cross country running at Scotmans Flash and I had no idea."

"Knowing all the locations are near my house. I just wanted to visit every place especially to see some ducks. I want to take my mum." The jewel in the crown of the Proposed NNR project is a 45-minute documentary (with a 3 minute trailer) which has been presented by Josh Styles, who leads the North West Rare Plants Initiative, with one young person describing him as the "Brian Cox of Botany". Josh is only 24 so we are excited for a young person to be a figure head of the documentary.

"The establishment of a National Nature Reserve will be important for the amazing wildlife we have here. From booming bitterns to ostentatious orchids."

We wanted to capture the new voices in nature recovery so have a broad spectrum of young people engaged in the making and content of the film including a wheelchair user campaigner James and movingly he said being an advocate for improvement of access to the Flashes "had given him a voice."

Into the future

This pilot and the journey subsequently have led to the Flashes of Wigan and Leigh being declared as a National Nature Reserve in May 2022. This is an astonishing legacy for the Carbon Landscape and will ensure that the Fenscape programme has a long-term management plan designed through co-production especially with local stakeholders e.g. Friends Groups and Leigh Ornithological Society. This indeed has gone onto influencing a new generation of NNRs which are not solely about rare wildlife but also about the potential for Connecting People with Nature. The new phase will see the start of a consultation process for the Proposed NNR Mosslands of Wigan, Salford of Warrington.



Pestfurlong

Targets



Mossland improved:

Achieved 1.9ha

Pile dams installed:

Target 22 / Achieved 31

Plygene / peat bunds created:

Target 130m / Achieved 140m

Access path enhanced:

Target 230m / Achieved 266m

Not originally envisioned:

- · 0.4ha wet woodland
- 10,000 bog plants including common and hare's tail cotton grass, sphagnum moss, cross leaved heath, common heather and bilberry
- · 3 great crested newt ponds
- · 73 volunteers engaged.





Pestfurlong Moss dried out with bracken and scrub encroachment. By restoring this rare lowland raised bog habitat the site has become a significant ecological stepping stone. The programme significantly overachieved its targets although a boardwalk was not put in.

"I am so excited about this because it is actually working and everything is going to plan."

Steve Wright Chair of Friends of Gorse Covert Mounds.

"The biggest achievement for phase one has to be how Carbon Landscape programme Team, Natural England, Woodland Trust and Friends of Gorse Covert Mounds came together to plan, fund and deliver the rewetting."

Tony Da Silva Project Manager

"The Manchester Mosses Special Areas of Conservation (SAC) include Risley Moss and Holcroft Moss and they are internationally important. They cannot exist in isolation. They need to be connected for species to have a sustainable future. The rewetting of Pestfurlong is an important steppingstone. It is almost like an insurance policy since the bog bush cricket is here and we are working on this being a donor site to some of the other mosses around."

Dr Paul Thomas Natural England

One regular user of the site can now access the mossland using the steps installed.

"Ever since I lived in Birchwood, I've been visiting Gorse Covert Mounds, but never been down to the moss. I struggle with a bad hip and now use the steps most days when walking my dog"

Into the future

The Woodland Trust were so impressed with the work they have allocated a management budget to the moss. The site is part of a species reintroduction projects: donor for the Bog Bush Cricket (captive breeding programme with Chester Zoo) and receptor for white-faced darter dragonflies.



Risley Moss

Achievements



Fenced raised boardwalk accessible for wheelchairs:

Achieved 0.18km

Pathways created:

Achieved 40m

Channels blocked:

Achieved 14

Channels rewetted:

Achieved 210m

Not originally envisioned:

- 1.2ha of lowland raised bog restored
- · 1.5ha of wet woodland re-wet
- · 1 raised viewing platform.



Having left all of the motorways, ring roads and housing estates of Birchwood behind, all of a sudden you pass through the gates of Risley Moss and into this different place. Risley Moss supports 68ha of internationally important lowland raised peat bog habitat.

The Mini-moss bunding and rewetting works created a mosaic of bog pools, mossland and wet woodland in an area that was previously dominated by bracken and scrub. The boardwalk through the Mini-Moss has enhanced the visitor experience. The programme significantly overachieved its targets.

"With the restoration of the Mini-moss, we saw the outcomes for biodiversity immediately. Dragonfly surveys carried out with our Friends, Risley Moss Action Group (RiMAG), indicated that nine species had moved in straight away. This brings nature close to people's viewpoint because as they are walking down the boardwalk, the damselflies and dragonflies are resting up, sunning themselves."

Mark Cozens Warrington Borough Council Ranger

However, due to the sensitivity of the habitat there needs to be a public visitor zone. The new "Access for All" boardwalk and habitat has been well received. Sphagnum squeezing and bouncing on the moss always go down well as activities with children.

The boardwalk forms part of the wider Wildlife and Orienteering trails created in partnership with the Mersey Forest. Events include the regular Green Safari, Halloween and Christmas Elf Hunt. The standout Carbon Landscape event was the Boggarty Boggart day.

"It is another place with its own serenity, specialist plants and different rules apply. You gain a sense of being part of an ancient landscape."

Into the future

The viewing platform, boardwalk and Mini-moss will last for decades to come as will the visitors experience and a hub for the proposed National Nature Reserve. The partnership with Natural England is an integral. We are getting Risley Moss to the point where we can support species reintroduction e.g. white-faced darter dragonfly.



