

Black Country Blue Network

Summative Evaluation

Report to Wolverhampton City Council

March 2019



European Union
European Regional
Development Fund



Project signage and ground preparation at Reedswood Park – Neil Wyatt

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NW Environmental

NW Environmental Limited is a consultancy specialising in the environment and sustainability, including the development, management and evaluation of environmental and greenspace projects and initiatives.

NWE has been contracted to undertake the summative evaluation of the **Black Country Blue Network** project on behalf of Wolverhampton Council and the other project partners. For this work we are linking up with **Landscape Matters Design LLP**, a respected landscape design consultancy with huge experience of greenspace and visitor centre projects who we have worked alongside on many projects, including project evaluations.

Black Country Blue Network

Black Country Blue Network is an innovative project to improve habitats and ecological connectivity on several sites associated with the Black Country's waterway network, Figure 1. In addition, the project aims to secure a range of benefits for the communities who benefit from these valuable greenspaces.

NW Environmental were pleased to have been part of the process of developing the original Black Country Blue Network bid and evaluation strategy, and we welcome the opportunity to undertake the evaluation of this important project.

This Document presents our evaluation of the project as of the end of February 2019.

There are a few outstanding actions to be completed by the project, we are confident that these will be completed by the end of March 2019.

Update: Some changes have been made to reflect figures for outputs as of 31 March 2019. These indicate that:

- 1. 11.8 ha of rehabilitated habitat were achieved against a target of 8Ha**
- 2. 18.8 ha of land was brought into improved conservation status against a target of 20 ha.**
- 3. Overall, 30.6 ha were delivered against a target of 28ha.**

Other aspects of this report reflect the situation at 28 February 2019.

