



Network with Nature

Project Evaluation Report

Green Recovery Challenge Fund



Acknowledgements



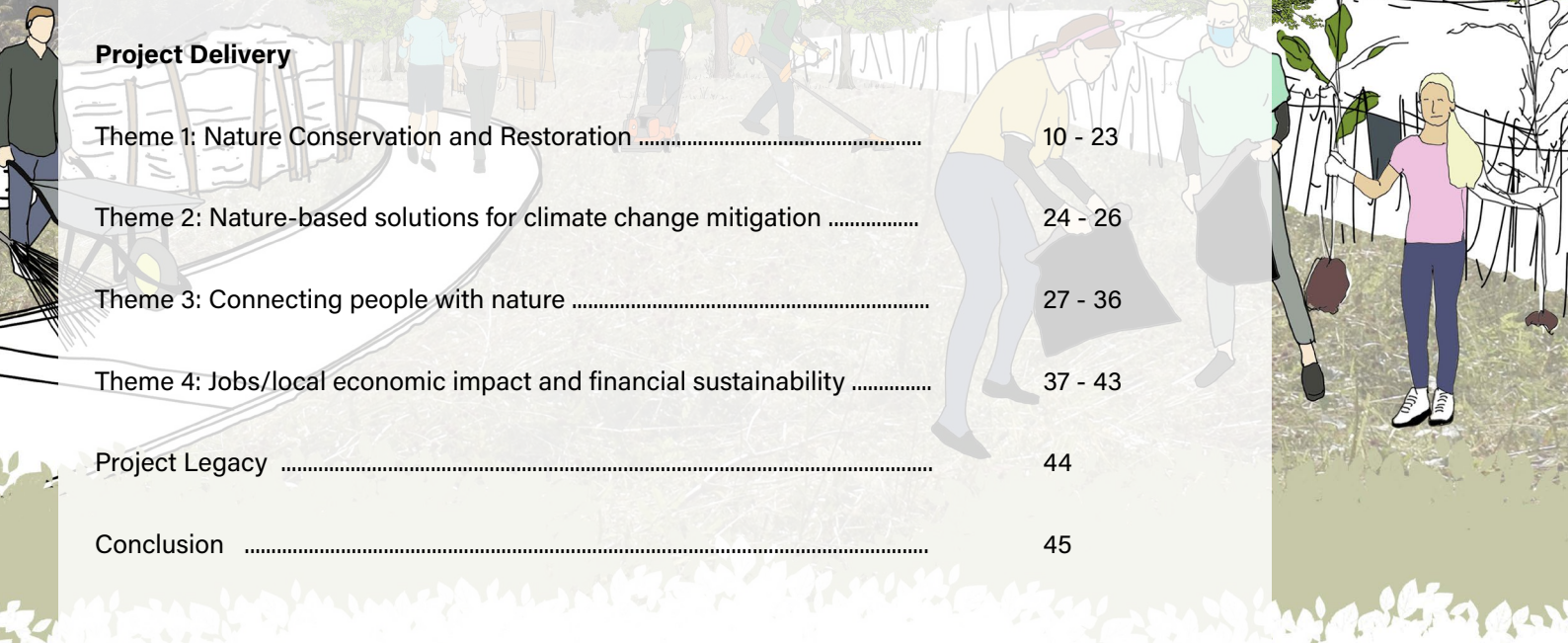
We would like to thank the Green Recovery Challenge Fund and all Arm Length Bodies for the opportunity to deliver Network with Nature and make a difference to our communities and the environment.

Thank you to all participants of the project, volunteers and educational establishments who have helped us complete work on these wildlife sites and gather information to illustrate the project's impact.

Thanks to all the project staff at Hill Holt Wood involved in delivering the project and team members involved in collecting data and evaluating Network with Nature.

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Authors: Hollie Drake, Ben Wilson and Kat Robinson

2 Wildlife Sites IMPROVED

In 2021, Hill Holt Wood began their 21-month Network with Nature project; improving and maintaining 2 local wildlife habitats in Lincolnshire by engaging members of the community. The project funded by the Government's Green Recovery Challenge Fund Round 2, was one of ninety projects awarded a grant to accelerate the implementation of nature-based projects. The Green Recovery Challenge Fund was developed by Defra and its Arm's-Length Bodies, and delivered by The National Lottery Heritage Fund in partnership with Natural England, the Environment Agency and the Forestry Commission.

Having worked in the environmental sector and in the local community since 1997, the Green Recovery Challenge fund accelerated Hill Holt Wood's work on 2 local wildlife sites for the community. This investment secured dedicated time and resources for these important nature sites, allowing work to be undertaken in exemplifying and restoring natural habitats; tackling climate change and illustrating the importance of connecting people with the natural world. Initial expectations to increase footfall of the sites; provide 250 accreditations and establish regular volunteer and well-being groups have been achieved, even exceeding in some areas. The Network with Nature project put people at the heart of delivery, provided various engagement opportunities for people to connect with nature whilst improving biodiversity, habitats and access to these green spaces; biodiversity was increased, people were educated and engaged, and jobs were created.

Main engagement opportunities throughout the project included weekly volunteer sessions, weekly health and wellbeing sessions, work experience/work placement opportunities and educational sessions for schools and FE providers, home educators and nurseries. A key strength of the project was the variation of engagement opportunities, as it enabled varied groups to get involved with activities that suited them in terms of location, length of engagement and theme of interest.

One key aspiration of Network With Nature was to nurture young people, engaging them with their environments to deliver change and make a positive impact on the world; inspiring and nurturing the future generation of environmental leaders that can continue to spread the message and make a difference. Throughout the project over 500 young people were engaged in conservation activities, some of who achieved accreditation.

Data used in this report was captured over the 21 months of delivery, across various activities and all proposed aims. Combinations of both qualitative and quantitative methods of gathering information have been used to evaluate the project. As well as the proposed outcomes being achieved, the impact on people's confidence and personal development has been incredibly inspiring. Such results can be seen through the quotes and statements written by participants and also as case studies included within this report.

This report summarises the project, captures key highlights and lessons learned and showcases the impact of Network with Nature.



The Sites

Hill Holt Wood's vision through 'Network with Nature' was to improve and maintain 2 local wildlife habitats;

- 10-acre wet grassland site – South Witham Marsh in North Hykeham.
- 200-acre mixed woodland – Hospital Plantation (Lincoln's Largest Woodland). This area contains remnants of lowland acid-heath, a particularly rare habitat and is owned by Lincoln City Council.

NETWORK WITH NATURE

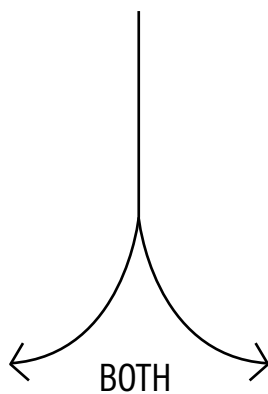
PROJECT SITES



SOUTH WITHAM MARSH



HOSPITAL PLANTATION



SOUTH WITHAM MARSH



Within the Lincoln City boundary and surrounded by the conurbation of North Hykeham, South Witham Marsh is 10 acres of wet grassland bounded to the east by the river Witham. This area, gifted to Hill Holt Wood in 2015 by Lindum Homes, had no farming or significant disturbance known of and as such supports a huge variety of plant species. For example, a survey conducted by the Lincolnshire wildlife trust in 2020 discovered over 100 species of plants. Adjoining the wet grassland is an area that was cleared and scraped approximately 5 years ago. This was done to build an attenuation pond associated with the new housing development on the edge of the site. Now, after years of regeneration, this once barren land is now a marshy area, consisting of scrub, self-set Birch and Willow which is intersected by small ditches that allow the water levels to fluctuate with the nearby river Witham. This habitat is ideal for many UK bird species such as the common Willow Warbler, Blackcaps and Sedge and Reed warblers as well as the rarer, more threatened species such as the Marsh Warbler, the Grasshopper Warbler and the Marsh Tit.

HOSPITAL PLANTATION



Owned by Lincoln City Council, Hospital plantation is Lincoln's largest woodland with an extensive area of approx. 200 acres of semi-natural Oak-Birch woodland on the western boundary of the city. Up until the early industrial period [1750-1845 AD] the area was most likely open heathland consisting of typical heath species such as Bell Heather and Purple Moor Grass. In present day, remnants of rare heathland can be found within two areas of the woodland, one of those areas only recently discovered. This is important as lowland heath is a rare and threatened habitat that only grows in specific conditions and is the only habitat that can support all 6 reptile species within the UK. Combined, this area of woodland now contains remnant areas of heathland, planted pines, self-set broad-leaved plantations, two ponds and several damper areas. Prior to the start of forestry management back in 2017, the site had been without formal routine maintenance, including lack of Rhododendron control. Rhododendron is an invasive species with damaging effects to native woodland habitats as biodiversity will inevitably decrease if not managed, thereby damaging native flora and fauna. As a result, it is a priority to help eradicate non-native, invasive species to prevent further loss of biodiversity. This is further aided by the forestry management plan in place until January 2024 to maintain this important habitat but also enhance it further.

Project aims and outcomes

The following summarises the key findings from the evaluation across the four programme themes and against the Network with Nature project aims and outcomes set. The four themes of the Green Recovery Challenge Fund programme are; Nature restoration and conversation, Nature based solutions for climate change, Connecting people with nature and Jobs/local economic impact and financial sustainability. All aims were achieved or exceeded for the project, with engagement activities contributing (in some cases) to more than one programme theme.

GREEN RECOVERY CHALLENGE FUND THEME | NETWORK WITH NATURE AIMS

1. NATURE CONSERVATION AND RESTORATION

- RESTORE AND MAINTAIN LOWLAND HEATHLAND AND NEUTRAL GRASSLAND
- THIN WOODLAND BY REMOVING PINE AND BIRCH AND PLANT WITH NATIVE SPECIES
- RECONNECT HEATHER REMNANTS
- CREATE HABITAT PILES AND DEAD HEDGING
- REMOVE INVASIVE RHODODENDRON AND CLEAR SCRUB
- SURVEY AND RECORD FLORA AND FAUNA

2. NATURE-BASED SOLUTIONS FOR CLIMATE CHANGE MITIGATION AND/OR ADAPTATION

- RESTORE AND MAINTAIN LOWLAND HEATHLAND AND NEUTRAL GRASSLAND
- THIN WOODLAND BY REMOVING PINE AND BIRCH AND PLANT WITH NATIVE SPECIES
- RECONNECT HEATHER REMNANTS
- REMOVE INVASIVE RHODODENDRON

SUMMARY OF FINDINGS:

ACHIEVED



- * APPROX 45 ACRES OF A 200 ACRE WOODLAND MANAGED. 262 M³ OF TIMBER REMOVED THROUGH THINNING AND HEALTHY WOODLAND STRUCTURE RESTORED
- * 10 ACRES OF WET-GRASSLAND MANAGED AND IMPROVED
- * HEATHLAND RESTORATION COMPLETED INCLUDING RESEEDING PROGRAMME
- * YEARLY RHODODENDRON SURVEY COMPLETED AND REMOVAL SESSIONS COMPLETED
- * HABITAT PILES CREATED AND 376M OF DEAD HEDGING CREATED AT SOUTH WITHAM MARSH
- * 16 WILDLIFE BOXES CONSTRUCTED AND INSTALLED AT HOSPITAL PLANTATION
- * 34 WILDLIFE BOXES CONSTRUCTED AND INSTALLED AT SOUTH WITHAM MARSH
- * 8714M² MEADOW MANAGED
- * ANNUAL LITTER PICKING EVENT
- * ECOLOGICAL SURVEYS COMPLETED

3. CONNECTING PEOPLE WITH NATURE

- SURVEY AND RECORD FLORA AND FAUNA
- CONSTRUCT/ INSTALL BIRD AND BAT BOXES, BIRD SCREENS, BOARDWALKS AND PATHS
- ENGAGE 500 YOUNG VOLUNTEERS IN CONSERVATION WORK
- INVOLVE 1500 MEMBERS OF THE WIDER COMMUNITY
- PROVIDE 250 ACCREDITATION
- DEVELOP A REGULAR VOLUNTEER GROUP OF 50 PEOPLE TO DELIVER CONSERVATION WORK
- ENGAGE 32 PEOPLE IN MENTAL HEALTH AND WELLNESS FOCUSED PROJECTS

SUMMARY OF FINDINGS:

ACHIEVED



- * INITIAL BIO-BLITZ COMPLETED AND SURVEYS COMPLETED THROUGHOUT PROJECT
- * BIRD SCREEN, 50M OF BOARDWALK AND 2 BRIDGES INSTALLED
- * 135M OF PATHWAY CREATED/MAINTAINED
- * NEARLY 5000 PEOPLE HAVE USED THE SITE FROM THE WIDER COMMUNITY
- * 250 ACCREDITATIONS ACHIEVED
- * 87 VOLUNTEERS ENGAGED
- * 33 HEALTH AND WELL-BEING VOLUNTEERS
- * 501 YOUNG PEOPLE ENGAGED IN CONSERVATION ACTIVITIES

Project aims and outcomes

4. JOBS/LOCAL ECONOMIC IMPACT AND FINANCIAL SUSTAINABILITY

- RECRUIT A FULL-TIME PROJECT LEAD AND 2 TRAINEES
- 1 JOB ROLE RETAINED
- CARRY OUT EVALUATION, CELEBRATE AND SHOWCASE THE PROJECT WORK
- PROVIDE 250 ACCREDITATION

SUMMARY OF FINDINGS:

ACHIEVED



- * PROJECT LEAD EMPLOYED AND DELIVERED THE PROJECT
- * 2 TRAINEES EMPLOYED. ONE TRAINEE HAS MOVE ONTO FURTHER EMPLOYMENT AS A RESULT OF THE TRAINEESHIP AND THE OTHER HAS BEEN OFFERED A 7 MONTH CONTRACT TO COMPLETE FURTHER COUNTRYSIDE WORK FOR HHW
- * 2 VOLUNTEERS HAVE GONE INTO ADDITIONAL TRAINING IN CONSERVATION. 1 HAS BEEN EMPLOYED BY HILL HOLT WOOD AS A COUNTRYSIDE OPERATIVE
- * ONGOING EVALUATION OF THE PROJECT THROUGHOUT, FINDINGS SHOWCASED AND USED TO DEMONSTRATE IMPACT
- * 250 ACCREDITATIONS ACHIEVED
- * 16 WORK PLACEMENTS COMPLETED

Work conducted at both sites (South Witham Marsh and Hospital Plantation) contributes to each of these themes. Activities were varied, from regular volunteer and well-being sessions each week, to bookable education sessions and larger community events. This variation and the Network with Nature's core team's flexible and driven engagement style supported project successes.