Rixton Claypits

Targets



Species wet grassland fen improved:

Achieved 1.3ha

Habitat corridor:

Achieved 170m

Ponds:

Target 2 / Achieved 4



Rixton Claypits is owned by Warrington Borough Council. Popularly called "newtopia" the capital works involved linking two sections of Sites for Special Scientific Interest (SSSI) which were remote from each other so that it would act as a natural corridor and aid the movement and intermingling of two largely separate Great Crested Newt (GCN) populations. The programme has overachieved its targets.

In recent years, the rangers were able to find a farmer who was looking for somewhere to graze rare breed Hebridean and Herdwick sheep, species ideally suited to dealing with invasive Willow, Birch and Bramble. The fact they had a way to curtail scrub invasion gave them the confidence to press ahead with "Newtopia" as part of the Carbon Landscape.

A "stepping stone" pond was excavated between the two existing clusters of ponds. The pond clusters were opened up from dense scrub shading. The removal of scrub from the area allows sunlight into the rescued ponds, and the return of species rich grassland and fen, thus benefitting a large selection of plants and wildlife. Further to this, the damming of an old trench created additional breeding space for a rapidly expanding GCN population.

Working closely with Natural England, and select contractors, the capital works went relatively well to plan. However, the overwhelming numbers of visitors, brought about by the Covid pandemic showed the reserves Achilles heel in that Rixton Claypits does not cope well with overuse.

"I am proud we were able to bring the idea into fruition, creating additional species rich grassland, Fen and Ponds into an area previously completely shaded and mostly dominated by a single species. This ensured connectivity of habitats and their populations throughout the reserve, giving the resident Great Crested Newt population room for expansion."

Mik Lees Ranger

Into the future

Maintenance is crucial, following on from the initial capital investment, to uphold the character and continuity of "Newtopia" as a concept for decades to come where future generations can benefit from today's work.



Woolston Eyes

Achievements



40 hectares dynamic wetland comprising of two lagoons.

1 new tower viewing platform.

1 hide repaired and in use.

1 visitor path opened.

5 training sessions

8 volunteers involved in weekly management habitat sessions.

400 volunteer days delivered





Prior to the construction of the Manchester Ship Canal (completed 1893), the Mersey Valley was an area of wetland flood plains, fen and mossland. During the early years of the Woolston Deposit Grounds (which received dredgings from the Ship Canal) a highly productive wetland habitat was created as a by-product. This habitat has slowly declined over the past thirty years as the Ship Canal dredging regime has reduced.

Woolston Eyes Bed 4 has been seeing a huge new wetland nature reserve slowly emerge in an area which was previously infested with giant hogweed and ageing willow scrub. The capital works has now restored the wetland habitat to a condition which will exceed its heyday back in the 1970s and 80s. previously dominated by bracken and scrub. The boardwalk through the Mini-Moss has enhanced the visitor experience. The programme significantly overachieved its targets.

It is the combination of skills and expertise from Peel Ports, RSPB, Natural England, Carbon Landscape allied to the lead role of our own local group, the Woolston Eyes Conservation Group which has brought this large-scale capital works to fruition.

It is the largest new wetland to be created in the north of England and is already attracting many hundreds of water-birds, including red listed species such as black-necked grebe and pochard, as well as large numbers of dragonflies and amphibians. Some of the visitor elements of the works have been delayed although capitals works and volunteer engagement has been achieved.

Into the future

Countryside stewardship funding of £140,000 will ensure the wetland is maintained in optimum condition. A further £40,000 will enable new wet woodland for willow tits. Through volunteering and engagement with a variety of structured wildlife surveys, local people will continue to be offered the opportunity for developing specific skills in these areas, as well as connecting with an important local resource. There will be a formal launch in the future.



Paddington Meadows

Achievements



7ha meadow restored

480m path improvements – especially blackthorn encroachment

Augmented Reality Trail of local wildlife carbonlandscape.org.uk/soundbites

1 management plan coproduced with the New Cut Heritage and Ecology Group

10 – 12 regular volunteers increasing to 25+ for larger events

6000+ volunteer hours

3 x bioblitzes



Paddington Meadows is a historic riverside meadow in Warrington. This volunteer-led work has reinstated the original riverside path and improved the meadows.

We have a hardcore team of dependable hardworking volunteers for undertaking work parties, wildlife surveys and public events, very ably supported by Steve Ormerod and Jenny Griggs from the Project Team. We honestly believe that the New Cut Group would have died a death if it were not for the Carbon Landscape's engagement. In particular, hedge laying, reed bed maintenance, citizen science and willow weaving workshops were of enormous importance.

We have expanded in so many directions, with work parties every week, wildlife surveys every month, dragonfly surveys from May to September and annual butterfly surveys. A special mention for the courses run by Steve Atkins, Tony Parker and Dave Winnard.

"Let's face it If it wasn't for the Carbon Landscape my life would be boring and my house would be nicely decorated".

The Landscape Champions programme has been really useful in sharing ideas and visiting other 'patches'. Joining with neighbouring communities to share activities and training workshops have helped bond the CL wider community.

Into the future

The number of people, and their dogs, using Paddington Meadows has increased many-fold partly because of the pandemic. We communicate with the 483 Facebook members and there is a lot of interaction e.g. "we never knew we ever had hobby visiting..."

"Members of the Group meet socially. It been a really worthwhile and rewarding experience and we've made lots of new friends."