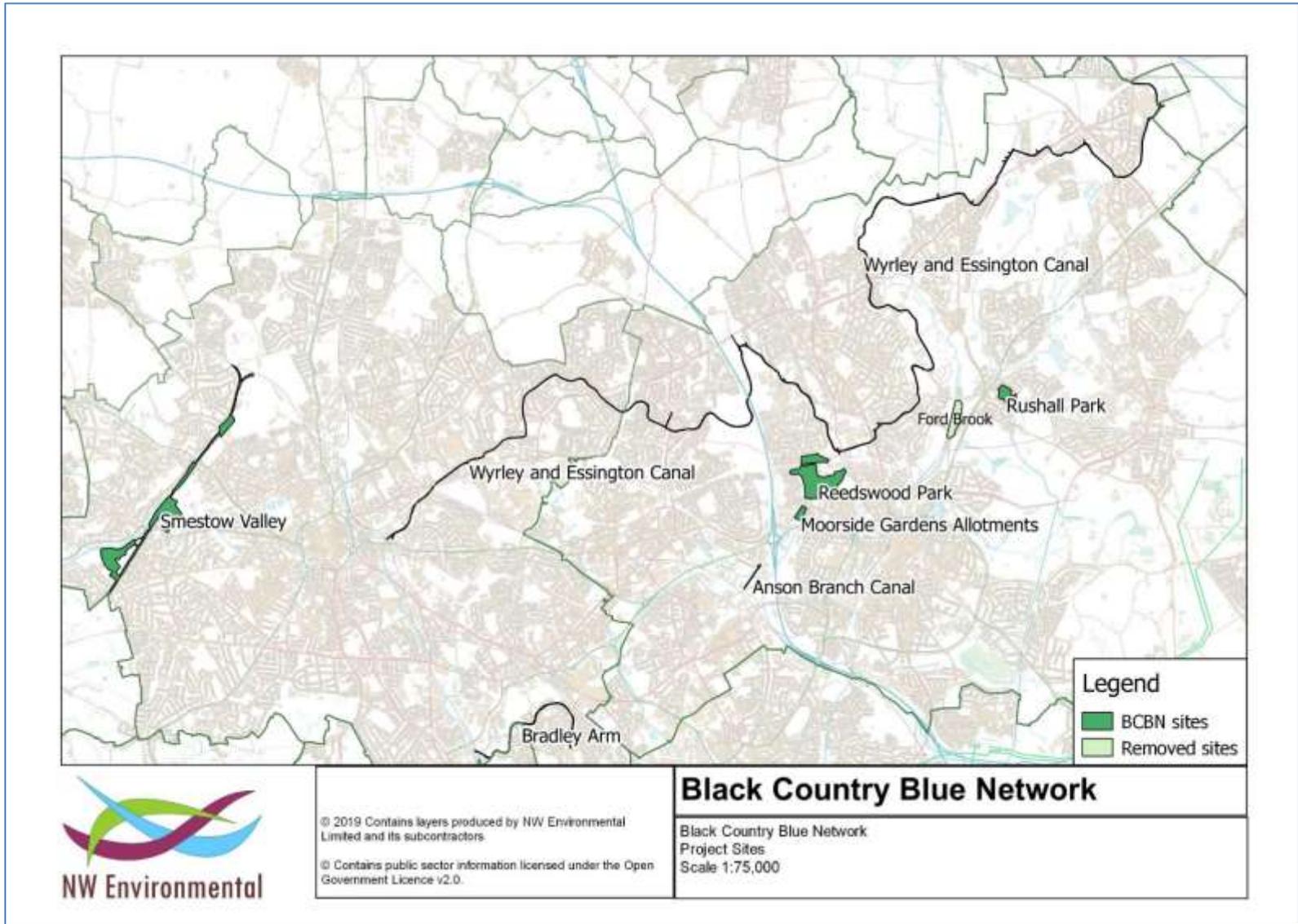


Figure 1 - Project Sites

Background to the Summative Assessment

Neil Wyatt Environmental Ltd and the Black Country Consortium Ltd were commissioned by Wolverhampton City Council to produce an evaluation framework for the ERDF project *The Black Country's Blue Network* prior to its submission.

Some aspects of the project have changed, largely in terms of sites and outputs, this Summative Assessment Methodology is built around the original framework, but with amendments to reflect the changes.

This report has been produced in accordance with the requirements and guidance in the ESIF Summative Assessment Guidance.

This Black Country Blue Network Summative Assessment and Summary Findings Report documents and evaluating the impact of the project across all objectives and sites.

Note that permission was given to delay production of this report to allow completion of as much as possible of the project work; nonetheless there still remain some items of work outstanding as of the 28 February 2019. All of this work has been put out to contract and we have assumed, with the assurances of the project partners, that these works will be completed by the end of March 2019.

This evaluation report will be shared with all project stakeholders to help them in the planning of future projects and the future management and maintenance of the assets created and improved by the project.

The objectives of the project are:

1. To rehabilitate 8.4 hectares of greenspace
2. To support 21 hectares to attain better conservation status
3. To reverse the decline in, restore and enhance degraded ecosystem services halting overall biodiversity loss.
4. To increase the biodiversity of the areas, including woodland management, wildflower meadows and measures to encourage native species
5. To increase access to green space for local residents improving their quality of life
6. Increase numbers of visitors using the sites
7. To make the areas more attractive to investment by improving greenspace in strategic regeneration areas
8. Greater understanding of biodiversity through marketing and signage
9. Improving water quality in line with the Water Framework Directive

The report addresses the five areas scoped in the ESIF Summative Assessment Guidance:

- **Relevance and consistency:** the summative assessments must explore the continued relevance and consistency of the project, in light of any changes in policy or economic circumstances during its delivery period.
- **Progress:** the summative assessments will set out the progress of the project against contractual targets, any reasons for under or over performance, and the expected lifetime results.
- **Delivery and management:** the summative assessment must explore the experience of implementing and managing the project and any lessons which have emerged from this.

- **Impacts:** the summative assessment, where possible, must show the economic impact attributable to the project, including both the intended and actual outcomes and impact.
- **Assessing value for money:** the summative assessments must analyse the cost-effectiveness of the project in light of its intended and unintended outcomes and impacts, and hence its value for money.