PROJECT ACTIVITIES



Health and Well-being Sessions



Volunteer Conservation Sessions



Education Sessions



Woodland Management



Heathland Restoration

This report will look at each of these themes in more detail, depicting how work/engagement at each site showcases the project impact.

NETWORK WITH NATURE PROJECT HIGHLIGHTS

"I enjoyed meeting and working with new people as well as gaining a feeling of connection with the natural world and my community"

"Not only has this helped me towards a qualification and experience which increases my employability in the industry, but it has also been incredibly enjoyable and rewarding. It has done my mental health wonders to be out, meeting different people and practically achieving goals which help the local environment. It is a great feeling that we have helped improve and manage a place which local people enjoy every day"



55

ACRES OF LAND MANAGED



45 ACRES WOODLAND
10 ACRES WET GRASSLAND

FOOTFALL INCREASED BY

4800



1,687KG OF LITTER PICKED



33

HEALTH/WELLBEING VOLUNTEERS



87

CONSERVATION VOLUNTEERS

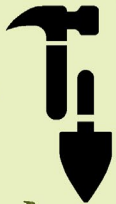
250

QUALIFICATIONS GAINED



50M

OF BOARDWALK CONSTRUCTED



65M²

SEEDED WITH HEATHER

50

BIRD/BAT BOXES INSTALLED



501

YOUNG PEOPLE ENGAGED IN CONSERVATION ACTIVITIES



Logic Model

THEME 1

Nature Conservation and Restoration

THEME 2

Nature-based solutions for climate change mitigation and/or adaptation

THEME 3

Connecting people with nature

THEME 4

Jobs, local impact and financial sustainability

INPUTS

Funding
 Project staff with knowledge in conservation and restoration
 Access to wildlife sites - South Witham Marsh, Hospital Plantation, Hill Holt Wood
 Relationship with partner organisations- Lincoln City Council
 Contacts with school, colleges, universities
 Materials/resources

ACTIVITIES

- Meadow management
- Dead hedging
- Construction of wildlife boxes
- Land management
- Woodland management
- Habitat creation
- Removal of invasive species
- Surveying
- Heathland restoration and planting activities

- Meadow management
- Land management
- Woodland management
- Heathland restoration
- Surveying
- Litter picking

- Open day events
- Education events
- Work experience opportunities
- Educational visits -Schools and FE
- Surveying
- Habitat creation e.g. boxes, habitat piles and bug hotels.
- Construction projects e.g. boardwalk/bridges/bird hide
- Accreditations
- Volunteer sessions
- Health and well-being sessions
- Improving access to nature sites

- Jobs created
- Accreditations
- Work experience opportunities
- Opportunities for student led research projects
- Education events
- Careers events
- Training opportunities

OUTPUTS

- Area of land prepared to support new habitat/species
- Area of woodland brought back into active management to improve condition
- Area of wet-grassland managed
- Area of meadow managed
- Quantity of Rhododendron removed
- Number of wildlife boxes created
- Area of natural habitats now joining up to create wildlife corridors
- Number of species recorded

- Area of woodland bought back into active management
- Area of meadow management
- Attenuation pond managed for water storage
- Area of heathland managed and seeded for expansion
- Soil health improvements

- Length of footpaths
- Area of nature identified near urban setting
- Number of features introduced/ improved e.g. wildlife boxes and benches
- Number of participants on the project
- Number of engagement sessions conducted
- Opportunities for volunteering e.g. species monitoring
- Increased footfall on sites
- Number of accreditations received

- Number of jobs created or retained
- Skills/expertise increased
- Number of accreditations gained
- Number of progressions as a result of project engagement
- Number of work placement opportunities
- Increase in visitor or volunteer numbers
- Development of relationships to secure income streams
- Improved evidence base to support ongoing activities

OUTCOMES

- New or restored wildlife rich habitats
- Existing habitats protected and enhanced
- Wildlife habitats expanded and more connected
- Actions to support pollinators and other native species
- More local habitats

- Habitats restored or created for enhanced carbon sequestration and storage and/or improved resilience to climate risks
- Nature and land use change better supporting resource management and reduce carbon emissions
- Nature based solutions to support climate change adaptations including flood mitigation
- Heathland regeneration present and joining remnants

- Improving and/or increasing nature where people live
- Connecting people with nature to increase understanding and/or improve well-being
- Access to nature improved
- Engaging and empowering communities to support nature based solutions
- Local improved ownership of wildlife sites

- Boost contacts with schools to bolster resilience
- People gain and retain employment in the environmental sector
- Skills developed to retain within the organisation
- Additional income for local business
- Improved governance and partnership agreements
- Increased financial resilience

IMPACTS

- Better woodland structure attracts wider variety of flora/ fauna
- New habitats attract wildlife improving biodiversity
- Heathland habitat restoration

- Woodland more sustainable for the future
- Carbon sequestration more effective
- Heathland habitat restoration

- People continue to use new skills learnt
- Change in attitudes and increased care for the natural world including sustainability
- Participants remain active volunteers

- Qualifications achieved aid participants to find jobs in the green sector
- More jobs in the green sector
- Participants experience increased confidence and wellbeing

Evaluation Methodology

The Approach

The Network with Nature project was monitored and evaluated against its approved purposes and also against the four Green Recovery Challenge themes as described on pages 4 and 5. Using a suite of methods to collect data, including those from external sources (ecological surveys), the project used appropriate methods depending on which outcome was being measured. The predominant approach for data collection was via a variety of feedback forms specifically designed for groups participating in an activity. Developing these varying forms ensured they were appropriate to the participants and were accessible especially when working with young people. Clear language and short forms were used to encourage responses. Demographic data was gathered from all participants where possible, however in large group engagement with schools this was not always possible.

Methodology

A mixed-method approach was adopted to gather information to assess the project's impact across these themes. The framework was designed to allocate appropriate methodologies across appropriate time scales dependant on the outcome/impact being assessed. See below the methodology used;

METHOD	USE TO EVALUATE WHICH THEME?				NOTES
	1	2	3	4	
Interviews with participants/project staff			✓	✓	Qualitative data/anecdotal evidence recorded to demonstrate individual experience of project.
Ecological surveying to monitor habitats	✓	✓			Baseline Bio-Blitz survey completed and final habitat survey completed at South Witham Marsh. Plan to continue this post project completion to continue monitoring impact on habitats. Heathland and Rhododendron surveys completed.
Mapping improvement features	✓	✓			Ecological habitat survey, Heathland restoration, GIS mapping, masterplan mapping and woodland management mapping. These have been used to showcase work completed.
Observation of activities by Network with Nature project staff	✓	✓	✓	✓	Staff reflections recorded where appropriate on individuals progress.
Qualitative data collection feedback forms; - Volunteer - Young people (before and after) - School - Teacher and pupil			✓	✓	Recording a variety of impacts including well-being, changes in confidence/self-esteem and attitude change. Baseline questionnaires and then change of attitude questionnaires used to demonstrate impact of project. School groups and staff questionnaires also used.
Project website and social media analytics				✓	Quantitative data gathered. Website hits and also engagement on social media.
Case studies			✓	✓	Case studies in report to demonstrate individual impact.
Verbal and written feedback from schools/groups after activities			✓	✓	Recorded on feedback forms or received emailed feedback.
Web survey			✓	✓	Online form sent to all volunteers of the project.

Evaluation Methodology

This mixed media approach and overlap of multiple methods available for each theme resulted in flexibility and therefore the project's ability to remove any barriers identified for the groups. Working with groups/individuals with high needs or high levels of anxiety, for example, having multiple evaluation methods available allowed the project team to allocate an evaluation method appropriate for that group/activity on an individual basis.

This evaluation report draws heavily on both qualitative evidence collected from the participants themselves or group leaders in the form of anecdotal evidence, alongside quantitative data provided from bespoke feedback forms (results included within the report).

Particular areas of interest when collecting feedback from participants included:

- How being involved in the project contributed to their personal development and well-being
- How the project aided upskilling
- If as a result of the project participants felt they had made a difference to the environment
- What changes of attitudes happened as a result of being involved

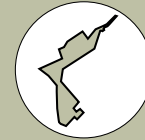
In addition, all forms asked participants what they 'most enjoyed' and also 'least enjoyed' to allow the project team to continually improve delivery, where possible, throughout the project. It must be noted that some data collection, via the use of paper forms was hampered by outdoor activities (for all groups) and therefore in some cases the number of forms received was limited. This report will define number of total participant responses with all statistical analysis to ensure transparency and thus should be considered alongside statistical confidence of statements.

A more in depth feedback form with rating system was used for long term volunteers on the project. Using the rating system, participants could strongly disagree, disagree, agree or strongly agree to statements about the project e.g. 'I feel I have made a difference to the environment'. These questionnaires provided a more detailed insight into project impacts, however they only had limited use on the project and therefore is difficult to use these alone to demonstrate impact. Use of such feedback alongside case studies proved necessary.

Reflection of evaluation framework

See below some key observations and lessons learnt:

- Ecological surveys accompanying this report have assisted in demonstrating theme 1, 2 and 3.
- Flexibility and variation in feedback forms helped to increase participation.
- Weather contributed to limited use of paper forms on particular events. Digital post project questionnaires were sent, however responses were limited. In reflection potential options for a tablet/QR code method with quick and easy access to questionnaires digitally may have assisted with this.
- Observations by project staff and accounts by teachers/group leaders were invaluable. Collecting these and young people's views of engagement activities gave a well-rounded approach to the evaluation.
- The limited use of some evaluation methods could have been improved, increasing the sample to make more comparisons possible with statistical confidence.
- The use of case studies and interviews with participants to track participants progress and project impact were invaluable to assess theme 4.
- Although overlapping methods across each theme increased flexibility and accessibility, in terms of evaluation it made it more difficult to draw direct comparisons when using a slight variation of collection method under the same theme.
- In some cases, although feedback forms were design as inclusive as possible, school groups with young people with high needs were unable to complete these forms. In these cases feedback was also gathered from school teachers/accompanying support workers to gauge the impact of the work completed.



SUMMARY OF PROGRESS AT SOUTH WITHAM MARSH

10 ACRES OF WET- GRASSLAND SITE MANAGED
376M OF DEAD HEDGE CREATED
HABITAT PILES AND BUG HOTELS CREATED
34 WILDLIFE BOXES CONSTRUCTED AND INSTALLED
8714 M² OF MEADOW MANAGED
ATTENUATION POND MANAGEMENT
4726 M² OF SCRUB REMOVAL
WOODLAND RIDE AND GLADES CREATED
147M OF HEDGEROW MAINTAINED
SURVEYS COMPLETED - INITIAL BIO-BLITZ AND FINAL
ECOLOGICAL APPRAISAL

SUMMARY OF PROGRESS AT HOSPITAL PLANTATION

APPROX 45 ACRES OF A 200 ACRE WOODLAND MANAGED
888 TREES/262 M³ TIMBER REMOVED FOR THINNING
16 WILDLIFE BOXES CONSTRUCTED AND INSTALLED
RHODODENDRON REMOVAL FROM 5 AREAS
HEATHER SEEDING COMPLETE INC. MAPPING OF REMNANTS

WHO WAS ENGAGED?

- College/university students in Lincolnshire
- Special Educational needs schools, Primary/secondary schools and home educators
- Hill Holt Wood study programme
- Volunteers
- Health and Well-being groups



Rhododendron removal at Hospital Plantation



Bug hotel created with school group

Theme 1 under the Green Recovery Challenge fund focuses on nature conservation and restoration, including ecosystem restoration and species recovery. Hill Holt Wood delivered this across both nature sites through Network with Nature (South Witham Marsh and Hospital Plantation). Modifications to the existing habitats in aid of restoration were made whilst also creating additional habitats within both settings to encourage habitat diversification. Heathland restoration and woodland management were the key focus of delivery at Hospital Plantation. More works were planned at South Witham Marsh, with more variety of habitats in need of management and therefore in addition to this report a Final Ecological Appraisal has been conducted and is intended to be read in conjunction with this evaluation report.

Aspects within this section also provide some overlap with Theme 2 - Nature based solutions for climate change and therefore within this chapter, as appropriate, references will be made for further reading later in the report.

All work conducted on both sites, as illustrated in the following pages, was completed with participants on the project, varying from school groups, conservation volunteers and also University students on work placements. These conservation activities have contributed to nature restoration, however have also provided real life opportunities for hands-on engagement for such a variety of individuals. For more information on how activities have connected people with nature please see 'Project Delivery: Connecting people with Nature page 27'

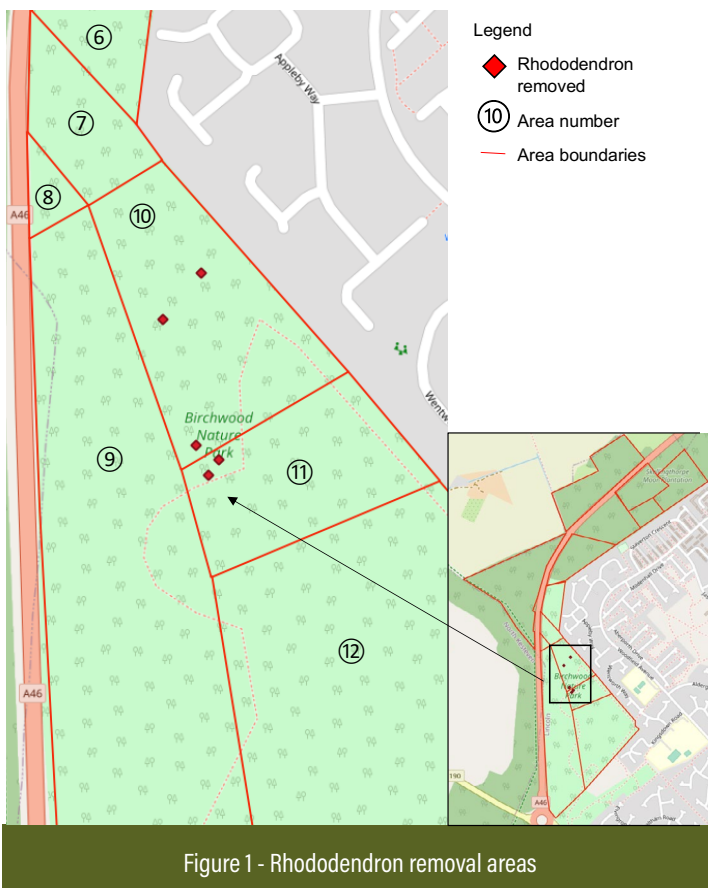
HOSPITAL PLANTATION RHODODENDRON REMOVAL



In July 2022 Lincoln University Geography students completed a survey within Hospital Plantation looking at the extent of Rhododendron present, what impact this was having on biodiversity/ecosystems and how it can be managed for the future. As a largely unmanaged site until 2018, Rhododendron has become well-established across Hospital Plantation with a wide range. Rhododendron is well-suited to acidic soils, similar to those present within the woodland. This alongside the lack of natural management (herbivores will not eat it) has led to favourable conditions that contribute to its extent. Clearance of such invasive species is critical to woodland eco-systems. Without management, it grows quickly, producing a dense blanket of foliage preventing light from reaching the woodland floor. This contributes to and makes the soil even more acidic which also limits what other species can grow around it. As a result, it out-competes other species and you lose healthy woodland structures such as flora layers and shrub layers that can't establish, under-stories that cannot support invertebrates and the main canopy is all that is left.