The new wildflower meadow will be a legacy, as the flowers seeded are largely indigenous perennials. The improvements in biodiversity created by the new meadow, especially in invertebrates and hence forward potentially to the bird and mammal life, is something we are really looking forward to.



Landscape Scale Restoration

Targets



New projects:

Target 6 / Achieved 18

Funding target:

Target 100k / Achieved 160k

Volunteers engaged:

Target 200 / Achieved 630

Student Placements:

Achieved 5





The sheer scale of the delivery has been incredible and triple of that which was originally envisaged. Two additional partners came on board: the Woodland Trust and Cheshire Wildlife Trust.

- Astley Moss Bunding, rewetting and scrub removal to enhance SSSI.
- Little Woolden Moss Reprofiling, bunding and rewetting.
 Also plants to support possible future reintroductions of Large Heath Butterfly.
- Risley Moss Ponds for Great Crested Newts.
- Holcroft Moss Removal of invasive bracken, rewetting and planting to support SSSI.
- Whitehead Hall Pool and wetland creation.
- Amberswood Mossland rewetting and planting to connected fragmented moss. Created GCN pools.
- New Moss Wood GCN Pools, mini moss, rewetting bog, wet woodland and fen creation.
- Golborne High School converting a hockey pitch into a thriving wetland.
- Pestfurlong Moss phase 2.
- · Peel owned Chat Moss site plant reintroduction.
- Moss brook growers hedge laying and pool creation.
- Park Moss Mossland reclamation.

"I would like to thank everyone involved in the Carbon Landscape for their support of the trustees of Whitehead Hall Millennium Green. We have been a partner ...for some years and would not have achieved so many improvements to our site without the partnership."

Christine Elding Whitehead Hall Meadow

The most successful project sites seem to be those where we have been able to deliver multiple Carbon Landscape programmes simultaneously. Examples include New Moss Wood and Whitehead Hall Meadow, where we have layered Trails, Gateways and Sense of Place on the original Restoration projects.

Into the future

A paper that outlines our achievements on New Moss Wood has been released by the Chartered Institute of Ecology and Environmental Management (CIEEM). This knowledge share will upskill organisations delivering similar peatland restorative works. New Moss Wood, Pestfurlong Moss and Holcroft Moss are part of numerous GM Wetlands species reintroduction projects. The Carbon Restoration project was so successful, a number of partners had highlighted further projects, that we simply just didn't have the time to deliver. These are now sitting on the Great Manchester Wetland project pipeline.



Carbon Trails



A programme of physical access improvements to the Carbon Landscape. Thousands of hours were spent exploring the trails and footpaths of the CL searching for the suitability of trails across the landscape and opportunities to tell the Carbon Landscape story to anyone that will listen!

Acheivements



- **3 gateway sites** improved including audio trails, play trails and artwork.
- **3 Heritage Trail loops** created as and rambles between wetlands totalling **26km** each have accompanying downloadable leaflets, heritage audios on the website and video familiarisation walks.

Interactive map carbonlandscape.org.uk/ explore including walks championed by Friends Groups and Outdoor Champions.

Leaflets produced and trails sit on Komoot, Plotaroute and Strava. People can download maps or use the apps to guide them.

Access improvements – Interpretation features 9 AO Lecterns, 9 Oak Monoliths with British Cycling and 100+ Augmented Reality Signs to double as waymarkers, orienteering trails and other access infrastructure.

Additional Achievements

- **9** x Family friendly cycle trails totalling 30.9km with AR app to help explore the landscape and learn about wildlife. All involved surface upgrades matchfunded by Wigan Council and FCC Foundation for Communities.
- **10 Family friendly walks**, including improved pathways, carving trail, orienteering trail.
- 11 Rambles between wetlands. Walks that help you explore further across the landscape.
- 5 audio trail walks developed by artists and community groups on IZI travel app: Mosslands creative writing trail to inspire people about the landscape, Leeds to Liverpool canal to RHS Bridgewater Canal Audio Trail. Canal Heritage Audio trail, New Moss Ghost Wolf poetry trail. Pennington Flash Poetry Trail and Word in Edgeways poetry trail.

Into the future

The trails are the backbone of everything in the Carbon Landscape - the events, digital, the arts and culture. People really start to understand their place and their relationship with the landscape; its past, its wildlife and how they may personally move forward with that space.

- · Interpretation furniture and digital presence into relative perpetuity
- Dr Andrew Read of "Walking Projects Plus CIC" has taken the trails within his own practice and therefore there is an influential advocate.
- · Declaration of the Flashes National Nature Reserve and proposed Mosslands NNR will ensure the trails are enjoyed for many years to come.



Mossland Gateway – New Moss Wood





The Mossland Gateway improves pedestrian and cyclist accessibility to Chat Moss whilst creating mini mosses, new wet woodland and interactive trails carbonlandscape. org.uk/new-moss-wood-1 It shows the determination of Salford City Council, landowner Woodland Trust and support from Hamilton Davies Trust (HDT).

The visitor experience is helped by the magnificent Irlam Train Station (brainchild of HDT) which provides a refreshment hub and place to start the "peatlands safari".

The biggest achievement of the new Mosslands gateway has been its ability to become an enabler for newfound creativity in local young people. Previously only really used by professional dog walkers, that all changed with the involvement of local primary schools. They were given the opportunity to become designers of a Nature Trail (or "dengineers" as one child put it) with Carbon Landscape trainees Jade and Hanifah supporting the workshops.