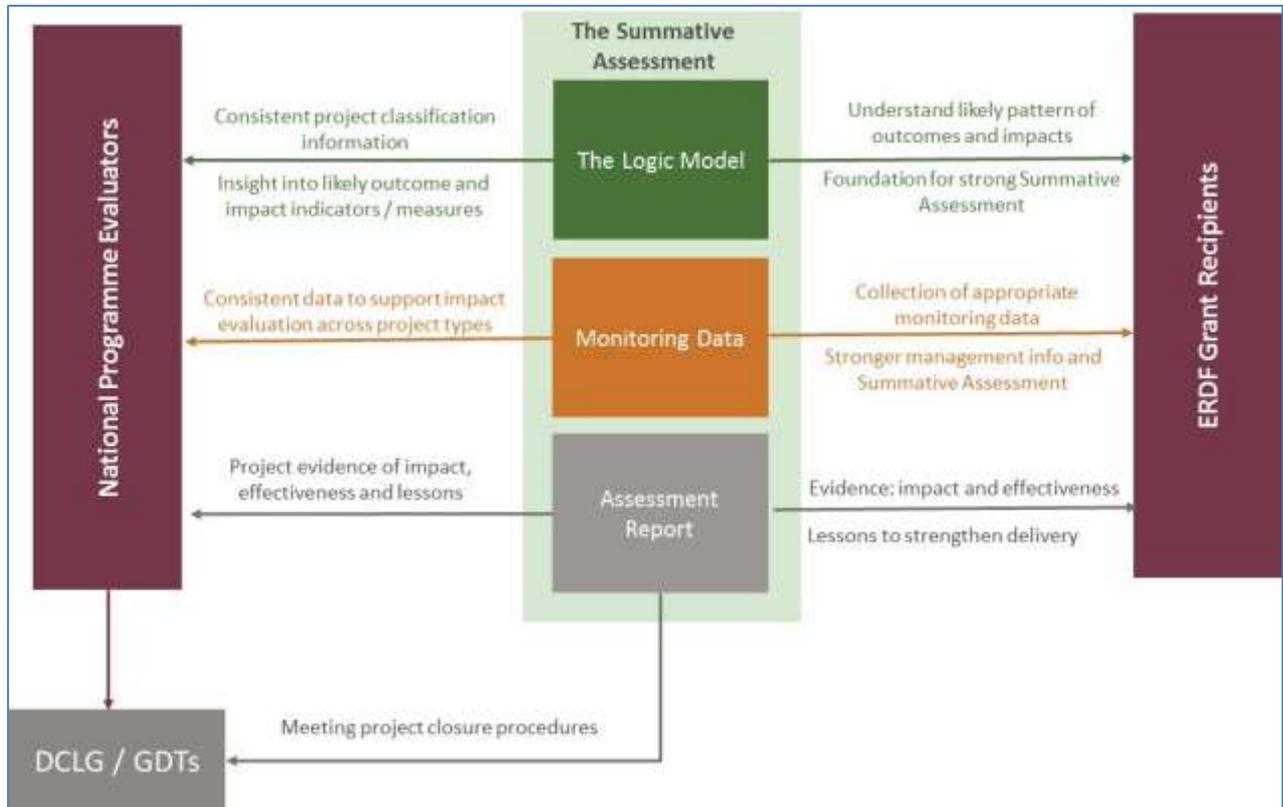


Figure 2- The summative Assessment Process – source: ESIF Guidance

As well as evaluating progress and delivery through reviewing progress reports, records of expenditure, claims etc. the actual delivery of the project is assessed by looking at two areas in detail:

- **Evaluation against biodiversity objectives**
- **Evaluation against community engagement objectives**

Black Country Blue Network

Project Details

'Black Country Blue Network was originally submitted in February 2016 to European Regional Development Fund (ERDF) Priority Axis 6: *Preserving and protecting the Environment and promoting resource efficiency* under the priority 6d - *Protecting and restoring biodiversity and soil and promoting ecosystems, including through Natura 2000 and green infrastructure*.

The original total project value was £1,240,814, with £620,402 sought from the ERDF.

The proposed start date was 1 January 2017, with financial completion, practical completion and activity end dates of 31 March 2019. The actual start date was somewhat delayed, but the completion date has not change; this has had some implications for project delivery, discussed later. Project actual values are as at 31 December 2019. The original project funding breakdown is shown in

Table 1 Project Funding Summary. Please note the final figures may change post this report.