Throughout the project Network With Nature participants, volunteers and young people, alongside project staff have removed Rhododendron from five areas within Hospital Plantation (see below figure 1 and images below). **8 volunteers** have assisted with this work and in addition two large scale Rhododendron removal sessions (Rhoddy-Bashing Days) were completed with young people from Hill Holt Wood's study programme, with **48 young people** engaged overall. Furthermore **46 students** from Lincoln University have been involved in conducting surveys at Hospital Plantation, monitoring this invasive species. For more information about how the project has connected with people see 'Project Delivery: Connecting people with Nature page 27'.

Rhododendron was removed in all cases by the root to avoid any regrowth. The impact of work can be seen on site with woodland ferns and bramble starting to re-establish and make up the shrub layer. Although Rhododendron removal has, so far, been a success, due to the extent and size of the woodland removal will still need to be conducted (particularly within Area 9 - see figure 1). This area has not been managed during the last 21 months as work within other areas has been a priority, however Hill Holt Wood have secured management of the Woodland until January 2024 and therefore additional removal works are planned to be completed during 2023.



HOSPITAL PLANTATION WOODLAND THINNING



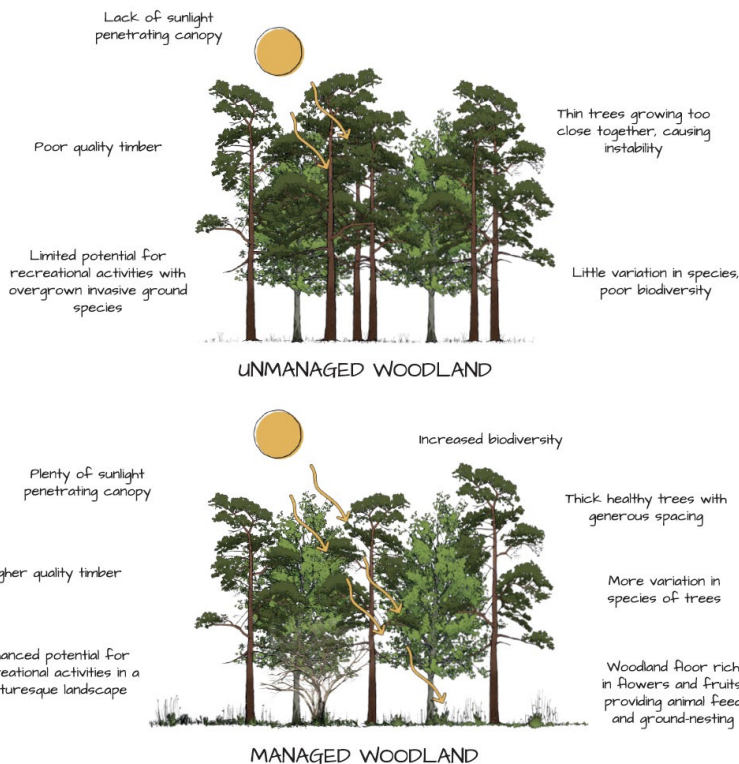
Hospital Plantation (Lincoln's Largest Woodland) is an extensive area, approx. 200 acres, of semi-natural Oak-Birch woodland on the western boundary of the City of Lincoln. Throughout the 21 months of the project the woodland compartments 1, 2, 8, 10 and 11 have been managed involving coppicing, thinning, opening up rides and felling of some trees sensitively as per the felling license to bring this unmanaged woodland back into active management for wildlife; ensuring there is a healthy mix of old trees and species, sapling, dead wood and open spaces. Note: Specific care was taken when completing any management work near the heath remnants, see page 16 for more information.

Nigel Webster, Land and Management Co-ordinator at Hill Holt Wood, with over 15 years experience in woodland management states **"Wood's left alone (untouched) will eventually start to decline. Without management and lack of light reaching the ground, nothing new can grow. By opening up the canopy in pockets, this will let more light into the woodland floor to promote new growth and more diverse species can flourish, thus supporting a wider variety of native wildlife"**.

"Much of the wildlife within our woodlands now relies on active management to provide a mix of different habitats, from piles of dead wood which can help beetles and fungi to open glades which help butterflies"

The Wildlife Trust 'How to manage a woodland for wildlife'. Available at: www.wildlifetrusts.org (Accessed 01.03.23)

Figure 2 below demonstrates the effects before and after active woodland management. To manage woodlands sustainably, conditions must be observed, such as sunlight. A heavy canopy that covers the ground, blocking sunlight to the woodland floor stops ground species from growing, limiting biodiversity. In the summer you should be able to see daylight when looking upwards; otherwise some trees may need to be felled. When trees grow close to each other they compete for sunlight to survive. Too much competition can promote too much growth too quickly, leaving trees thin and unstable. Giving trees adequate sunlight will reduce the rapid growth, leaving new trees strong and healthy with broad canopies and thick trunks.



Thinning works at Hospital Plantation



Figure 2 - Unmanaged vs. managed woodland



Aerial view of Hospital Plantation showing dense canopy coverage

The image opposite is a drone photo of Hospital Plantation showing the dense canopy of the unmanaged woodland, illustrating the need for this work.

Before conducting any work the woodland was split into 13 compartments (see figure 3) differing in size and species. Compartments 1 - 12 are located on the South Side of the A46 and compartment 13 on the north side. A sensitive approach was taken, avoiding consecutive compartment work in order to mitigate the creation of formal boundaries.

Previous to the Network with Nature Project, Hill Holt Wood had completed management within compartments 3-7 (shown in orange in figure 3). During the 21 months of the Network with Nature project management works have been completed in compartments 1, 2, 8, 10 and 11 (shown in red in figure 3).

Works were undertaken from 1st September 2021 until the end of February 2022 and September 2022 until the end of February 2023, outside of bird nesting season. Thinning and coppicing within the woodland was determined using various factors including original condition of the tree, how close together trees were located and also considering safety of dead/dangerous trees located near footpaths. In addition to these necessary thinning works, some dead trees were left standing in inaccessible areas for wildlife; providing excellent habitat for bats that tend to roost in cavities behind loose bark.



Figure 3 - Hospital Plantation compartment map

"Coppicing allows flowering plants and grasses to grow, providing food for insects which in turn provide food for other animals such as birds and bats. Wildlife that benefits from coppicing includes flowers like wood anemones, dog violets, st john's wort, bluebells, butterflies and moths, bumblebees, dragonflies, slow worms, birds such as nightingales and chiffchaff, some species of bat, such as pipistrelles, dormice and other small mammals"

The Wildlife Trust 'How to manage a woodland for wildlife'. Available at: www.wildlifetrusts.org (Accessed 01.03.23)

Project Delivery - Theme 1 Nature conservation and restoration

The table below shows the extent of management completed during Network with Nature. A total of 262 m³ of timber was removed bringing nearly 45 acres of woodland back into active management. Where possible materials we utilised on site in habitat creation and any larger timbers were taken to Hill Holt Wood and proceeded for use in construction as timber framing, cladding or for internal furniture making. Works were completed by the Hill Holt Wood Forestry and Land Management Co-ordinator alongside **two young people on kickstart programmes** who successful achieved their Level 2 chainsaw licenses.

Hospital Plantation Compartments	Acres	Species to be thinned as per management plan and felling license	Number of Trees Removed	Total m3
Compartment 1	12.87	Silver Birch	254	47.82
		Scot's pine	35	29.10
		Rowan	6	0.22
		Oak	14	9.52
Compartment 2	6.94	Oak	201	71.83
		Silver Birch	78	45.32
		Rowan and Ash	28	4.07
Compartment 8	0.87	Silver Birch	15	2.82
Compartment 10	15.12	Silver Birch, Aspen and 3 Oak	100	20.34
Compartment 11	8.89	Silver Birch	138	25.66
		Oak	19	5.33
Totals	44.69		888	262.03

Hospital Plantation overlaps with the old Swinderby airfield (see figure 4). For extraction purposes some of the pathways within the woodland were widened for easy access and during this process some of the historic tracks were discovered.

“As we have been completing the works within the woodland we have been finding the old airfield solid concrete tracks, thus using them to aid extraction of materials but also we have been putting some efforts into clearing these walkways to assist public access”

Nigel Webster, Hill Holt Wood Land Management Co-Ordinator

Hospital plantation due to its dense nature has become an area prone to a high amounts of fly-tipping and litter. It is hoped that the secondary benefit of opening up the woodland, in addition to encouraging diverse species, is that opening up the tracks and woodland more will encourage more public use of the space and in time reduce this antisocial behaviour.

Hill Holt Wood have secured management of the woodland until January 2024 and therefore will continue work within unmanaged compartments between September 2023 - January 2024.

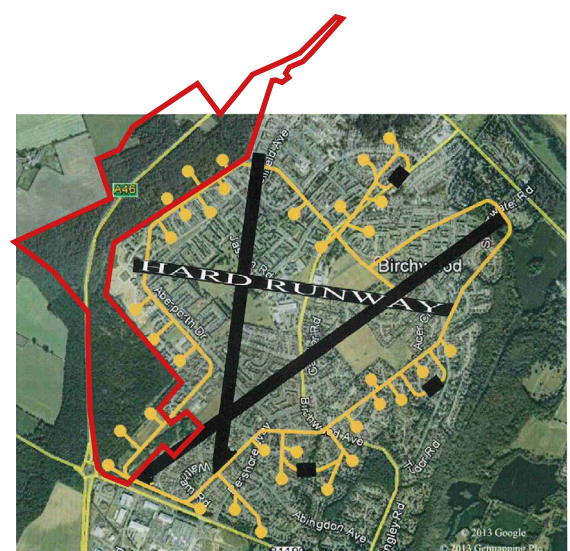


Figure 4 - Map provided by Friends of RAF Skellingthorpe.
Mike Cannock
Neil Cheeseman

HOSPITAL PLANTATION WILDLIFE BOXES



Habitat creation in the form of bat and bird boxes contributed to the nature enhancements on the site. A total of 16 wildlife boxes were installed, 10 Blue Tit boxes, 3 Robin boxes and 3 bat boxes. **Over 250 young people** have been involved in wildlife box construction throughout the project, contributing to the boxes installed at Hospital Plantation and also to others that have been installed around the District (for more information see 'Project Delivery: Connecting people with Nature page 27'). Figure 5 below shows the locations in which the boxes have been installed. Spread throughout the woodland in various compartments, it is hoped that in future years these will be utilised. They will continue to be monitored by Hill Holt Wood until January 2024 and then will be maintained by Lincoln City Council in the future.

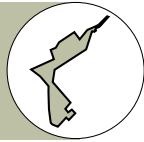


Hospital Plantation Bird Box Locations Using W3W

Blue tit box (TB)	Robin box (RB)	Bat Box (BB)
TB1 – Acre.blazed.afraid	TB6 – Recapture.sulky.curious	BB1 – Hampers.rolllover. crunches
TB2 – Aviators.braced.pays	TB7 – Triathlon.scowls.again	BB2 – Clocked.impeached. destiny
TB3 – Emerge.google.additives	TB8 – Unfocused.former.saloons	BB3 – Solder.artichoke. insects
TB4 – Remotest.cling.hoofs	TB9 – Commented.printouts.committee	
TB5 – Honeybees.proves.stadium	TB10 – Emporium.caressing.traids	
	RB1 – Hoped.lobbed.single	
	RB2 – Booster.interests.head	
	RB3 – Servicing.fake.steady	

Figure 5 - Location of wildlife boxes at Hospital Plantation

HOSPITAL PLANTATION HEATHLAND RESTORATION



Remnant Heath

Hospital Plantation includes areas of remnant heathland, planted pines, broad-leaved plantations, two ponds and several damper areas. Up until the Early Industrial period [1750-1845 AD] this area was probably open heathland and typical heath species like Bell Heather and Purple Moor Grass can still be found in several areas. On the eastern side of the bypass there is a particularly good example of heathland habitat and this is one of only two sites in the City where it is known to occur. Lowland heath grows below an altitude of 300 metres and consists of species such as heather and gorse. It grows on impoverished acidic soils but is susceptible to encroachment from more dominant species such as Birch saplings, other shrubs, bracken and Rhododendron and thus requires human intervention to aid its survival.

" Heather will ... cope with moderate shade but it really doesn't like it too dense. It will cope with a bit of dappled shade from the light canopy of a few Birches but even if these get too thick some of the Birches would have to be thinned and removed.... it certainly won't cope with shade from bracken or rhoddy"

Dr Dean Kirkland, Head of Ancient Woodland Restoration the Woodland Trust

As part of the Network with Nature project, the project team worked to protect the existing remnants from encroachment and also put in a plan to reconnect the existing remnants present.

The priority was to map out the existing remnants before any work could begin, both restoration and woodland management, to ensure the protection of these areas. Hill Holt wood received guidance from the Head of Ancient Woodland Restoration at the Woodland Trust who helped develop a plan of action for this area. The following was recommended.

To manage these areas Hill Holt Wood were advised that ongoing management would be necessary to keep bracken down and also work would need to be completed to stimulate the existing seedbank or alternatively look for other commercial seeding options. The initial recommendations included options for controlled burning (to kill bracken rhizomes and stimulate any heather seeds in the seed bank) or grazing (to manage regrowth) and then seeding. Due to the location, public access on the site and also the site being owned by Lincoln City Council, not Hill Holt Wood, limitations of such meant that this was not possible. Instead Hill Holt Wood undertook the following with guidance from Dr Dean Kirkland;

1. Removal of bracken and brash of dead bracken fronds along with any other thick course vegetation around the area of heathland remnants by hand. Remnant areas were small so this was feasible. Ongoing monitoring and removal of regrowth was necessary.
2. Review the tree canopy in close proximity to the remnant areas and complete localised thinning if necessary.
2. Introducing reseeding once the course vegetation was removed, within areas adjacent to the remnants in the hope these pockets will connect in time. Seeds were stimulated with heat prior to spreading to help increase germination rate.