"This is the best day ever." Pupil from Cadishead Primary

Post pandemic young people in their teens and twenties (with support from the Manchester Universities, Leeds University and Manchester Literature Festival) have led sublime poetry and songwriting. 'Songs of Resilience' examines how writing songs and making music videos might help us to bring the voices of young people into debates on climate. The end product is special: Undoing - Song from 'Songs of Resilience'. A recent event at New Moss involved Deep Cabaret and their "beWILDer world as kin - Songs of Attention and Reciprocity".

The reaction of audiences is always magical:

"Gorgeous and stirring" and "Wonderful and invigorating."

Into the future

The cumulative effort is a brand new community asset at New Moss Wood which embodies everything we would want from a Mossland gateway. It comprises of a physical Arts Feature Metal gateway, Nature Play Trail, original music video, and inspiring soundscape audio trails about the "ghost wolf" that guards New Moss wood telling the story of loss of habitat, biodiversity and restoration. There is a literary trail to encourage creative thinking by Carbon Landscape Residence Artist Clare Shaw. Finally, is the adjacent bridleway that leads to Little Woolden Moss with an Augmented Reality (AR) trail where bog wildlife "pops out" before your very eyes and scripts written by Friends of Chat Moss carbonlandscape.org.uk/soundbites





Flashes Gateway Three Sisters Access for All

Achievements



5 x AO lectern boards -

Introduction to the Carbon Landscape, willow tits, Garswood Hall Colliery, pond creatures and minibeasts

1 braille lectern including site map, I oak monolith to start the Augmented Reality Trail, 30 waymarkers

Designed through a process of co-production with 24 disability organisations.

Notable disability organisations Leonard Cheshire Disability, The Hamlet, Thrive CIC who installed the gabion hare, More Than Words CIC who did the original access audit.

3km of new wheelchair accessible paths including bridges over a brook. This is a huge asset to the community of people living with disabilities including profound disabilities as there is a hoist accessible toilet.

5 x Trails - Lakeside, Wildlife rubbing, Enchanted tree trail, Wildlife and Heritage Audio Trail, Bird Hide and Wetlands.



The Flashes Gateway – Three Sisters Access for All is a significant visitor attraction where the Carbon Landscape story is told in an inspiring way. The eco-tourism: carbonlandscape.org.uk/ThreeSisters

The target was to deliver some interpretation and this programme significantly overachieved.

"The Friends of Three Sisters are delighted with the work carried out on the site. The resurfaced paths are saving us lots of heavy maintenance work. The trails around the site are encouraging visitors to use and see more of the site... Thank you to all involved."

Joy Winstanley Secretary of Friends of Three Sisters.

Legacy Resources

Wildlife Rubbing Trail up and around Arena Hill (one of the previous coal spoil heaps) carbonlandscape.org.uk/brass-rubbing-trail

Enchanted Tree Trail enabled young children I and to learn about the folklore of trees whilst identifying them: carbonlandscape.org.uk/enchanted-tree-trail-stories This starts with a large xylophone to "call the fairies and goblins".

Timewalk (from the beginning of the earth) carbonlandscape.org.uk/three-sisters-timewalk

Women and Children in the Mines Early Victorian Re-enactment carbonlandscape.org.uk/3SAudio_Women&Children

A Day in the Life of a Miner and a Pit Brow Lass Re-enactment carbonlandscape.org.uk/3SAudio_Mines1910 to accompany this video https://youtu.be/D581TDHFpmE

Mining Explosion Re-enactment carbonlandscape.org.uk/explosion-re-enactment

Heritage Booklet by Ian Winstanley carbonlandscape.org.uk/3S_Heritage_Booklet

Willow tit guided mediation carbonlandscape.org.uk/willow-tit-1



Carbon Connections

Achievements



185 events – We achieved a lot more through the extension project Wanderland which had an additional **167** events.

Participants

Target 2500 / Achieved 7503 With *Wanderland* engaging a further 5889.

20 local groups engaged

4 Local museums and historical institutions – Wigan Museum, Wigan and Leigh Archives, Lancashire Mining Museum, Irlam Train Station Museum, Liverpool Museum



Carbon Connections interpreted, disseminated and promoted key messages about the Carbon Landscape through accessible, relevant and enjoyable workshops and events. This programme represented a significant over achievement with the small team achieving 352 events and 13,392 direct attendees (if we include Wanderland).

One example of the difference the Programme team has made is that between 2018 and 2019 the number of people attending the Magnificent Meadows Open Day at Paddington Meadows. The public footfall had doubled. In many ways the use of Eventbrite and publicity via Facebook groups has transformed ways of working. Most of the events were oversubscribed.

The team brought in further funding of over £150k for events, part of that was to fund Wanderland through Wigan DEAL to engage more people in Arts events across the Carbon Landscape. This doubled our output almost. We also were a leading member of the consortium securing the funding for "Down to Earth" an Arts Council People and Places Project £2 million project. This will be a 5 year project focusing on engaging people across the Carbon Landscape with a Climate focus using the arts to engage people.

Stand out events

- · Launch to influencers Astley Mining Museum September 2017
- · British Science Week 2019 with local disability groups
- · Six Lowland Peatbogs in a Day aimed at Key Stakeholders 2019
- · Youth Summit 2020
- Boggarty Boggart Day Warrington 2019
- · Dragonfly Festival Salford 2019

"The story of the decline of the dragonflies or the Boggarts reappearing are in effect fables. Stories with a moral undertone about protecting nature. It helps embed the importance of these landscapes in the hearts and minds of potentially millions of people living on the doorstep."