Table 1 Project Funding Summary

Original Values		ERDF / ESF (a) (£)	Public Match (b) (£)	Private Match (c) (£)	Total (d) (£)	Intervention rate (%) (a)/(d) x 100	Total public funding (%) (a+b)/d 100
Capital	ERDF	484,957	484,958		969,915	50%	100%
Revenue		135,445	135,454		270,899	50%	100%
Sub Total		620,402	620,412		1,240,814	50%	100%
TOTAL		620,402	620,412		1,240,814	50%	100%

As of 31 December 2018		ERDF / ESF (a) (£)	Public Match (b) (£)	Private Match (c) (£)	Total (d) (£)	Intervention rate (%) (a)/(d) x 100	Total public funding (%) (a+b)/d 100
Capital	ERDF	237,571	237,571		475,142	50%	100%
Revenue		206,637	206,637		413,274	50%	100%
Sub Total		444,244	444,244		888,488	50%	100%
TOTAL		444,244	444,244		888,488	50%	100%

Projected for end of Project		ERDF / ESF (a) (£)	Public Match (b) (£)	Private Match (c) (£)	Total (d) (£)	Intervention rate (%) (a)/(d) x 100	Total public funding (%) (a+b)/d 100
Capital	ERDF	443,870	443,871		887,741	50%	100%
Revenue		142,562	142,563		285,125	50%	100%
Sub Total		586,432	586,434		1,172,866	50%	100%
TOTAL		586,432	586,434		1,172,866	50%	100%

Projected Spend as a Percentage of Original Value		ERDF / ESF (a) (£)	Public Match (b) (£)	Private Match (c) (£)	Total (d) (£)	Intervention rate (%) (a)/(d) x 100	Total public funding (%) (a+b)/d 100
Capital	ERDF	92%	92%		92%	100%	100%
Revenue		105%	105%		105%	100%	100%
Sub Total		95%	95%		95%	100%	100%
TOTAL		95%	95%		95%	100%	100%

Project Context

The objective of the project was to support the ‘transformation of the Black Country Environment’ through a programme of linked projects to undertake habitat rehabilitation and improvement accompanied by access improvements and interpretation across a series of sites linked by the Black Country’s ‘blue network’ of rivers and canals. In total it was planned to rehabilitate 8.4ha and improve the conservation status of 21ha of habitat. The stated ambition is that through this work the project ‘will benefit local residents, visitors, wildlife, encouraging healthy lifestyles and active recreation; attracting investment and helping change the socio-economic mix; improving quality of life; and ameliorating climate impacts’.

The project is delivered by a partnership between two Black Country local authorities (Wolverhampton City Council and Walsall Metropolitan Borough Council), Environment Agency, Canal and River Trust and Birmingham and Black Country Wildlife Trust.

The project actions were planned to be undertaken at several sites:

Smestow Valley Local Nature Reserve (Wolverhampton)

Rehabilitate 4.4 hectares and improve 7.65 hectares through: woodland management improving the variety of habitat; creation of wildflower meadows attracting a variety of insects and improving diversity of wildlife, improvements to access to and through the site.

Wyrley & Essington Canal (Wolverhampton)

Improve 1 hectares through: woodland management to improve the variety of habitat and creation of wildflower meadows to increase the diversity of wildlife.

Bradley Arm Canal (Wolverhampton)

Improve 6 hectares through: improving the habitat through dredging to improve open water habitat, building vegetated banks, removing invasive weeds, planting new native species benefiting pollinating insects, water voles and improving water quality.

Ford for the Future (Walsall):

Removal of an obsolete aqueduct, addressing invasive species and creation of priority habitat improving 1.3 hectares. The removal of a barrier improving downstream habitat and fish passage; wetland habitat creation; and control of non-native species.

Reedswood Park Improvements (Walsall)

Improve 2.67 hectares through a range of habitat improvements including wildflower strip, heathland creation, tree planting, wetland improvements, scrub removal, dead wood habitat creation, improvements to the canal including dredging watercourse and clearing vegetation growth, woodland management, pond clearance, woodland management, scrub removal, wildflower areas and meadows.

These site-based works were supported by two other activities:

Growing Local Flora (BC wide)

Produces plants by propagation from locally collected seed, not available from another supplier. This project will provide plants and seeds of local provenance to ensure the project is supplied with materials of the highest ecological quality.

Blue Network marketing

Promotion of the project and its work.

Significant Changes to the Project

As a result of changes during project delivery a number of changes were made. The most significant of these for the project and its outputs were:

1. The Ford for the Future Project was withdrawn.
2. The area of habitat improvements at Wyrley and Essington Canal was greatly extended.
3. One completely new project site was added, Rushall Park.