Although these works have been completed, it is difficult to comment on the successful outcome. These works were successfully completed, as per the plan, however Heather only germinates and spreads slowly and therefore success of the seeding effort will need to be monitored in the future.

Project Delivery - Theme 1 Nature conservation and restoration



Area cleared for seeding



Area reseeded

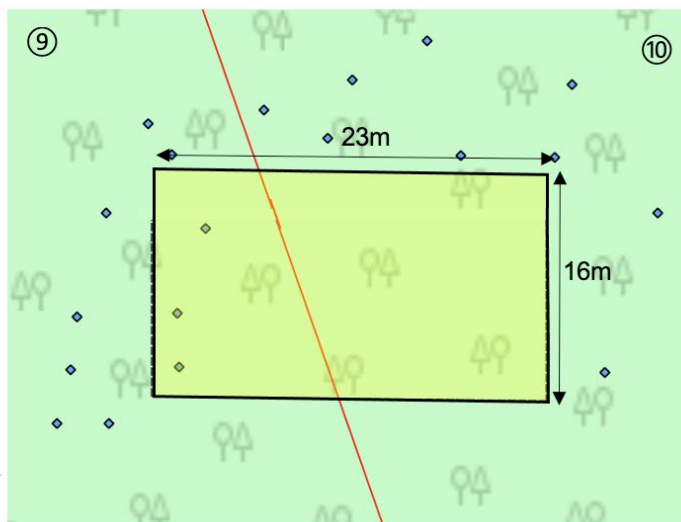
See above photographs of ground preparation and seeding completed by volunteers. See below and overleaf maps of the heathland areas within Hospital Plantation. Work restoring the 'Main heathland location' was the primary focus, yet nearing the end of the project an additional newly discovered area (see map below) was noted. Works on this area could be continued post project by Hill Holt Wood.



Heathland Locations

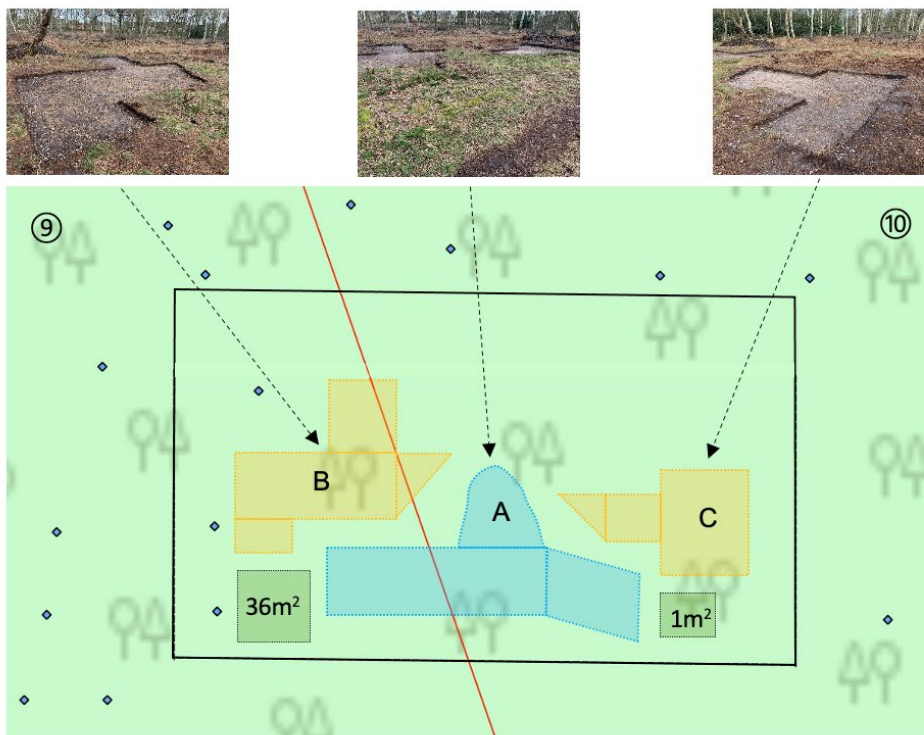
Project Delivery - Theme 1 Nature conservation and restoration

- Legend:**
 Boundaries —
 Zones ⑨
 Trees ◆
 Heathland area □



Heathland Main Area - overall dimension of work area

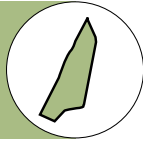
- Legend:**
 Boundaries —
 Zones ⑨
 Trees ◆
 Heathland area □
 Previously dug areas (A) □
 Newly dug areas (B + C) □
 Areas of remnant heathland □
 Not to scale



Heathland restoration areas

Existing heathland remnant coverage was approx. 37m² (see the green shaded area above). One area (shaded in blue on the map above, area A) had previously had some restoration completed by Lincoln University including seeding within the last 5 years and is currently showing some signs of heath regeneration (24.5m²). Adjacent to the existing remnants two new areas were prepared (shaded yellow on the map above, areas B and C) and cleared, with the removal of the top layer of soil, and then seeded. The new seeded area is approximately 40.6m² making the total restoration area 102.1m². Further monitoring will need to be completed to ascertain the success of these efforts.

SOUTH WITHAM MARSH



As a confirmed Local Wildlife site, South Witham Marsh is wildlife-rich and has significant local nature conservation value. Due to this, the Nature Conservation and Restoration theme evaluation on this site has been completed by an external Ecologist. This ecological appraisal looks at all aspects improved/maintained on the site and also includes information regarding species that have been recorded. This final evaluation report will summaries some of the key findings in the appraisal and also reflect on the main nature feature improvements, however it should be read in conjunction with the full Ecological Appraisal.

For more information please see '[South Witham Marsh - Green Recovery Project Ecological Appraisal Report 2023 by Jane Southey](#)'

See below a few highlights from the report to demonstrate the project impact. All work conducted, as illustrated in the following pages, was completed with participants on the project, varying from school groups, conservation volunteers and also University students on work placements. For more information on how activities have connected people with nature please see 'Project Delivery: Connecting people with Nature page 27'



Dead hedging

376m of dead hedging created

From removal of scrub and brash necessary in some areas these cuttings were woven into boundary fencing or used to create brash walls. Mainly situated within the northern reach of the marsh, an area cleared to help the establish another wet-grassland area. These were installed with young people and also volunteers.

These installations are a sustainable way to dispose of excess brash on site, help to direct pedestrian movement on the site to ensure ground flora is protected in sensitive grassland areas and also create wildlife refugia. These have been seen to be used by wildlife as shelter and/or for nesting. However these installations will eventually rot down and degrade and therefore Hill Holt Wood will need to manage and maintain such features moving forward alongside the ongoing management of brash.



Young people completing hedge maintenance

Hedge maintenance and scrub removal

147m of hedgerow has been maintained. This hedge runs adjacent to the housing development on the western border of the site and runs parallel to the pedestrian footpath has been maintained. This hedgerow was cut back outside of bird nesting season each year to reduce encroachment onto the footpath. The hedgerows provide a refugia for various wildlife including; nesting birds, hibernating hedgehogs, other small mammals and insects including beetles and butterflies.

In addition 4726m² of scrub has been removed from various areas of the site, with removal of scrub from neutral grassland margins, removal to create two new grassland areas (including a glade within the southern woodland area) and removal of some scrub to improve access and thus visitor experience of the site.



Neutral grassland summer cut and rake

Neutral Grassland Management

8714 m² of neutral grassland with areas of wetgrassland have undergone yearly management. Tasks undertaken include hand cutting and raking the neutral grassland which in the absence of grazing stock is an essential process to maintain, and potentially improve the diversity of the grassland and ensure that it doesn't scrub over. As this was conducted by hand it was a substantial task and therefore was a key activity in engaging volunteers and participations to assist in the effort. 13 volunteers assisted the project team over a two week period to remove and rake off all the cuttings. Jane Southey comments in her report that *"the main meadow ... is a good example of a neutral grassland and has a range of typical damp and dry neutral grassland indicator species" and "the damper areas included species such as meadow sweet, greater bird's foot trefoil and rush species. The plant assemblage was good for a winter survey and indicates a species-rich grassland and this area appeared to be the most diverse of the neutral grassland stands on the site"*.



Bug hotel created

Bug Hotels and wildlife refugia created

A particular engaging activity completed by school groups on site was the creation of bug hotels. These were created using the coppiced materials on-site, utilising a range of materials, creating habitats for invertebrates. Designs were created by the groups engaging in the activity, one imaginary bug hotel even depicts a boat. Located within non accessible areas these bug hotels will provide a great habitat and shelter for invertebrates. In addition to bug hotels, wildlife boxes (bat and bird) were constructed and installed on the site. For more information see page 22.

Furthermore the meadow management works resulted in grass cuttings that were piled into wildlife refugia on site for small mammals and grass snakes.

Surveys

Surveys and assessments have been undertaken site since 2015 when the land was gifted to Hill Holt Wood. The site was accepted as a Lincolnshire Local Wildlife Site (LWS) in 2008 and in 2020 (based on data collected during August 2019) the designation was reconfirmed based on quality of the LWS categories NG1 neutral grassland, FW2 running or standing water habitat and We2 wetlands present on the site. Jane Southey stated that *"The conservation work undertaken as part of the Green Recovery Project will contribute towards the maintenance of the designation especially the grassland which has had considerable management effort aimed at it, to both expand the existing areas of grassland and maintaining the main meadow"*.

Throughout the project various surveys with health and well-being groups, school groups and the Lincoln Naturalist's Union have contributed to citizen science. In addition the project team have also worked with an ornithologist licensed in bird ringing, to set up rigs on site and record the findings. Lastly a full ecological appraisal was completed by Jane Southey in February/March 2023, results of which can be seen in her report.

A recommendation was noted that *"the plant data set for the site would benefit from an in-season botanical survey (June to August) in 2023 to document the post project effects, especially in areas such as the neutral grassland where much management effort has been made"*. In addition Jane also recommended that the southern woodland could benefit from thinning/coppicing works to bring more light in. These aspects are something that Hill Holt Wood should consider completing both to help demonstrate the impact of completed works further yet also continue to improve the site.

Project Delivery - Theme 1 Nature conservation and restoration



Insect surveys with school groups



Insect survey with well-being group



Bird ringing at South Witham Marsh

Infrastructure Improvement

Erection of **2 bridges**, construction and installation of **2 benches**, pathway maintenance/creation (135m), **bird screen** installation and construction of a **50m board walk** are some of the main infrastructure improvements that can be seen on site. These installations improve access to the site, thus enhance user experience (for more information on how activities have connected people with nature please see Project Delivery: Connecting people with Nature page 27'). Furthermore these improvements have assisted by orchestrating appropriate pedestrian movement through the site which in-turn assists in protection of sensitive grassland areas. Use of limestone material in areas of pathway construction and in the hard-standing area around the benches also provides a useful open area for invertebrates to warm up before flight. The project team state they have seen butterflies warming themselves on the limestone pad.



50m of boardwalk constructed



Bridge



Seating area created overlooking meadow



Limestone path



Bird screen installation



**TAKE A QUICK TOUR
OF THE SITE HERE**

Wildlife Boxes



Willow Tit habitat

Habitat creation in the form of bat and bird boxes contributed to the nature enhancements on the site. A total of 34 wildlife boxes were installed, 13 Blue Tit boxes, 4 Robin boxes, 5 bird clad bird boxes, 3 bat boxes, 1 Kestrel box and 8 Willow Tit habitats. **Over 250 young people** have been involved in wildlife box construction throughout the project, contributing to the boxes installed at South Witham Marsh and also to others that have been installed around the District (for more information on 'Project Delivery: Connecting people with Nature see page 27').

Figure 6 below shows the locations in which the boxes have been installed across South Witham Marsh. These will be maintained and monitored by Hill Holt Wood.



Kestrel box

A habitat of particular interest created was that of the Willow Tit. Willow Tits rely on rotting deadwood (in particular standing deadwood) to excavate nest holes with ideal species for this as Willow, Birch, Alder and Pine.

To mimic this habitat the project team used hollowed Birch logs, from trees thinned on site, filling the central cavity with tightly packed sawdust and then drilling a hole through the face of the log as an entrance. Capping with a larger disk of timber, acting a roof, these were then installed in appropriate habitats on site, surrounded by dense vegetation for protection and to encourage use by the Willow Tit. These have been reviewed in March 2023 and have currently not been used. Hill Holt Wood will continue to monitor these habitats.