Bernie Dalrymple Arts and Culture Co-ordinator

 Life and Times of Chat Moss – commissioned promenade outdoor play

"It is wonderful that all these different organisations are coming together. It must be one of the hardest things in the world to educate people in such an entertaining way. It was absolutely wonderful."

Cllr Steve Dawber Mayor of Wigan

- Heritage Fund Celebration and Canal Barge Trip
- · Supportive digital links carbonlandscape.org.uk/resources





Wanderland

Achievements



167 events and over 5889 people engaged directly

- 4 major projects
- 20 artists
- 36 community workshops
- 18 family orientated workshops
- **21** young 11-17 people orientated workshops
- 58 adult focused activities
- 7 trails





This project was not originally envisaged in the Landscape Conservation Action Plan and we can see an experiential step-change from forerunner projects. Wanderland brings together expertise in community engagement, digital arts, wellbeing and addressing carbon neutral targets with an outreach goal of a much larger and diverse audience alongside commissioners like The Turnpike Gallery and Manchester Literature Festival.

The programme will run a further ten months after the Heritage Lottery Funded period but at the point of writing there has been significant over achievement.

Floating Earth Luke Jerram with estimated **20,000** visitors at Pennington Flash

"It's absolutely surreal. You walk through the trees and behold, at Pennington Flash, it's a thing of beauty. It is after all what the spacemen see when they look down on planet earth."

Tim Scott ITV Reporter

Touch AR Brass Art at Pennington Flash

Touch AR mixes 3D scans of the artists' hands with 3D models and collaged images from the artists' collection. This imagery is drawn from the local history of Wigan and Leigh and has been taken on tour and with twinned with the town of Angers in France.

Poet in Residence

"I rapidly learnt that the Carbon Landscape was not home territory. It is a geographically, culturally, linguistically and historically distinct area. Throughout the summer of 2021, I came to understand how residencies enable us as artists to fully engage with the landscapes we work within."

Clare Shaw Poet

"The trip was amazing, and all the young carers loved it, no rain can put us down!"

Lauren Bentley Shine Team for Salford Young Carers, Gaddum Team.

Wellbeing Wagon Yan Tan Tethera

"I love how Professor Jiggett creates feelings of wonderment at the same time teaching intricate lessons of nature. My daughter has enjoyed the sessions, sometimes magic always fun-filled with laughter and joy. Away from the character of Jiggett is Oliver. An amazing creative whatever the media. The video "Reintroduce Your Love" I still consider a work of genius!"





Carbon Clever

Achievements

This programme's targets were affected by the Covid pandemic

50 schools within walking distance of nature reserves sent wall posters.

807 primary children engaged

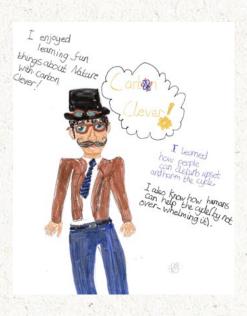
10 schools / colleges had nature reserve visits

1 inset day with teachers in partnership with the Roman Catholic Diocese of Salford.

"Event was advertised through the Diocese ..."

"really good package of learning that can be applied and adapted across the curriculum"

"Clear plans and outcomes"





To our knowledge this is the first time such a comprehensive range of school resources has been created by a Landscape scale partnership. These resources are so diverse because of co-production with staff, partners, contractors, community groups, disability groups and Friends groups

carbonlandscape.org.uk/resources/landscape-adventurers/landscape-adventurer

The RoundView has set the local landscape to inspire future action towards sustainability. carbonlandscape.org.uk/carbon%20clever A series of hands-on games have been developed by Dr Joanne Tippett and Fraser How, which will be piloted in schools, galleries, museums and visitors' centres in partnership with the UNESCO UK Commission in 2023.

Professor Jiggett (Oliver Bishop) of Yan Tan Tethera created a series of games that were really enjoyed pre pandemic as run around games for primary schools and now exist as instructional video.s carbonlandscape.org.uk/carboncleverchallenge

- · Carbon Clever, Learn about Flashes youtu.be/Wc_JRkbiyK8
- · Carbon Clever, Learn about the Mosslands youtu.be/InYvHt4Rftw
- · Carbon Clever, Learn about Wetlands youtu.be/viYBHywSVxM

Feedback from pupils and teachers was very positive. There is a latent demand for these resources. This has led to forging strong relationships with the education team at Wigan Council.

About the nature reserve visits

"We weren't sure what to expect and to be honest thought that mosses and peat sounded a bit boring – but the children have had an amazing time and are very interested and have learned a lot" School teacher after visit to a Mossland."

Agreed with Heritage Fund, the focus changed to developing off the shelf free digital resources. The real challenge will be spreading the word with 50 x RoundView Earth Story posters sent to primary schools within walking distance of a wetland site.



Roundview

Achievements

300 attending either RoundView in the Carbon Landscape and Visioning workshops

15 trained facilitators

'RoundView of the Carbon Landscape' film hosted by Manchester University mui.manchester.ac.uk/ research/projects/the-carbonlandscape

Reports after significant events e.g. Wigan based 'Deal' workshop, NNR pilot and the two multi-stakeholder workshops

1 x 'database' of all ideas collected as shared resource

Not originally envisaged:

Cross-cutting contributions

to Carbon Clever, Carbon Creative, framing for interpretation boards, deep time dimension of audio trails for the official loops. carbonlandscape.roundview. org/resources

Working with the Youth Summit and young people with the NNR pilot.