Rushall Park (Walsall)

Creation of an area of new woodland and an orchard, as well as structural shrub planting around existing woodland margins.

Current Situation

As of the 28 February the status of each of the project elements is as follows:

Smestow Valley Local Nature Reserve (Wolverhampton)

The grassland improvements at Smestow Valley were completed as of September 2018, aside from some introduction of wildflower seed. The woodland and the works to rehabilitate the Wolverhampton Environment Centre as part of the Local Nature Reserve, including woodland, grassland, access and pond management were progressing well by the end of February 2019 and are expected to be completed by the end of March.

Wyrley & Essington Canal (Wolverhampton)

The locations for habitat improvements were identified and detailed design work has been completed in Autumn 2018. The woodland management, installation of signage and most other work was complete at the end of February. The outstanding work of tree planting and bulb planting is on track for completion by the end of March.

Bradley Arm Canal (Wolverhampton)

The works were completed by the end of January 2019.

Ford for the Future (Walsall):

Due to affordability issues this project element was cancelled, with the agreement of MCHLG additional works at the Wyrley and Essington Canal and Rushall park have been substituted.

Reedswood Park Improvements (Walsall)

The comprehensive programme of habitat works at Reedswood Park was effectively completed in September 2018, although further wildflower planting took place over the winter. The programme of signage and access improvements was virtually complete at the end of February with only the 'ladder signs' outstanding and planned to go in in early March.

Growing Local Flora (BC wide)

Growing Local Flora produced over 3,000 local provenance wildflowers for use by the projects; most of these have now been planted, with the balance being planted in March.

Rushall Park (Walsall)

The tree planting at Rushall Park took place in January/February 2019 and has been completed.

Blue Network marketing

A number of communications activities have taken place, including a brand guide, web pages for some of the project partners, a project newsletter and interpretive signage at Reedswood Park, Anson Branch and the Wyrley and Essington Canal. The chief outstanding actions are the installation of interpretation at Smestow Valley, which is in hand.

A detailed analysis of progress with each of these project elements follows.

Status of projects when consultants' evaluation began (May 2018)

As a portion of the works at Reedswood Park, Lane Avenue Allotments, the Anson Branch Canal, and the towpath enhancement works along the Bradley Arm Canal had already been completed prior to our appointment we were unable to compare their visual and physical condition 'before' and 'after' at first hand. We have therefore had to rely on photographic evidence provided by the partner agencies and/or condition surveys e.g. hydrological, ecological and arboriculture surveys.

Specifically, this work included:

Reedswood Park

- Areas of topsoil removed to expose subsoil, and then covered with heather brash/seed.
- The thinning of monoculture birch tree plantations and the coppicing of others in order to create glades, deadwood habitat piles, and help diversify the woodland structure.
- The planting of new understorey tree species with over 2,200 two or three year old native and exotic species saplings.
- The restoration by dredging of two small Victory Pools wetland areas.
- The erection of interpretative signage.
- An adjustment in the grassland mowing regimes in order to enhance the sward's biodiversity value.
- The planting of new specimen lime trees in order to restore gaps in a mature tree-lined avenue

Lane Avenue Allotments (also known as Moorside Gardens Allotments)

- Water courses were cleared to allow the free flow of streams to help prevent flooding and the build-up of stagnant water.

Disused Anson Branch Canal

- Spot dredged to create small areas of open water and prevent the total loss of any wetland habitat to other vegetation.
- Footpath access along the towpath had been improved, with the cutting back of trees and shrubs.

Bradley Arm Canal

- No work undertaken at this point.

Communications

- In addition, new web pages were operational both for the Black Country Blue Network on partner websites as well as for Walsall's Reeds, Wood and Water project.

Review of Progress to Date with Project Elements

This section provides a detailed assessment of progress with works at each of the project sites.

Smestow Valley Local Nature Reserve

The chief objectives here are to rehabilitate 4.4 hectares and improve 7.65 hectares through: woodland management improving the variety of habitat; creation of wildflower meadows attracting a variety of insects and improving diversity of wildlife, improvements to access to and through the site.