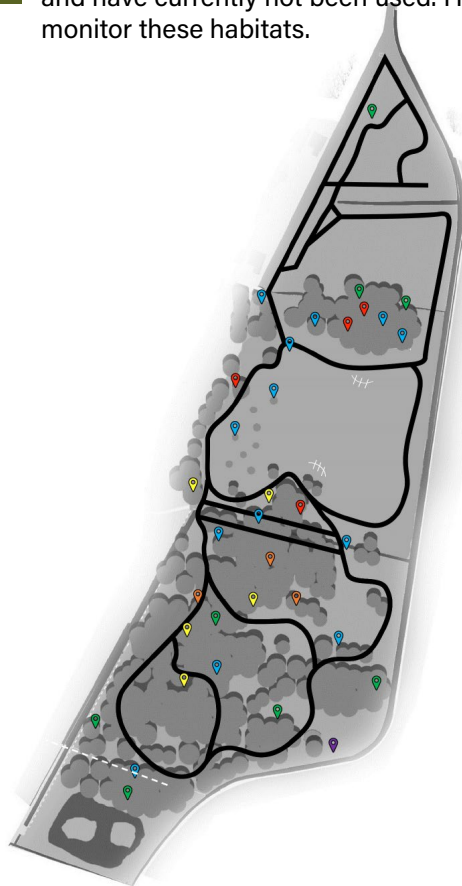
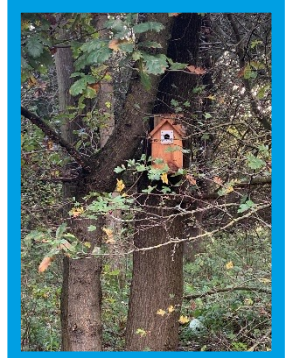


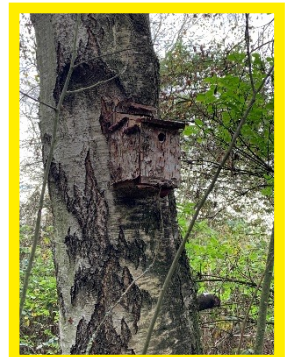
Figure 6 - Location of wildlife boxes at South Witham Marsh



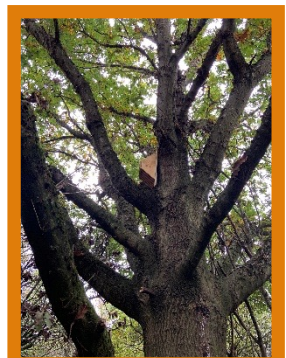
Blue Tit box



Robin box

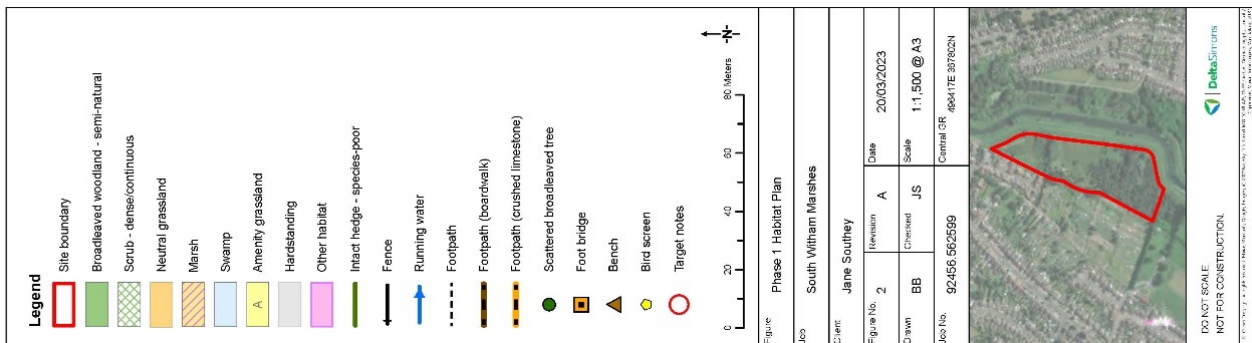


Bird clad bird box



Bat box

Project Delivery - Theme 1 Nature conservation and restoration



Habitat Map - From 'South Witham Marsh - Green Recovery Project Ecological Appraisal Report 2023 by Jane Southey'



SUMMARY OF PROGRESS AT SOUTH WITHAM MARSH

10 ACRES OF WET- GRASSLAND SITE MANAGED
8714 M² OF MEADOW MANAGED
ATTENUATION POND MANAGEMENT
LITTER PICKING



SUMMARY OF PROGRESS AT HOSPITAL PLANTATION

APPROX 45 ACRES OF A 200 ACRE WOODLAND MANAGED
888 TREES/262 M³ TIMBER REMOVED FOR THINNING
RHODODENDRON REMOVAL FROM 5 AREAS
HEATHLAND RESTORATION
LITTER PICKING

" In reference to climate change mitigation, we feel that it is important to first and foremost look after elements of the natural world already present, then adapt on what you already have to make it better. The producer elements of the natural world all have the ability to sequester carbon when they photosynthesise and as such it is important to look at all plants when thinking about climate change and not be lulled into just planting trees everywhere. Yes, planting trees brings benefits but when it is the right location, by taking a holistic approach you can maximise carbon sequestration and maximise biodiversity net gain all at the same time. " Head Ranger Ben Wilson at Hill Holt Wood

As part of Network with Nature the project team looked as primarily preserving what was already present on each site and then adding enhancements if required. This was done in a number of ways which included maintenance and restoration of heathland, managing neutral grassland, thinning of an established mixed woodland, litter removal and the management of an invasive species, New Zealand pygmy weed.

HOSPITAL PLANTATION



Heathland Restoration

Lowland acid heath is an extremely rare habitat globally so the need to preserve it is clearly evident. By preserving and restoring the heathland it brings benefits to the climate as well. **"Heathlands are successional habitats that store high levels of carbon, mainly in the soil"** [Alonso.I et al, 2021]. By preventing encroachment from tree species into areas of heathland, establishing more heath and preventing disturbance of the soil you are able to protect the carbon already stored and help to produce more carbon sinks in the future while protecting and enhancing an extremely rare habitat.

The Network with Nature project team and participants maintained nearly 37m² of existing heathland habitat and reseeded an area of 40.6m² (65.1m² total reseeded area, with previous reseeded effort) in an attempt to reconnect these remnant pockets. Maintenance of existing remnants included reviewing the tree canopy in close proximity; completing localised thinning, removing bracken along with any other thick course vegetation around the area of heathland. These works were completed by hand, taking care not to disturb the soil. This is particularly important as **"Soil disturbances as a result of management activities can increase carbon emissions from the soil stock, thus soil conservation and minimal disturbance is the best mitigation tool against carbon emissions from the ecosystem"** [Alonso.I et al, 2021]. Yet in balance carefully maintenance is necessary as **"heathland undergoing shrub or tree encroachment may release carbon into the atmosphere"**, due to roots disturbing the carbon store in the soil. Considering this careful balance, the project team removed any encroachment carefully by hand. In addition after receiving guidance from the Head of Ancient Woodland restoration, the project team also thinned a few trees from the locality, including 3 Birch trees and 6 Ash trees.

When looking at the extent of carbon storage within heathland, the soil is clearly the primary source with **"80% in soils versus 2% in vegetation"** [ONS,2016, cited in Alonso.I et al, 2021] with **"82 to 103 tonnes of carbon per hectare (t.C/ha)"** [Countryside Survey, 2007, as cited in Alonso.I et al, 2021].

Project Delivery - Theme 2 Nature-based solution for climate change

Considering these statistics, see below calculations of the carbon storage within the heathland remnants as Hospital Plantation in addition to the proposed carbon storage if the seeding effort is successful.

Existing Remnants = 37m²

= 0.0037 hectares

= **0.30 - 0.38 tonnes of carbon in the soil**

Seeded Areas = 65.1m²

= 0.0065 hectares

= **0.53 - 0.67 tonnes of carbon in the soil**

Combined areas = 102.1 m²

= 0.01 hectares

= **0.82 - 1.03 proposed tonnes of carbon in the soil**

If the seeding effort is successful that could potentially lead to a 171% increase in carbon storage



The scale of this restoration work is noted as reasonably small. The key driving principle behind this was that, as the heathland exists within a mature woodland, additional factors have to be considered; work needs to be conducted in balance. Woodlands themselves sequester more carbon than heathland, yet as a specialist habitat allowing woodland to overtake these areas already present destroys an existing habitat and carbon store. The primary focus of the project was to restore these areas and pockets, removing undergrowth and tree canopy as necessary to avoid encroachment, and join up these areas with reseeded. All efforts were focused within these specific areas, not in clearing and removing other trees to make room for large scale expansion that would compromise the carbon sequestration present within the woodland and trees. *"In summary there are trade-offs between achieving conservation objectives for heathlands and their special characteristics.... as soil disturbance as a result of management actions can increase carbon emissions from the soil stock and should be minimised.."* yet *"widespread natural growth of trees and scrub on heathlands should be controlled to help retain existing soil stocks and cater for heathland special characteristics"* [Alonso.I et al, 2021].

Woodland Management

"The United Kingdom's forests currently stores 1.09 billions tonnes of carbon and sequester about 4.6% of the country's total emissions" [Alonso.I et al, 2021]. Hospital plantation being Lincoln's Largest Woodland is an obvious resource sequestering carbon.

Due to their size, root systems and elongated life, trees are hugely important for storing carbon. Throughout project delivery the Hill Holt Wood Forestry and Land Management Team have invested their undivided attention into protecting and enhancing the woodland at Hospital Plantation so that its trees can continue to sequester carbon for years to come. By carrying out thinning works this creates more light into areas of the woodland that were getting suffocated allowing the under-storey, shrub layer and floral layers to develop further and thus increasing carbon net gain on the site. *"Limited harvesting of overgrown woodlands creates structurally diverse canopies that favour ground layer plants and tree regeneration"* [Kirkby et al, 2017, Peterken, 2017, The Woodland Trust 2018 as cited in Alonso.I et al, 2021].

As part of the woodland works the project team also carried out work on removing the invasive species Rhododendron. Rhododendron spreads very quickly, turns the soil acidic and forms a dense cover, up to the height of the understorey, preventing anything growing underneath. By removing this species the re-establishment of a healthy woodland structure will begin where the floral layer, shrub layer and under-storey have space and light to grow and as a result allow more carbon to be stored. *"Recognising that UK woodlands lack the predators that would have once kept these in check; clearing of invasive species, including Rhododendron ponticum"* is essential *"to enable the natural regeneration processes to resume, and ground flora and epiphytes to re-cover"* [Kirkby et al, 2017, Peterken, 2017, The Woodland Trust 2018 as cited in Alonso.I et al, 2021]

Litter Removal

Litter removal is also very important to helping protect our environment. Micro plastics have been recognised as being extremely harmful to the natural world. Unfortunately, due to Hospital Plantation and South Witham Marshes urban settings they both suffer from a lot of litter pollution. The project team have undertaken large scale litter picking events throughout the project to tackle this issue, trying to clear as much litter as possible to reduce pollutants and micro plastics leaching into the ecosystem and as a result have a positive impact on both sites for them moving forward into the future. **62 young people and volunteers have taken part in litter picking events** (for more information on how activities have connected people with nature please see 'Project Delivery: Connecting people with Nature page 27'). During these events a total of **1,687 kg** of litter was removed from these nature sites, equating to **710.23 tonne per annum of carbon saving** [calculated using the Bright Green Future Carbon Calculator] (<https://www.bright-green-future.org.uk/>).

SOUTH WITHAM MARSH



Looking after the neutral grassland at South Witham Marsh (8714m²) is important for biodiversity reasons as the area is recognised as a Local Wildlife Site (LWS) for its diversity of wildflowers. That being said, it also has benefits for the climate as the meadow acts as a carbon sink. Wildflower meadows can store 6 times more carbon than grass pitches, so this highlights their importance in the fight against climate change.

"In lowland meadows ... up to 35 or more plant species may occur in a 2m x 2m sample ... well established lowland meadows provide excellent habitats for invertebrates, such as butterflies and pollinating species, which has a direct value for food security" [Burkle et al, 2017 as cited in Alonso.I et al, 2021]. In terms of climate change mitigation ***"grasslands store carbon below ground and due to their large coverage they hold a considerable proportion of the UK carbon stock. Natural or semi-improved grasslands contain 15-205 more soil carbon than improved grasslands in the top 15cm"*** [Carey et al, 2007 as cited in Alonso.I et al, 2021]. At South Witham there were options to use any meadow cuttings from the site during its annual cut; if spread onto other areas with little or no wildflowers more wildflower meadows could be propagated thus benefiting the environment and storing more carbon. Evidence of this can not yet been seen on site but Hill Holt Wood plan to spread annual cuttings in 2023 onto the newly cleared area of grassland creation in the northern reach of the site (see habitat map page 23 for more information).

New Zealand Pygmy Weed

During a survey completed by the Lincoln Naturalist Union in 2022, New Zealand Pygmy Weed was discovered at South Witham Marsh. As stated in the Ecological Appraisal completed by Jane Southey she stated ***"The flood compensation area created for the housing estate.. is a diverse marsh area which includes the non-native and very invasive, New Zealand Pygmy weed Crassula helmsii. The problem of the invasive New Zealand swamp cress in the northern marsh ... is currently being explored to define suitable management. The continued presence and potential expansion of this species presents a significant management issue for the site team"***.

New Zealand pygmy weed is hugely damaging to our native aquatic environment. It is extremely invasive and with no natural predators it can take over water bodies blanketing them, killing any native vegetation. As a result any forms of aquatic vegetation good at storing carbon are lost and areas that are affected by it suffer a biodiversity deficit.

The project team with guidance from Jane and also from a local environmental contractor have come up with a plan to manage this problem. Finding the right solution, in terms of sustainability and location appropriateness, the team have opted to complete some work covering the Pygmy weed with black plastic, using 'lightproof' barriers to stop growth and kill the invasive plants instead of chemical interventions in the first instance. Such works are to be undertaken in 2023, with continued management necessary going forward. It's hugely important to control the spread of the New Zealand pygmy weed to prevent more biodiversity loss and prevent the loss of any more plant species with the ability to sequester carbon.

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SUMMARY OF PROGRESS



OVER
650
PEOPLE
ENGAGED ON SESSIONS

250 ACCREDITATIONS ACHIEVED
87 VOLUNTEERS ENGAGED
33 HEALTH AND WELL-BEING VOLUNTEERS ENGAGED
501 YOUNG PEOPLE ENGAGED IN CONSERVATION ACTIVITIES
OVER 100 SESSIONS FOR VOLUNTEERS/HEALTH AND WELL-BEING GROUPS CONDUCTED

10 ACRES OF WET- GRASSLAND SITE MANAGED WITH VOLUNTEERS, HEALTH AND WELLBEING GROUPS, YOUNG PEOPLE AND EDUCATIONAL ESTABLISHMENTS INC. ALL CONSERVATION ACTIVITIES (DEAD HEDGING, HEDGEROW MAINTENANCE, PATHWAY MAINTENANCE SCRUB REMOVAL AND MEADOW MANAGEMENT) AND INFRASTRUCTURE IMPROVEMENTS (BOARD WALK, BRIDGES, BIRD SCREEN PATH AND SEATING AREA)

APPROX 45 ACRES OF A 200 ACRE WOODLAND MANAGED WITH VOLUNTEERS, HEALTH AND WELL-BEING GROUPS, YOUNG PEOPLE AND EDUCATIONAL ESTABLISHMENTS INC. SOME THINNING WORKS, RHODODENDRON REMOVAL AND HEATHLAND RESTORATION

CITIZEN SCIENCE AND SURVEYING

WIDER COMMUNITY ENGAGEMENT - OVER 4000 PEOPLE FROM THE COMMUNITY HAVE USED SOUTH WITHAM MARSH



Wildlife boxes created with Lincoln University

Theme 3 looks at how the Network with Nature project connected people with their environment. This was achieved every step of the way as people were at the core of all delivery. All conservation efforts on both sites were completed with groups of young people, volunteers, schools and work placement students. By taking a holistic approach to all activities, participants have been able to gain hand-on experience working in these environments and tangibly be able to see their contributions to the nature restoration and conservation of both sites. These activities have resulted in participants being educated about the natural world and it's importance to us all. The impact of these activities can be seen in the relationships participants have fostered with the natural world and also in the flourishing habitats, attracting fauna.