6 public exhibits physical games.

3 Peer-reviewed journal articles and other academic influence.



The RoundView approach helped people to think bigger, beyond their patch, about how these activities can contribute to broader sustainability aims. The greatest has been helping partners and groups to achieve a step change in the landscape through facilitating dialogues.

"If we pitched our story just around the Industrial Revolution, we miss that opportunity to go right the way back... we didn't want it just to be around how we exploited that geology but also how that geology came about. It's around biodiversity, it's about plants, it's about water, it's about wetlands, it's about this space over a long period of time".

The significance of this project is less about any one outcome, and more about having a qualitatively different project with a process of learning together through the lens of sustainability.

Running workshops with wider stakeholders helped clarify and crystallise a new objective for the Great Manchester Wetlands Partnership. The pride comes from watching people getting excited about the possibilities in their landscape and learning new skills to help move towards them.

"I found the RoundView process genuinely inspiring; it's very easy to feel overwhelmed and powerless against the planet's problems but I left feeling optimistic that change is possible for a positive future and I really loved hearing people's passion and ideas."

Into the future

A long-term aim for our project is to create an open learning resource and toolkit that can be used to tell the story of sustainability and interpret a wide range of cultural settings across the UK. This will be developed as a significant bid to Innovate UK and the British Academy in partnership with the UNESCO UK Commission.





Carbon Digital is a legacy – a combination of archives, gallery, educational resources, interpretation material, publications and RoundView.

"there is a disconnect for us with green spaces. You [the environment organisations] need to get behind digital projects, you need to enthral and engage a new generation."

Feedback from the 2020 Youth Summit

160 downloadable resources carbonlandscape.org.uk/resources

Games aimed predominantly at primary aged children including the RoundView game carbonlandscape.roundview.org/challenge

Films with different purposes accessible from the website and youtube channel youtube.com/channel/ UCqcS9TX5I3Au0TD0QcTBzLw/videos

Podcasts e.g. Timewalks, Guided Meditation, Beat Stress with Nature

Geo-located soundscapes usually using the IZI Travel App

Virtual Reality Film to be viewed through a headset or in a dome carbonlandscape.org.uk/ vr-immersive-experience-resurgence

Augmented Reality App where wildlife "pops" out in the landscape carbonlandscape.org.uk/ soundbites The AR app which has the potential to get children and young people familiar with the wildlife on their doorstep even if they cannot physically see it. This is often a criticism of nature reserves is that you never see the wildlife. The community co-produced AR app has the potential to be a game changer in the way the Carbon Landscape is perceived.

IZI travel app. Digital walks across the landscape.

Novel digital assets always involve a leap of faith. As Arts and Event Co-ordinator Bernie Dalrymple said

"We may never know the impact although we do know the resources have been accessed more than 1000 times and we will continually look for ways to promote Carbon Digital since all the resources are free."

Something that we can evaluate successfully is the programme teams relationships with digital content creators. Several members of the programme team, especially Lydia Dayes and Bernie Dalrymple, were unique and divergent in their commissions.

Into the future

The digital assets are the legacy. Some of those assets are unusual for example community groups can have access to the illustrations to use in their own communications on events. The challenge will always be getting the digital technologies to reach their full potential i.e. spreading the word and confidence building. For example, with the VR headset film the original intention was to take to dementia cafes and care homes where people are bed bound so they can experience the Carbon Landscape outdoors indoors but this was brought to a halt with covid.





Sense of Place

Achievements



1 expanded and supported network

Projects developed:

Target 25 / Achieved 30

Groups supported:

Target 60 / Achieved 62

Networking events - Friends group members tend to be happy to attend annual volunteer conferences but don't have the capacity beyond that.

Moved the bulletin to social media updates.





Sense of Place supported community groups to enhance their local environment, instil pride and engender community ownership of the Carbon Landscape.

The greatest achievement is the "stepping up" of community groups that have come together to deliver projects for their wetlands and wild spaces, moving out of their comfort zones and taking on more responsibilities. In many ways this is captured in other projects. Sense of Place has often involved groups being in it for "the long haul" starting at the wishlist, to planning, fund raising and through project delivery with difficult skills like dealing with subcontractors etc.

"the sheer quantity and quality of projects co-produced with volunteers and staff is astonishing and the lasting impact of the friendships made will benefit the landscape for years to come."

Jenny Griggs Sense of Place Coordinator

"Sense of Place is all about interpretation of the landscape and engendering feelings of ownership in the community. Otherwise all efforts are pointless. The community are the true legacy of the Carbon Landscape."