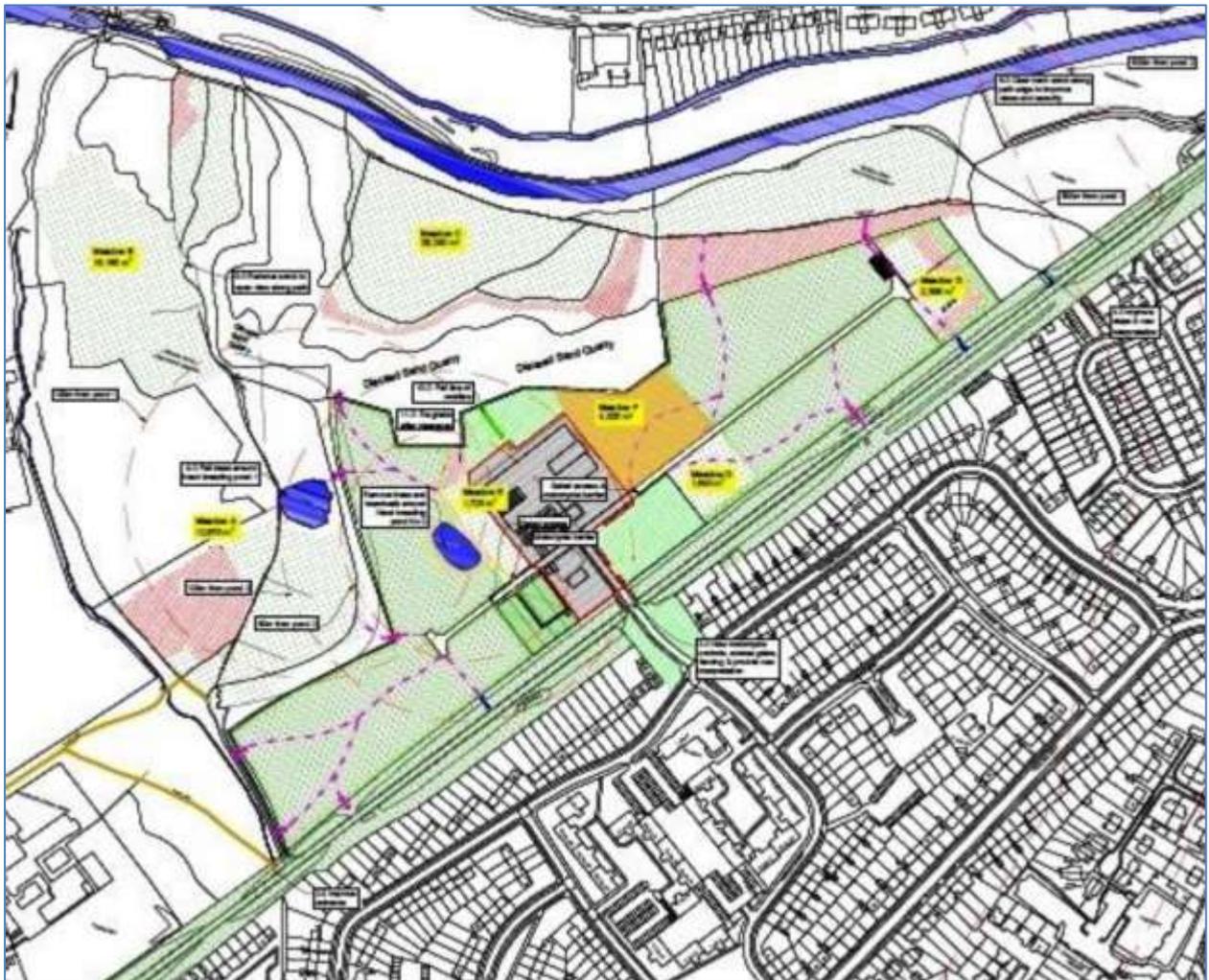


Figure 3 - Location of works at Smestow Valley. The central darker green area is the former WEC site to be added to the LNR, the paler green areas are woodland and grassland improvements within the existing LNR.

Meadow Creation

The work undertaken at Smestow Valley commenced with meadow creation, undertaken in July 2018, with some works to improve pedestrian access along and to the disused railway line. Hay was collected from meadows at Castle Vale, Birmingham, which had in turn been created by strewing hay from Eades Meadow National Nature Reserve and other sites in south of the Black Country. We were able to inspect the hay and it contained a large seed-load of species such as sweet vernal grass, black knapweed and hay rattle. The hay was cut and baled on one day and delivered the following day when it was immediately spread by team of individuals, largely volunteers from the Wildlife Trust.