From the onset of the project, Hill Holt Wood set targets for engagement, accreditations and wider community engagement. See aims below;

Network with Nature Aims:

- * Provide 250 accreditations
- * Develop a regular volunteer group of 50 people to deliver conservation work
- * Engage 32 people in mental health and wellness focused projects
- * Engage 500 young volunteers in conservation work
- * Engage 1500 members of the wider community

The following pages summaries progress against these aims.

Project Delivery - Theme 3 Connecting people with nature

QUALIFICATION BREAKDOWN :

QUALIFICATION	NUMBER ACHIEVED
EMERGENCY FIRST AID	3
ABRASIVE WHEELS AWARENESS	1
CHAINSAW LICENSE - MEDIUM TREES	1
COUNTRYSIDE AND ENVIRONMENTAL MANAGEMENT	2
EMERGENCY FIRST AID AT WORK	16
FIRE SAFETY AWARENESS	36
FOOD HYGIENE	2
GIS BEGINNER COURSE	1
INTRODUCTION TO ECOLOGY WOODLAND	156
SAFE USE OF STRIMMER AND BRUSHCUTTERS	28
WOOD WORKSHOP SAFETY TRAINING	4



IMPACTS SEEN :

- Participants go onto further employment and/or education
- Participants gain confidence in their abilities
- Participants gain experience/qualifications to add to their CV's to aid in finding further volunteering/training/employment
- Participants gain key skills for the future which can be used in their day to day activities.

SESSION BREAKDOWN:

Approx. 60 volunteer sessions and 60 health and wellbeing sessions were hosted throughout the project.

87 VOLUNTEERS ENGAGED = 174% 

(Target 50)

One volunteer attended 47 out of 60 sessions and another attended 34. 25 out of 87 attended more than once and nearly 10% attended more than 10 sessions.

33 PEOPLE ENGAGED IN HEALTH AND WELLBEING PROJECTS = 103% 

(Target 32)

One participant attended 50 out of 60 sessions, with 39% attending more than once.

501 YOUNG PEOPLE ENGAGED = 100% 

(Target 500)

Wider Engagement

Wider community engagement was monitored using a footfall monitoring device installed in November 2021 on South Witham Marsh. This was installed to monitor how the work impacted on the use of the site by the wider community. Efforts to improve access were a priority for the project (installing a boardwalk, benches and improving the paths etc), so it was hoped by the project team that the local community would start to utilise this wildlife area more. Footfall has dramatically increased during the works, showing significant growth (see graph below). The Network with Nature Team monitored this count each month throughout the project and an increase has been noticed. To improve accuracy of these figures a baseline figure was taken over the first 2 months to identify the individuals that already utilise the site. This figure was then subtracted from the monthly 'count' figures. This shows an increase of approx. 4800 visits across a 15 month period.



**FOOTFALL
INCREASED
BY 4800**

(Target 1500)

Considerations

It must be noted that using a monitoring device in this way, the project team encountered some issues and whilst completing the analysis of this a couple of discrepancies were noted. During the month of July there seems to be a dramatic increase in footfall from 1800 in June to 8000 in July (as can be see on the graph above). This is obviously an anomaly and therefore the July figure has been excluded from the final count results, as a outlier, as this would skew the results and make them look more favourable than is accurate. This may have been caused by the sensor malfunctioning or by being activated by a low lying branch/foilage in front of the sensor. An improvement that could be considered for the future is looking at other alternative footfall monitoring devices to see if there are any that would suit an outdoor environment in terms of sensitivity better. Also in addition, during the month of August there was a 2 week period in which the batteries in the device were not working. This has reduced the footfall figure over this time, and therefore maybe additional monitoring of the device would have been beneficial.

The next few pages will summarise some of the key activities undertaken throughout the project and illustrate how these connections between people and nature have impacted on individuals attitudes.

Litter Picking

Litter removal was key to the Network with Nature delivery. The activity provided an opportunity to engage with a wide group of participants whilst also contributing to an activity protecting our natural world. 3 large scale litter picking activities were conducted throughout the project, one of which at South Witham Marsh as part of the Keep Britain Tidy Campaign where **13 regular volunteers** assisted the project team in removing fly tips and litter from the Local Wildlife Site. In addition, **2 litter picking events** were conducted at Hospital Plantation. Hospital Plantation, due to its location, is prone to fly tips, litter and subject to high levels of antisocial behaviour. During these litter picking events **49 young**

Project Delivery - Theme 3 Connecting people with nature

people joined the project team and collected a total of **1,687 kg** of litter excluding fly tips. The purpose of these events was to educate young people on the impact of litter in the natural world and also have a subsequent positive impact on these environments. The total litter picked (1,687 kg) equated to **710 tonnes p.a of carbon savings**. Hill Holt Wood plan to continue events such as this in the future to emphasise to young people and the community that small changes, for example not littering or buying reusable plastic bottles, can all make a difference toward a cleaner planet and healthier future.



Litter and fly-tips removed from Hospital Plantation



Young people and volunteers litter picking

*** 49 young people collected 1,687 kg of litter ***

Rhododendron Surveying and Removal

Each year second year geography students from Lincoln University visited Hospital Plantation to monitor and compare results, to identify habitats, discuss potential impacts of the land management and compile recommendations for future management. The result of this can be seen in the student reports completed in response to the high volumes of Rhododendron present in the woodland. One student report stated **"Rhododendron is clearly well-established across HP [Hospital Plantation], with most bushes being large/dense and several being highly reproductive"**. During these surveys areas needing intervention were identified and large scale Rhododendron clearing events were hosted. These activities require very little prior knowledge and involve using basic hand-held tools, so it is easy and quick to pick up by all. Groups would work together as a team to remove the invasive species via the root, to avoid regrowth. See below some photographs of these events.

*** 51 young people assisted in removing Rhododendron ***



Volunteer removing Rhododendron



Removed Rhododendron



Young people removing Rhododendron by the root

Project Delivery - Theme 3 Connecting people with nature

Work Placements

Work placement opportunities were offered to young people in an environmental setting. These placements included shadowing and working with the project team, countryside rangers (with experience within the natural environment) and also opportunities to complete practical hand-on tasks. The project team were flexible with the work placement offers in terms of length, and hosted **5 long term** (up to 10 weeks) work placements for Lincoln University Geography students and **11 short term placements**; 3 from The Place Independent School (a bespoke educational provider for children with complex trauma, mental health, behaviour and attachment needs), 7 from Abbey Access (a training provider in Lincoln) and 1 from Sir Robert Pattinson Academy in Lincoln. The Lincoln University students noted particular positive responses as a result of engagement. See some responses below;

" I enjoyed building valuable relationships with my peers and employers. I also enjoyed spending time in nature"

" I enjoyed working with like minded people as well as feeling like I'm making a genuine change to the environment"

Students From Lincoln University

One student commented that they felt the work they did at Hospital Plantation was less satisfactory/rewarding (removal of Rhododendron). The project staff took these comments on board and sessions at Hospital Plantation were dispersed with sessions at South Witham Marsh completing conservation work. Students commented that overall the placements helped their studies.

One school sent the project team feedback after a young person completed a short-term work experience placement:

"On behalf of the students and the Academy I would like to express my thanks to you for hosting a work experience placement for us during the week commencing 30/01/23. The students have returned to the Academy full of their achievements and enthusiastic to put what they have learnt into practice. They now have an excellent insight of how they can present themselves in the best possible way when applying for vacancies in the future. We thoroughly enjoyed visiting the students where possible and were delighted with the variety of the activities and tasks that you involved the students with. It was over and above what we had envisaged or expected. For this we are truly grateful and hope that you too enjoyed hosting our students during the week"

Feedback from Sir Robert Pattinson Academy

Educational Visits

Educational visits and engaging with young people were core to the delivery. Hill Holt Wood aimed to inspire, upskill and enthuse young people about the natural world through practical activities; connecting them with nature. Groups included Universities, Colleges, Secondary/Primary Schools, Special Educational Needs schools and Home Educators.

20 Lincoln College Level 2 Animal Management course students completed 4 weeks of sessions which included activities such as pathway maintenance. These activities contributed to their learning modules.



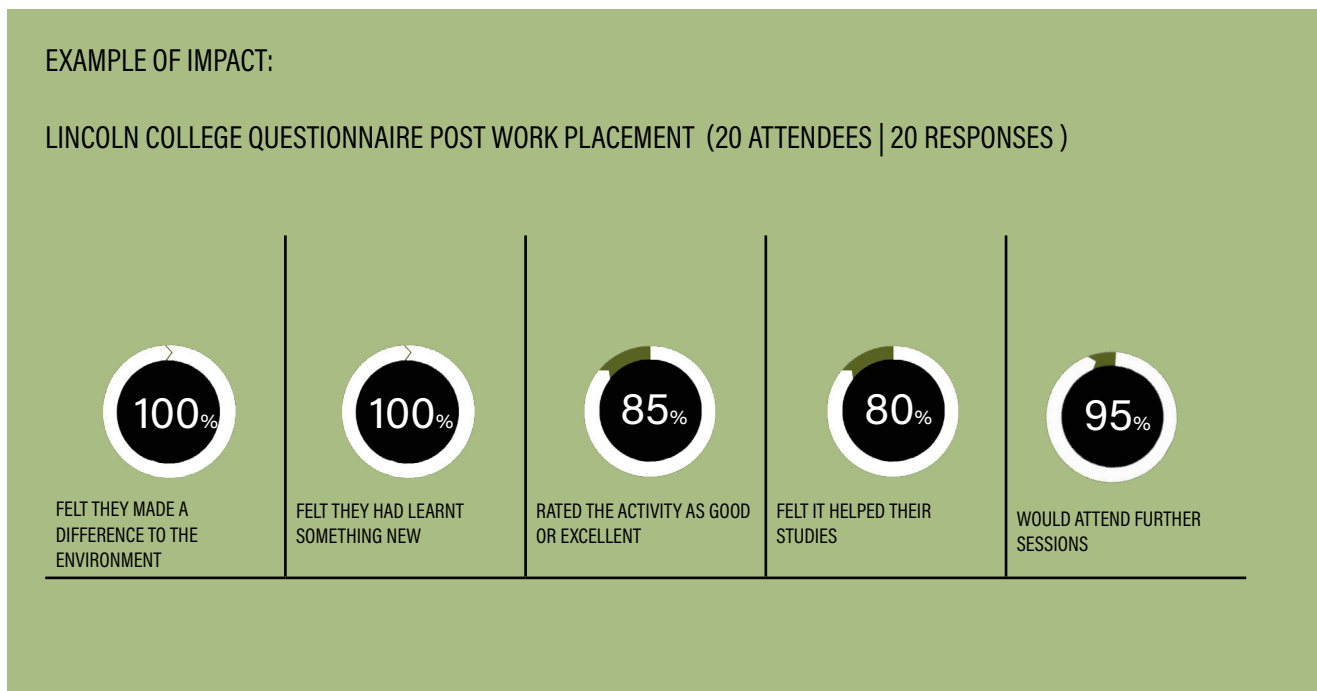
School group helping complete dead hedging



College group helping construct the boardwalk

Project Delivery - Theme 3 Connecting people with nature

Students were asked to complete a questionnaire on their experience after completing the programme.



Students remarked positively about their experience on the project, with all from Lincoln College stating they felt they had made a difference to the environment. Feedback from these questionnaires did however bring to light what young people's least favourite thing about the project was, with 8 out of 20 students commenting that weather conditions made it, at times, unfavourable. The nature sites host to these activities have no infrastructure or shelter other than a toilet at South Witham Marsh. This made it difficult for the project to engage large educational groups if the weather was not amenable. To combat this the project team invested in some outdoor 'pop-up' shelters to assist in providing some cover to groups working in unfavourable weather. Conservation work is always going to be completed outside and therefore the unpredictability of weather will always be a problem with delivery, however even though this was noted students still commented positively on their experiences overall.

When asked what they most enjoyed the student commented:

" I enjoyed practical work like the rhodey removal "

"I spoke to people in my class that I never usually speak to "

" I enjoyed exploring around and laying the dead hedging"

" That the sessions were hands on"

Students From Lincoln College

The largest educational engagement sessions were with St Christopher's Special School with **110 students completing 3 - 6 week courses**. Students completed the introduction to ecology accredited course and also practical work on site including; dead hedging, bird box making and bug hotel construction. As the closest school in proximity to the site at South Witham Marsh, working closely with this educational establishment made sense for the Network with Nature team. The school were very keen to be involved with the project and stated to parents ***"Together, by providing a more diverse and better connected habitat, we can help to improve biodiversity and save threatened species from extinction, whilst also engaging people with the natural world. This will give your child a chance to look into the world of work and offer a valuable work experience opportunity. This will also be the chance to learn more about nature, teamwork and a host of other skills based learning opportunities"***

St Christopher students completed a baseline questionnaire and post engagement questionnaire to gauge the impact of the project.

Project Delivery - Theme 3 Connecting people with nature

EXAMPLE OF IMPACT:

ST CHRISTOPHER SCHOOL 'BEFORE AND AFTER' QUESTIONNAIRE RESULTS (110 ATTENDEES | 57 RESPONSES | 24 RESPONSES USED IN ANALYSIS*)

STUDENTS WERE ASKED ON A SCALE OF 1 (STRONGLY DISAGREE) - 5 (STRONGLY AGREE) HOW THEY FELT ABOUT THE FOLLOWING STATEMENTS

STATEMENTS	BEFORE ENGAGEMENT	AFTER ENGAGEMENT
I CARE ABOUT THE ENVIRONMENT	87% STRONGLY AGREED	87% STRONGLY AGREED
I ENJOY BEING OUTSIDE	70% STRONGLY AGREED	87% STRONGLY AGREED
I FEEL RELAXED	70% STRONGLY AGREED	78% STRONGLY AGREED
I FEEL I CAN MAKE A DIFFERENCE TO THE ENVIRONMENT	57% STRONGLY AGREED	91% STRONGLY AGREED
I FEEL CONFIDENT	52% STRONGLY AGREED	78% STRONGLY AGREED
I FEEL CLOSE TO OTHERS	61% STRONGLY AGREED	70% STRONGLY AGREED

THE MOST NOTABLE INCREASES CAN BE SEEN AROUND STUDENT ATTITUDES TOWARDS THE ENVIRONMENT AND HOW THEY FELT AFTER INVOLVEMENT, WITH 34% FEELING MORE ABLE TO MAKE A DIFFERENCE. ADDITIONALLY A 26% INCREASE CAN BE SEEN IN YOUNG PEOPLE'S CONFIDENCE AS A RESULT OF THE PROJECT.