Steve Ormerod Landscape Champion Coordinator

New paths at Worsley Woods Can Do Project with Leonard Cheshire

Thrive CIC

Oakwood Wood Academy

Expanse

Risley Moss Action Group Fundraising

My Life

Neighbourly

Pennington Flash Zebra Crossing

Through Our Eyes Art Project

Friends of Chat Moss Bog in a Box

A summer of ecotourism with Salford Gaddum

Independent Disability Services creating animal lanterns

Hedgerow at Cardinal Newman

Top Trumps with the Hamlet

Wetland Wellbeing with Westy Older People's Forum

Little Hulton youth engagement

Friends of Gorse Covert Mounds

Trees for Life

Tesco Bags Beat Stress with Nature

Friends of St Mary's Park Walkden Gruffalo trail

Westy Morris Brook clear up Grow Wild Bog Set

Roscoe with Leeds University

White Head Millenium Green

Chat Moss Schools

Tesco Bags Digital Games

Wigan Flashes Postcode Lottery
Woolston Park Rubbings

Into the future

carbonlandscape.org.uk/guide-voluntary-groups

Guide for Voluntary Groups (formerly Sense of Place Toolkit) – the pdf toolkit captures all the skills needed to run a successful project into the future.

carbonlandscape.org.uk/habitat-guide-community-group

Habitat Management Toolkit for groups on the Mersey Corridor – created by Trainee Stuart Manning.

Both of these are going to be updated for ongoing National Nature Reserves and Greater Manchester Green Social Prescribing pilot and so the core work of the Carbon Landscape has wider influence around ways of working.

Carbon Skills

Targets



People trained:

Target 1000 / Achieved 2030

Training courses:

Achieved 120

People mentored to lead community events:

Target 40 / Achieved 59

Training networks:

Achieved 1

Not originally envisioned:

Programme team ended up doing a lot of the delivery because the training was so bespoke.

66 AQA Unit Awards -

The programme team did not appreciate how powerful these would be for motivating trainees, placements, volunteers and the general public.



Carbon Skills is a real success story because of the varied subjects and the digital delivery that we were forced into through lockdown. The sheer number of training opportunities, tailored to the needs of formal partners and local communities, is an exemplar for Landscape Scale Partnerships. The programme significantly overachieved.

The programme team have also been on a journey of how to create the best learning experiences. Entry Level training on every subject imaginable:

"Loved learning the science behind restoration"

"Explanations as to why we do the practical stuff."

"The practical workshops on habitat maintenance were particularly useful for volunteers with limited mobility who could use the skills taught at a level practical to themselves."

Landscape champion training – this would involve some form of mentoring commitment from the individual and AQA Leading a Group and AQA Leading a Guided Walk were particularly important.

"Tickets" style training – this was only available to those volunteers who had shown dedication and connection to a restoration project e,g, Outdoor First Aid at Work and Brushcutter Training.

Practical sessions

"It was very much encouraged that everyone get stuck in and give it a go – learning as we were going along. That worked for me because I had never done it before."

Hedgelaying Workshop Attendee

Into the future

The evolution of the project especially to the three-tier system and the use of AQA Unit Awards is valuable lesson for all Landscape Scale Partnerships. There is a digital footprint as a legacy of Carbon Skills so people can dip in if they need to refresh. Several community groups are continuing with the organisation of their own workshops and bioblitzes.



Carbon Volunteering

Targets



Registered volunteers:

Target 500 / Achieved 633

Volunteers trained as Landscape Champions :

Target 20 / Achieved 30

526 people inspired by Landscape Champions

- 2 Volunteer promotion campaigns
- **+500** hectares enhanced as a result of volunteer activity



Volunteering drove forward essential action for a bigger, better more joined up Carbon Landscape that puts volunteers at its forefront by upskilling, supporting, and enabling local action. The programme significantly overachieved.

Conservation volunteers spear headed reimagining wildlife corridors and stepping stones. Similarly, volunteers were the stalwarts of other aspects of the Carbon Landscape which included overseeing capital works, leading walks sometimes even school groups, events, litterpicks (and we did a lot!).

Volunteering effects everyone differently. For a lot of the Friends groups with retired members it is a way to keep fit, learn new skills and have a social life.

"Everyday is a school day on the Carbon Landscape".

"I'm constantly learning in this role by physically doing something, shadowing staff members or attending training days. I'm now equipped to help manage habitats and educate others in landscape restoration."

Annie Dixon Volunteer Placement

One volunteer reported that because they were a GP, it was difficult to connect in the community because people would just want to discuss their ailments in the supermarket! However, post-retirement engagement with Flashes has given them purpose and friendships and newfound wildlife knowledge.

This project has provided quite an interesting route for those changing their 'life plans'.

"This gave me a unique level of exposure and access to situations and experiences, which have fundamentally accelerated my development and understanding of the career paths ahead of me. Working with my volunteer co-ordinator I found that my development objectives switched focus regularly. This presented me with the opportunity to try new things and led me to finding what I truly enjoy"

Stuart Manning Volunteer Placement (Stu went on to become a trainee).

"A massive Thank You to all the intrepid volunteers! They have braved the elements, sacrificed their time and lent us their strength, skill and humour. Essentially the Carbon Landscape could not have achieved what it did without volunteers."

Steve Ormerod Volunteer Co-ordinator



Carbon Trainees

Targets



Trainees target:

Target 9 / Achieved 10

100% success rate for trainees gaining employment in the environment sector. Trainees went on to work for Natural England, Lancashire Wildlife Trust (5), Mersey Rivers Trust, Groundwork Trust, RSPB and a land-based project in Scotland and some of them went straight in at manager level.

Hectares of land improved:

Target 75ha / Achieved 131ha

People benefitting from trainee projects:

Target 250 / Achieved 440

Attendees of workshops led by trainees:

Target 170 / Achieved 191

5 Reports / Management by trainees

Income generated £17.2k



Carbon Landscape Trainees project offered underemployed people the opportunity to learn traditional heritage and conservation management skills whilst undertaking a paid traineeship in Environment Conservation. The programme significantly overachieved.