Figure 4 Delivery of freshly cut hay in 'super bales' (L) and volunteers spreading the hay at Smestow Valley (R)

Due to the prolonged drought and high summer temperatures the hay strewn meadow creation material became highly combustible. Unfortunately, some of the meadows were deliberately set on fire. The rapid response of the fire service and local volunteers ensured that the fires were confined just to the hay strewn meadow areas and did not go deep into the soils beneath. As a consequence of the reduction in competition this has enabled the meadow sward to rejuvenate such that by mid-October an approximately 80% coverage had been achieved.



Figure 5 Burnt hay-strewn area(L) and recovering sward (R)

On the western side of the site, from the disused railway across to Castlecroft Primary School and Windmill Crescent new path works are currently being implemented. The southern section is characterized by a heavy-duty sleeper and stone path, comprised of reclaimed Azobe sleepers. These are very durable, high quality timbers that are in keeping with this rural setting. The northern section is a lighter duty stoned path with timber edging. This was less advanced than the sleeper path and had in places had its edging pushed over. But this should not be a problem in the future once the paths have been stoned up and the soft landscape reinstated to the sides.



Figure 6 Detail of path construction.



Figure 7 Upgraded paths

Woodland Understorey Enhancement

The other element of improving the status of habitats at Smestow Valley is ground flora enhancement of approximately 2.5 hectares of woodland to the north-west of the meadow areas. The planting has now been completed.



Figure 8 - A view of the woodland planned for ground flora enhancement from one of the meadows



Figure 9 - Volunteers planting wildflowers in the woodland

The WEC

The major hard and soft landscape works associated with the former WEC site commenced in early 2019. The Wolverhampton Environment Centre was formerly used for training in environmental work and other activities operated by Groundwork West Midlands. In around 2005 the WEC fell into disuse with the result that the site's infrastructure (including large glasshouses) had fallen into disrepair. Although much of it was 'tumbling down' to a natural state it was not suitable for public access and unmanaged. The objective of this element of the project is to rehabilitate the WEC as a public open space, so it could largely become an extension of the Smestow Valley Local Nature Reserve. This (and other work at Smestow Valley) was match funded through S106 payments relating to a housing development which will take place on the central area of the WEC where the former buildings and other units were located. This will occupy about 10% of the site area

The work has been classified as ‘rehabilitation’ rather than improvement of conservation status as the prime objective of the work is to bring a derelict site into beneficial use, however the work could potentially have been classified under either definition. Approximately 4.5 hectares of land at the WEC have benefited from habitat works, however, because of the establishment of new paths, removal of fences., old structures and rubbish etc. access is being provided to an area of 9ha; it is arguable that the area rehabilitated through the project should be nearer to this higher figure.

Habitat Works

Woodland Management

The woodland at the WEC is a combination of planted native woodland and areas used as tree nursery/storage areas that were subsequently left unmanaged and have developed into woodland. Some of these areas, particularly the woodland on the slopes at the southernmost end of the site were very overcrowded and in need of thinning. The area was also densely colonised by the North American species *Rhus typhina* which suckers vigorously. This southern area has been heavily, but sensitively thinned and the *Rhus* controlled. this should bring numerous benefits in terms of improving the structural diversity of the woodland and allowing more light to reach the woodland floor. This should bring benefits in terms of both woodland flora and fauna. This has also made the woodlands considerably more attractive to visitors and paths have been created through the area (see later). Planting of appropriate native species is planned and will be carried out before the end of March.



Figure 10 - WEC woodland before and after thinning, note extensive *Rhus typhina*

Less intensive management is being undertaken on the woodland in the northern part of the WEC, including some selective coppicing. This will take place in March, the stools have already been marked with blue paint.



Figure 11 - previously coppiced stools marked up for recoppicing

Meadow Creation

Across the WEC were several areas of rough grassland and tall herb. Some of these areas were very uneven and have been completely cleared and levelled ahead of reseeded, Figure 12.



Figure 12 - Tall herb area north of compound was completely covered by tall herb and the uneven ground has been remodelled.