* Note: of the 57 responses only 23 completed the questionnaire before and after and therefore only 23 can be used in the analysis. The 'after engagement' questionnaire was missed by some groups due to bad weather conditions being inappropriate to fill out paper based forms. This therefore raises an area for improvement for further projects and should be considered by the project team.

Some comments from the students support this further;

" To the fantastic rangers. Thank you for the exhilarating activities, they were amazing. Thank you!"

" Thanks for all the fun over the last weeks. I learnt a lot about birds and all kinds of animals"

" I liked walking through the meadow to see the butterflies"

Students From St Christopher's School

Other educational sessions included students from the Hill Holt Wood Study Programme, students from St Francis Special School in Lincoln, Feather Teens, Home Ed groups and Grantham Additional Needs Fellowship. These activities included bug hotel construction, bird box making, dead hedging and also completion of the Introduction to Ecology UK rural skills accreditation.

Particular success was seen when engaging the home educators were 16 young people attending with their parents/carers to complete an accredited course over a 1 day period. This involved measuring trees with clinometers, using 'pooters' and quadrats to complete ecology surveying and also conducting species ID.

*** 16 home-educated young people completed *
an introduction to ecology course**

Project Delivery - Theme 3 Connecting people with nature



Thank you cards sent to the project team from St Christopher's Special School

Ecological Surveys

Citizen science data has been collected throughout the project, as part of accredited course (Introduction to Ecology) and also as a result of volunteer/health and well-being groups completing surveys on the site. One activity of particular note was when an ornithologist licensed in bird ringing, set up rigs on site and spoke to volunteers about the reasons for bird ringing including demonstrations. One volunteer said *"I enjoyed seeing and learning about the birds"* whilst another stated *"I liked seeing how bird rings get on, also learning how I'd get a bird licence"*.

Lincoln Naturalists Union found over **200 species** of flora and fauna at South Witham Marsh. Volunteers found **80 species** of flora and fauna at Hospital Plantation during a survey.

*** Over 100 people have *
contributed to surveying**

Qualifications

Qualifications provided a perfect opportunity to connect people with nature. Whilst completing conservation tasks on the sites, participants were able to work towards qualifications and thus also take away knowledge and skills for the future that may help them access further employment. For more information on qualifications achieved as a result of Network with Nature please see page 28.

Tree Thinning activities at Hospital Plantation

Hospital plantation provided a unique experience for people to assist in thinning small trees using hand tools. Conducted by a small group of health and wellbeing volunteers a small area of trees were thinned to allow the growth of more established trees. Some of the participants stated:

"I enjoyed meeting and working with others. I feel as if we are achieving something and learning a lot. I am looking forward to what the project will bring"

"It was a great practical experience of forestry and wildlife conservation"

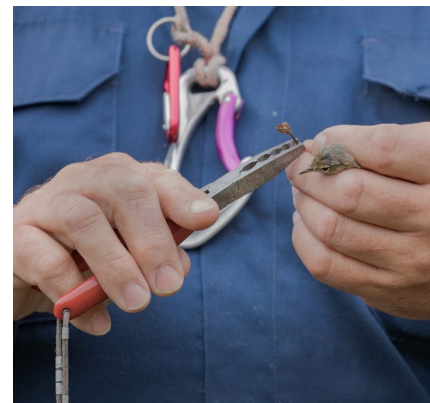
Health and Wellbeing volunteers

When asked what their favourite thing about the activity was, one participant stated *"team working and being out in nature"* another commented it was *"good for my mental health"*. Although a small group completed this activity 100% (5 participants) felt that they had made a difference to their environment.

Infrastructure improvements

Construction of the benches, boardwalk and bridges have shown to be engaging and enjoyable activities for engagement (see case studies pages 42-43 for feedback from volunteers). These allowed participants to gain practical skills in the use of handtools, which was received positively. These elements will also remain as long standing legacies of the project.

*** 48 people have assisted in infrastructure improvements***



Bird ringing at South Witham Marsh



Insect survey by health and wellbeing group

Habitat Creation Activities

A variety of habitats were created on the project. Particular success was seen when engaging school groups. The project team completed sessions using 'flat-pack' (made by Hill Holt Wood) bird/bat box kits. In this way young people were easily able to construct the wildlife boxes with guidance from the project team. These boxes have been installed at both South Witham Marsh and Hospital Plantation, as well as other areas around the district.

*** Over 250 young people have been *
involved in wildlife box construction**



Bug hotel creation

Long Term Volunteers

Every week volunteer and health and wellbeing sessions were conducted. Some volunteers on the project attended for over 12 months therefore showcasing project experiences and valued feedback on project impact. A post project digital questionnaire was sent to all volunteers on the project. See below some responses received:



Group constructing bird/bat boxes

"I enjoyed meeting and working with new people as well as gaining a feeling of connection with the natural world and my community"

"This is exactly what wanted to do which I was wasn't getting else where - practical wildlife conservation. Not only has this helped me towards a qualification and experience which increases my employability in the industry, but it has also been incredibly enjoyable and rewarding. It has been very satisfying to see the project develop from start to finish over the year, improving the site and achieving our goals and aim. It has done my mental health wonders to be out, meeting different people and practically achieving goals which help the local environment. It is a great feeling that we have helped improve and manage a place which local people enjoy every day"

"It gave me the opportunity to offer my love for mother Earth and the 'Natural' World. To meet some great folk along the way and as well as 'working' we all had some great fun! This experience boosted my passion to work back outdoors and something in addition to my incumbent work. I truly came away with a renewed energy to face some of life's 'challenges' and I am very grateful to the managing team who were awesome:) Thank you all"

SUMMARY OF PROGRESS

1 JOB ROLE RETAINED
3 JOB ROLES CREATED AND RECRUITED FOR SUCCESSFULLY
PROJECT LEAD
TRAINEE JOINERY RANGER
TRAINEE COUNTRYSIDE RANGER
YOUNG PEOPLE PROGRESSED FROM KICK-START POSITIONS
ACCREDITATIONS GAINED
16 WORK PLACEMENTS COMPLETED (UP TO 10 WEEKS)
WIDER COMMUNITY ENGAGEMENT WITH THE PROJECT ON SOCIAL MEDIA AND WEBSITE



Work Placement students installing Willow Tit Habitat



Litter removed by volunteers

POST PROJECT OUTCOMES :

PARTICIPANTS CONTINUE TO VOLUNTEER
HHW EMPLOYED TRAINEE COUNTRYSIDE RANGER
HHW EMPLOYED PROJECT VOLUNTEER AS 'COUNTRYSIDE OPERATIVE'
CONTINUED PARTNERSHIP WITH LINCOLN CITY COUNCIL
2 VOLUNTEERS GONE ONTO FURTHER EDUCATION IN ENVIRONMENTAL SECTOR

The Network with Nature project assisted in supporting jobs in the green sector by recruiting young people to lead the project, upskilling participants with accreditations, providing work experience opportunities and for some individuals this had led to progression towards their future goals and/or onto further employment. See below a few key points with regards to jobs/local economic impact;

Recruitment

1 job role was retained from the existing Hill Holt Team and 3 other roles were created for this project; one full time position for the Network with Nature project lead and 2 traineeships (one joinery and one countryside), with these young people working alongside more experience mentors throughout their 18 month on the programme. Hill Holt Wood struggled with recruitment of the project lead role initially, advertising at the start of the project (July 2021) yet not successfully recruiting until November 2021. At this time there was an influx of jobs from funded programmes as part of the post-Covid recovery and therefore within the saturated market Hill Holt Wood struggled to recruit. In November Kat Robinson was successful in the role (for more information about Kat's journey please see page 41). The traineeships were a way for the Network with Nature project to invest in young people as the next generation of environmental leaders. At this time Hill Holt Wood had 2 young people employed under the Government's Kickstart programme as Countryside Operatives. Network With Nature allowed these young people a chance of progression onto further employment (for more information about the traineeships and the young people's journeys please see page 39 - 40). Hill Holt Wood were then able to offer 2 more young people the opportunity to join the Hill Holt Wood team on kickstart positions, backfilling these now vacant roles.

Work placements

Hill Holt Wood offered 5 Lincoln University Geography students work placements of up to 10 weeks. Students were able to formulate a brief in conjunction with the Project lead, complete research and practical conservation work on the site, all concluding in a poster presentation about their theme/topic contributing to their educational assignments. An additional 11 short term placements were offered to other special educational needs establishments and local Academies and one provider stated *"The students have returned to the Academy full of their achievement and enthusiastic to put what they have learnt into practice. They now have an excellent insight of how they can present themselves in the best possible way when applying for vacancies in the future"*.

Partnerships

Since 2018 Hill Holt Wood have been working with Lincoln City Council, who have approved Hill Holt Wood's management of the site. This relationship has strengthened over time and was extended for a 2 year period for the delivery of the Network with Nature project. Although the project completed at the end of March 2023, the management agreement runs currently until January 2024, and Hill Holt Wood are hoping to secure further extensions to complete the work within all compartments, bringing the entire 200 acres back into active management.

Accreditations

250 accreditations across varying courses have been achieved through the project. Participants have been able to upskill, gain practical hands-on experience in the conservation sector and obtain additional qualifications that may assist in securing future employment within the green sector (for more information about accreditations achieved please see Project Delivery: Connecting people with Nature page 27).

Case Studies

Progression of trainees and staff on the Network with Nature Programme in addition to some of the regular volunteers showcases the impact of this project. Some of these individuals have been able to discover a career for their future where Network with Nature has been the catalyst. To showcase this theme, alongside qualitative data, case studies have been invaluable. The following pages showcase 5 case studies from staff, trainees and volunteers, following their journey on the project and the impact that being involved with Network with Nature has had on them.

Case Study - Gabe



BEFORE ENGAGING:

KICK START PROGRAMME AS A COUNTRYSIDE OPERATIVE

INVOLVEMENT IN NETWORK WITH NATURE:

EMPLOYED AS TRAINEE JOINER INCLUDING CONSTRUCTING/INSTALLING BENCHES, BOARDWALK, BRIDGES AND BIRD SCREEN

LENGTH OF TIME ON PROJECT:

18 MONTHS

PROJECT IMPACT:

IMPROVED SELF CONFIDENCE AND HAS SHAPED GABE'S CAREER PATH IN JOINERY

Before involvement with Network with Nature Gabe was pursuing his passion in production arts, already achieving a Diploma from Lincoln College he then went onto study Film at Nottingham Trent University. However after 1 1/2 years Gabe decided to leave the course due to difficulties studying through the pandemic. After 8 months of unemployment Gabe applied for a kick-start placement with Hill Holt Wood as a Countryside Operative. His motivation for this was to find something stimulating and outside in the natural world following on from isolation through the pandemic. After being successful in securing this position Gabe completed 6 months working alongside Hill Holt Wood rangers completing garden contracts and also assisting the Forestry team with log orders and clearance work. Nearing the end of the programme Hill Holt Wood were successful in securing the Network with Nature project, and as part of this committed to employing 2 young people on 18 month traineeships. With these opportunities available Gabe applied for one of these roles and was offered a progression route onto the programme upon completion of his kick-start placement. Although differing from Gabe's original career path, the role as a trainee joiner interested Gabe as he liked learning new skills and doing a variety of tasks, whilst also being keen to stay in employment within a sector that allowed him to work outside in the natural world. Gabe also states he is **"fond of giving places a 'glow-up [impressive transformation]"** and thus the opportunity to work alongside and receive 1:1 mentorship from the in-house Carpenter/ Joiner on live construction projects, learning both site joinery and carpentry skills appealed to him.

Gabe was involved in various elements of the Network with Nature project, from installation of a board walk, bridge construction, construction and installation of a bird-screen and benches. Gabe said that the project gave him a **"new appreciation for nature"** and he learnt how to interact with people from different backgrounds - working with volunteers of the project on these works - whilst also gaining a lot of knowledge in environmental conservation work on a wet-grassland site, **"I have learnt to appreciate trees and nature"**.

"I have learnt how to be a joiner" which he stated challenged him on a daily basis, having to adapt to something he hadn't done before. Gabe **"didn't know anything about joinery before the project"** however he said he **"gained skills that I can use for the rest of my life"**. Gabe learnt how to make furniture products, how to use different tools and also gained valuable skills in how to run and manage projects in a wood workshop environment. In addition Gabe undertook training and enrolled on a Furniture Making Course as part of the project.

Gabe stated his 'stand out' experience on the project was constructing a footbridge at South Witham Marsh. Leading a group of volunteers in the construction he was able to develop his leadership skills and also gained valuable insight into how to lead a group with varying abilities. Gabe stated that the project overall had given him a boost in self-confidence, discovering what is possible, allowing him to test his abilities and knowledge.

FROM INVOLVEMENT WITH NETWORK WITH NATURE GABE HAS BEEN INSPIRED TO CONTINUE WORK WITHIN THE JOINERY FIELD, UTILISING THE SKILLS HE HAS GAINED FOR FUTURE EMPLOYMENT. GABE HAS LEFT HILL HOLT WOOD AND MOVED ONTO EMPLOYMENT WITH A CARPENTRY FIRM FITTING KITCHENS, ALLOWING HIM TO CONTINUE USING THE SKILLS LEARNT FROM HIS TRAINEESHIP. ONE DAY GABE HOPES TO BE SELF-EMPLOYED RUNNING HIS OWN BUSINESS.

Case Study - Joe



BEFORE ENGAGING:
KICK START PROGRAMME AS A
COUNTRYSIDE OPERATIVE

INVOLVEMENT IN NETWORK WITH NATURE:
EMPLOYED AS A TRAINEE COUNTRYSIDE
RANGER
WORKING ALONGSIDE THE PROJECT LEAD
EACH DAY

LENGTH OF TIME ON PROJECT:
18 MONTHS

IMPACT OF PROJECT:
IMPROVED SELF CONFIDENCE
STILL EMPLOYED BY HILL HOLT WOOD AS A
COUNTRYSIDE RANGER

Before involvement with Network with Nature Joe studied an animal management course at Riseholme College. After one year at college Joe worked at a pig farm on an apprenticeship. Joe did not find joy in this role and therefore left and was unemployed for 3 months. Joe then applied for a kick-start placement with Hill Holt Wood as a Countryside Operative. After being successful in securing this position Joe completed 6 months working alongside Hill Holt Wood rangers completing garden contracts and also assisting the Forestry team with log orders and clearance work. Nearing the end of the programme Hill Holt Wood were successful in securing the Network with Nature project, and as part of this committed to employing 2 young people on 18 month traineeships. With these opportunities available Joe was notified of these roles and was offered a progression route onto the programme upon completion of his kick-start placement. Following on naturally from his previous Kickstart 'Countryside Operative' position, Joe was employed as a Trainee Countryside ranger to work alongside the project lead in delivering the physical management of the Network With Nature project. Joe stated he always liked ***"working outside and in the countryside"*** as ***"helping the environment makes me feel good"***.