The trainees literally turned their hands to everything and were regularly pushed outside their comfort zones. They also formed strong friendships and allyships. The standout aspects for nature were the trainees organising Wildlife ID Skills Workshops on various sites across the Carbon Landscape and the supporting of many events at the Gateways sites. The portfolio projects were incredibly important for new understanding in nature and included nationally important work around bog bush crickets, green bridges and a management plan for a new stepping-stone site.

Do you feel this traineeship has been useful?

"Yes, definitely" "Absolutely." "Incredibly so"

Do you feel this has helped your career?

"it has boosted my confidence that I would be able to carry out a role, even if I have to learn some skills on the job. I was also able to get advice from other team members and improve my job applications."

"Most definitely. I can assure you, if it weren't for the Carbon Landscape traineeship I wouldn't be going into my next job at Natural England."

Into the future

Overall, trainees are critical to successful Landscape Scale Partnerships. The personal projects have gone onto inform further projects within Great Manchester Wetlands Partnership They are available to view on the resource centre of the website and prove that even people who are at the start of their career, if they are passionate and willing, they can bring understanding to nature conservation and relevance for local people.





Carbon Creative



City of Trees commissioned artists to tell the story of the formation, exploitation and restoration of the Carbon Landscape with a variety of media. The programme significantly overachieved (target 4 artists) and is reported separately from Wanderland culture achievements in Carbon Connections.

Artists:

Elaine Fox – Through our Eyes carbonlandscape.org.uk/through-our-eyes

Joe Roper – Looking for Eden yumpu.com/en/document/read/63433715/ looking-for-eden

Mario Popham – Strange Eden mariopopham.com/SE1

Hill, Hoyte, Phelps Erygmascope carbonlandscape.org.uk/erygmascope

Words in Edgeways Tour

carbonlandscape.org.uk/word-edgeways-tour-0

Celebrating Joseph Evans Mitch Robinson and Oliver Bishop - Super powers of bog plants postcards with school children carbonlandscape.org.uk/celebrating-josephevans-0

Philip Garrett Stone Carvings philipgarrett.com/wigan-flashes-relief-carving-project/12136846

12 community groups engaged with 550 people

Permanent Art installations

Looking for Eden – creative writing and beautiful photography

The art produced is just stunning, ground-breaking and under-rated. The greatest achievement is the connections made with local communities. Each artist led collaborative pieces that were empowering for communities especially creative writing, poetry, photography and drawing. All work was totally embedded in the environment through a process of co-production which is more than the sum of its parts.

"At the time I was surprised how little knowledge people living in Walkden and Worsley had of their greenspace and virtually no knowledge of the mosslands... Just from my personal observations it allowed people who possibly wouldn't ordinarily, get outside, take a deep breath, listen to the birds on the moss and the fact the motorway can be heard in the background doesn't matter."

Miranda Clarke Project Coordinator, City of Trees

"I think it's fair to say that we're very pleased with the writing we have produced, aided greatly by Ralph's (Hoyte) help and support and our inspiring visit to Chat Moss as well as your enthusiasm and encouragement"

Paul Wright, Local Resident working on the Word in Edgeways Project

Into the future

The Great Manchester Wetlands partnership has become a trusted entity to deliver high quality art and culture experiences. The fact that the arts response came from the landscape ensured it was very rich. How communities react to their landscapes is very emotive whilst they learn about what is on their doorstep.













Outdoor Champions

Acheivements



508 health walks

820 participants

30 volunteer walk leaders

Not originally envisioned:

After the pandemic, because of the effect of British Cycling on the Carbon Trails the project moved over to working from the Cycling Hub at Leigh Spinners Mill.



The Outdoor Champions is a structured health walks programme. It involved coordinator Tracy Morris of the BeWell Programme (formerly Wigan's Inspiring Healthy Lifestyles), Salford Culture and Leisure Trust and Warrington Livewire. This programme was affected by the Covid pandemic.

"I had never even heard of a wildlife corridor. Now I can see how important it is to move people through the landscape for them to appreciate it. I would say it broadens people."

Richard Smith Project manager (BeWell)

The highlight was the launch of the Carbon Trail as part of the "Week in the Wild" as the community launch for the Carbon Landscape. It involved a relay of three groups of walkers totalling 32 people. The first leg was Warrington Train Station to Irlam Train Station (12 miles) with Livewire leading, Irlam Train Station to Astley Mining Museum with a drop at Little Woolden Moss Nature Reserve (6 miles) and finally Astley Mining Museum to Wigan Flashes (9 miles) where with the finale event.

"We are proud of the way we co-produced our trails so that local people feel ownership for them and also how amazing our volunteer walk leaders are for stepping up to support this event."

With the weekly health walks:

"Waggy tail walks have been really important for me. They have helped to improve my dog's social skills whilst in a safe environment. We've discovered parts of Wigan that I didn't even know existed. I've since revisited the walks and taken others to explore the area. Low hall and Amberswood are beautiful. I even used some of Tracy's knowledge to storytell along the way... Tracy deserves a medal she makes every walk fascinating. Her walks are the best part of the month."

Into the future

The legacy is undoubtedly that the walks have been mapped, all their interesting features are much more accessible. Into the mix are the volunteer walk leaders and cycle leaders who keep the programme running even if there is not a professional member of staff present. So, we are continuing to be active on the Carbon Landscape, even without the Heritage Fund, because of the increase in local knowledge.

