Joe was involved in the day to day delivery of the project at both Nature sites, South Witham Marsh and Hospital Plantation, working with volunteers and school groups completing the conservation works necessary. Joe stated that the project taught him about land management strategies, natural succession, how a wildflower meadow works alongside practical and people skills; ***"I have learnt how to work and communicate with volunteers from different backgrounds that has helped grow my confidence"***.

Joe stated his 'stand out' experience on the project was ***"watching the development of the wetland from where we started"***; ***"Watching the wetland, now we are coming towards the end of the project, develop ... to now where people can enjoy it"***. Joe stated he liked watching the volunteers enjoy what they are doing and also particularly enjoyed building the board walk and ***"learning new practical skills in regards to joinery"***.

Joe comments that the project has helped with his people skills, helped to build his confidence both personally and practically and also has helped with his stress, ***"Being outside has helped me enjoy my work instead of worrying all the time"***. Joe has also gained new practical skills which will help with future employment e.g. strimmer/brushcutter ticket.

"Network with nature has helped me come out of my shell" and ***"I hope to carry skills I have learnt here into future employment"***. Joe is very keen to stay in the land management sector. Joe's dream is to one day work within the RSPB or the National trust.

JOE HAS RECENTLY BEEN OFFERED A COUNTRYSIDE RANGER ROLE AT HILL HOLT WOOD TO START FROM 1ST APRIL 2023, WHICH HE HAS ACCEPTED. JOE WILL BE COMPLETING COUNTRYSIDE MANAGEMENT WORK AROUND THE NORTH KESTIVEN DISTRICT, UTILISING SKILLS GAINED THROUGH THE NETWORK WITH NATURE PROJECT.

Case Study - Kat



BEFORE ENGAGING:

COMPLETED MASTER DEGREE IN MARINE BIOLOGY AND ZOOLOGY AT BANGOR UNIVERSITY

INVOLVEMENT IN NETWORK WITH NATURE:

EMPLOYED AT THE NETWORK WITH NATURE PROJECT LEAD AND RESPONSIBLE FOR PROJECT DELIVERY

LENGTH OF TIME ON PROJECT:

17 MONTHS

IMPACT OF PROJECT:

CAREER PROGRESSION - SECURED ROLE AS TRAINEE ASSESSOR IN COUNTRYSIDE MANAGEMENT

Kat has always had a passion for the environment, studying an integrated master's degree in Marine Biology and Zoology at Bangor university. Having moved location after University, Kat wanted to find a job with relevance to the degree she had studied, however was finding it difficult due to lack of experience in the field. When Kat saw the project lead role advertised at Hill Holt Wood, with its relevance in conservation, she applied. Kat wanted to find a role in management and realised that this position and running a grant funded project would help her gain experience with this. Hill Holt Wood were impressed by Kat's enthusiasm and passion for the environment and offered her the role. Kat started in November 2021 with Hill Holt Wood and started her journey leading the Network with Nature project.

Kat's general week consisted of admin time to recruit, promote and expand the reach of the project and then 3-4 days of engagement activities; leading volunteers, health and well-being groups, schools and FE providers whilst completing the necessary works on both nature sites. **"I learnt how to lead a team successfully, how to tackle different situations and communicate with people from different backgrounds and needs"**. Kat also stated **"I have gained practical skills in how to use tools, learnt how to listen to people and help understand their perspective and also land management strategies"**. With support from the Senior Management team and also with assistance from the trainee countryside ranger, Kat excelled in the delivery over her 17 months on the project, with sites thriving and targets met.

When asked what her 'stand out' experience on the project was Kat stated **"the journey as a whole"**. **"Back in November 2021, I remember going home and thinking what have I actually signed myself up for, as this is huge, and there is so much I didn't know at the time. And now, looking back, I feel I have come such a long way and actually achieved something that benefits the environment. I know so much more now than I did and I have learnt so much from other people"**.

"I really couldn't have done it without the volunteers and to see the difference that we have made to the areas themselves just shows how much we have achieved".

Working on the site each week Kat and the volunteers have built up relationships with the local community that use the site. They have said how much of a difference the project has made, **"I have always wanted to make a difference"**. Also working with young people has been key to the project delivery over the last 21 months. **"The ability to educate and inspire younger people and encourage them to look after the natural world - I was a part of that"**.

KAT HAS RECENTLY BEEN OFFERED A JOB IN SOMERSET AS A TRAINER ASSESSOR IN COUNTRYSIDE MANAGEMENT FOR THE SOUTH-EAST OF ENGLAND. BEING INVOLVED WITH NETWORK WITH NATURE HAS, AS KAT STATED, "SET ME UP ON THE CAREER LADDER, HELPING ME MANAGE MY OWN TIME AND TAUGHT ME HOW TO MANAGE RESPONSIBILITY"

Case Study - Participant 'X'



BEFORE ENGAGING:

UNEMPLOYED DUE TO COMPLEX MENTAL HEALTH ISSUES
VOLUNTEERING ON PROJECTS

INVOLVEMENT IN NETWORK WITH NATURE:

NETWORK WITH NATURE VOLUNTEER
ATTENDING 97 SESSIONS

LENGTH OF TIME ON PROJECT:

15 MONTHS

IMPACT OF PROJECT:

IMPROVED MENTAL HEALTH AND SOCIAL SKILLS. NOW STUDYING A L2 COURSE IN COUNTRYSIDE AND WILDLIFE MANAGEMENT

Throughout this case study I will refer to the individual as X.

X left sixth form in 2014, not able to finish due to a brain injury. This injury led to complex mental health issues and therefore X was unable to secure a permanent job and started to volunteer on projects. X volunteered with the Princes Trust in 2018/9 and then joined Hill Holt Wood's well-being programme at Big Wood, constructing a woodland labyrinth for one year. After completion of this project X saw the opportunity to volunteer on the Network with Nature project. X stated ***"I wanted to continue working outside and do something similar"***. As X lives in a small village X wanted to socialise with others to reduce feelings of social isolation and also wanted a project that would help improve X's mental health.

X has been an ongoing volunteer on the Tuesday/Wednesday sessions for 15 months, attending 97 sessions. From being involved with Network with Nature, X feels they have ***"improved social skills and how to communicate with different people and also in practical skills such as surveying techniques and how to identify species"***.

X stated their 'stand out' experience on the project was ***"Building the bridge, as I have never built a bridge before and I learnt how to construct something from nothing. I learnt how to use different tools and how to overcome obstacles"***.

X stated they saw an improvement in their mental health since the start of the project. ***"I also have improved confidence in talking to others, where I previously struggled"***.

X is currently in the process of completing an online level 2 course in Countryside and Wildlife Management, which will allow progression onto a level 3 horticulture course. X wants to work within the countryside setting and with this experience and skills gained through the project X feels they are moving towards their goals; ***"Beforehand I have very little confidence or hope in completing a course like this one. I have learnt practical and social skills that can be used in the future"***.

X IS CURRENTLY COMPLETING A L2 COURSE IN COUNTRYSIDE AND WILDLIFE MANAGEMENT AND THEN WILL BE LOOKING TO COMPLETE A L3 ONCE X HAS OBTAINED THE L2 QUALIFICATION. X IS CONSIDERING ALSO GOING TO UNIVERSITY TO STUDY SIMILAR COURSES TO GAIN MORE EXPERIENCE. X WOULD LIKE TO CONTINUE VOLUNTEERING WITH HILL HOLT WOOD ALONGSIDE STUDYING.

Case Study - Jay



BEFORE ENGAGING:

WORKED WITHIN RETAIL AND LOCAL GOVERNMENT

INVOLVEMENT IN NETWORK WITH NATURE:

NETWORK WITH NATURE VOLUNTEER ATTENDING 62 SESSIONS

LENGTH OF TIME ON PROJECT:

15 MONTHS

IMPACT OF PROJECT:

SUCCESSFULLY SECURED 12 MONTH FIXED TERM CONTRACT WITH HILL HOLT WOOD AS A COUNTRYSIDE OPERATIVE

Jay has previously worked in retail and customer service, yet before engaging with the project was working in local Government for 3 years. Jay wanted to work within the environmental industry and joined the volunteering group at Network with Nature to ***“get practical experience to aid future career prospects”***

Jay was keen to be involved as the project included ***“practical experience - hands on practical skills such as tool use, construction, environmental management and putting some conservation theory into practice”***. Attending weekly conservation sessions Jay was involved in scrub clearance, dead hedging, pathways maintenance/creation and also engagement with the public to explain the project aims, works and encourage them to look after and use these areas. Jay's most memorable moment on the project was bridge building and he says ***“bridge building in the woodland was one of the greatest achievements. It was great to make something safe and stable to improve access routes. To be able to build something from scratch and see what you have achieved”***. Jay also enjoyed working as a team to complete this.

The impact of the project has meant Jay is ***“happier - being out within green spaces”***, more confident - ***“I have gained confidence after a short episode of unemployment”*** and also Jay has seen an improvement in his social skills ***“meeting new people from different backgrounds, who I wouldn't normally engage with in everyday life”***.

Since being involved in the project Jay has been able to combine knowledge learnt with an online course to gain a qualification in Countryside and Wildlife Management; ***“I will be able to add this to me CV which will make me more employable in the future”***.

Jay wants to continue work within the environmental sector and will continue to complete his online study. ***“I have realised through this project that I also like the engagement/education side, as well as the practical side”***.

JAY APPLIED FOR A COUNTRYSIDE OPERATIVE 12 MONTH POSITION THAT BECAME AVAILABLE AT HILL HOLT WOOD, IN WHICH HE WAS SUCCESSFUL IN SECURING. JAY WILL BE STARTING HIS EMPLOYMENT FROM APRIL, UTILISING SKILLS LEARNT ON THE PROJECT AND ALSO MOVING TOWARDS HIS GOAL TO HAVE A CAREER IN COUNTRYSIDE MANAGEMENT.

Project Legacy

From inception, the Network with Nature project was centred around sustainability and legacy. Making sure that the work started as part of the project could be continued; sustainability in both being able to continue the physical management, in the maintenance of previous work and in the messages being shared.

Regarding the South Witham Marsh site, work completed as part of the Network with Nature project has enabled the injection of resources needed to get the management of the site to a point which is more sustainable. Regular maintenance of the site will be needed, yet is more manageable for Hill Holt Wood than prior to Network with Nature project. The site will need ongoing maintenance of the hedgerow, topping up the material within the dead hedge and yearly meadow management. These activities are planned to be integrated within Hill Holt Wood's study programme for their Horticulture students to complete as part of their work experience and practical experience needed to complete their course. This continues connecting young people with nature post-project, carrying on spreading the message that young people are our future 'green leaders' and thus educating and inspiring them to look after the natural world is crucial. In addition volunteer days, especially with the meadow cut, will still be hosted onsite to continue engagement with the community. Additional works will also be completed on the site in future years, with Hill Holt Wood considering thinning work necessary in the southern woodland, ongoing maintenance of the New Zealand Pygmy weed and also continuing the establishment of additional meadows. The footfall counter will also be monitored by the countryside rangers at Hill Holt Wood to ensure that the site continues to be used by the public in the future.

Regarding the Hospital Plantation site, the heathland restoration works and the wildlife box installations will be maintained in the future by Lincoln City Council, once Hill Holt Wood's management agreement terminates on the site. The agreement is extended until January 2024, so additional thinning works will be completed in other compartments as of September 2023. Hill Holt Wood hopes to continue working within this woodland post January 2024 to enable all 200 acres to come back into active management. In addition, whilst the management agreement is still in place, Hill Holt wood plan to continue Rhododendron removal days (particularly in compartment 9) with young people and volunteers; removing the invasive species, improving the woodland structure and also as an engaging activity for the community to be involved in.

Monitoring of sites is planned to continue post-project completion to survey the flora and fauna attracted to the sites due to Network with Nature. This will help form future management plans and continue to increase biodiversity within the local community.

Conclusion

The Network with Nature project has engaged hundreds of people in conservation work on both sites; leaving installations, wildlife habitats and change of attitudes in many communities. Whether people have been involved in volunteer days, educational sessions or completing restoration work, they have gained practical skills and built confidence and self-esteem and seen much personal development. All activities, as well as being aimed at improving nature conservation and restoration, aimed to increase peoples understanding of the natural world and demonstrate how to made positive differences to the environment for a brighter future. Through studying the impact of each aim within this report, it is clear that the Network with Nature has helped both people and the environment. Through quantitative data and reflective accounts, present in this report, the project has successfully set out what it planned to achieve;

- Nature restoration and conservation
- Nature solutions for climate change
- Connecting people with nature
- Assisting jobs/local economy

The project has demonstrated that people become enthused and inspired when involved in environmental projects, especially when given a live brief to contribute to. They care about communities and wildlife and it is possible to open their eyes to small changes and ways they can help in all settings, be it school, home or in their purchases and use of the earth resources. Network with Nature has made a positive impact of both nature sites; improving the environment, contributing to climate change mitigation, shaping young people's attitudes towards the environment to make a difference for us all in the future.

LESSON LEARNT AND CONSIDERATIONS FOR THE FUTURE

- Lack of welfare facilities, such as toilets, at Hospital plantation made it difficult to engage schools and larger groups.
- In terms of activities, especially with younger school groups and children, the sessions were very much weather dependent as there were cases where booked sessions had to be re-arranged as they were called off due to rainy conditions.
- Increase in questionnaire responses would have been beneficial. Looking at digital alternatives e.g. using QR codes etc could be considered in the future.
- Case studies proved useful to demonstrate project impact and participant progression.
- Due to conditions of South Witham Marsh, especially after adverse weather conditions, some of the uneven/muddy footpaths made it increasingly difficult for visitors that were less able bodied to use and visit the site. As a result, it was emphasised to large groups these issues, which sometimes limited group participation due to the lack of access. This is also linked to the lack of facilities at South Witham Marsh including disabled toilets.
- Accredited courses were a benefit to the project as young people felt they had achieved as a result of engagement, however a wider variation of practical conservation courses would have been beneficial and assisted engagement numbers.
- Soft skills, such as confidence and self esteem, were noted by participants as an impact of the project. Soft skills questionnaires could have been developed to monitor this impact.

Hill Holt Wood CEO said " Network with Nature has been such a huge success, to see so many people of all ages and academic levels engaging in and looking after our beautiful green spaces. It has been fantastic to be part of"