The area in Figure 13 was cut and cleared in summer 2018, although a small part of the area was burnt later. Although much of this area has been retained, the removal of the banks (in the background of the first image and in the foreground of the second) and the need to take machinery across the ground in wet conditions means that part of it now needs to be regraded and reseeded.



Figure 13 - The same two areas as in the previous figure. The tall herb and uneven ground have been completely cleared (left) but the rough grassland has been largely retained.

In contrast, the grassland area in Figure 14 was cut and cleared in summer 2018 and remains in good condition.

The work being carried out in very wet conditions has clearly not helped in maximising the amount of existing grassland retained, however if more consideration had been given to marking out access routes before moving machinery across the site it is likely that the need for extensive reseeding/regrading could have been reduced, speeding recovery of the habitats.



Figure 14 - Grassland area managed by mowing in summer 2018, still intact (middle distance) in 2019

Pond

A significant pond, measured at over three metres deep, lies in the southern part of the site between the woodland and grassland areas. The pond had become so overgrown that its true extent was not apparent. The pond has been completely opened up and the surrounding areas are to be restored as grassland. A small area of boardwalk remains to be installed.



Figure 15 - the pond before and after removal of surrounding trees and shrubs

Access Works

From a public benefit perspective, the main gain at the WEC is that the derelict site is being brought back into beneficial use by providing public access. The original site layout was a main entrance (which will become the entrance to the new housing), a central, surfaced path running along most of the length of the site, and several minor paths which had largely become lost and overgrown.

The new works include:

- Creation of three new main access points from the disused railway line (the main route along Smestow Valley) into the site. These all include paths linking to the existing surfaced route.
- Clearing back vegetation along the central path.
- Creation of new paths through the woodland areas on the site, including new low-level access points to adjacent paths and meadow areas.

The new housing area will cut across the central path, but it is planned to keep a pedestrian access open along this route.

The new paths have been made using timber cut during the thinning works and surfaced using woodchip made from the brash. The paths look attractive but may not be particularly durable, especially as there has not been any permeable membrane used under the chip. This means that the paths are likely to require topping up with more woodchip from time to time.

The access work is planned to be completed in March 2019, this will include interpretation signs.



Figure 16 - new paths within the woodland areas



Figure 17 - work in progress to create new access from the disused railway line

As of February 2019, Stourbridge Paving Company and HFN Landscapes Ltd were currently working on the site such that whilst their landscaping contracts are not yet complete it is confidently expected that they will finish before the end of the month. Much has been achieved since our previous visit in that:

- The meadows appear to be recovering well following last summer's fires
- Scrub removal works have been completed
- The pathworks on the western side of the site, near to the primary and secondary schools, are largely finished
- The resurfacing of the former railway line, complete with motorcycle barriers, is also largely completed apart from some minor finishing off works and the laying of the wearing course
- A significant proportion of the new informal woodchip paths within the woodland areas have also been completed apart from the final links into the adjacent path system. These are highly attractive routes through the thinned woodland habitats.

Of the works that have been undertaken it would be helpful if the following aspects were given further consideration:

- Footbridge deck – routed grooves need cleaning out; a few of the boards at the western end could do with replacing with new routed decking boards, as has been done in other places.
- New woodchip paths – monitor to see whether some of the loose logs are removed; the loose chippings may get kicked out; if they do or they sag down in situ then it may be necessary to top them up.
- New path by school & path edging by school – in places the pegs hold the edging boards in place seem to be too far apart such that the path edge isn't smooth / crisp but bows out in places.
- Railway bridge fencing – although this looks fine at the moment (apart from the graffiti) the post supports seem undersized. They have been made from the same sized material as the handrails. Consideration to be given to replacing them with thicker, more robust posts.
- Southern end railway – the path edge on the north side doesn't feather in to the motorcycle barrier (like it does on the south) and consideration might be given to whether the new surfaced area needs to be expanded to the south so that maintenance vehicles can get through easily throughout the year (as some of the new path edging has been already damaged).

The principal outstanding works to be completed by the end of March are:

- Installation of fingerposts and signage
- Wearing courses to the railway line and other paths
- Some pathworks yet to do
- Steps to be completed
- Sowing of cleared and reprofiled meadow areas
- Planting of fruit trees by the main entrance
- Board walk at pond
- Minor tree works/coppicing

Future Management

There is a historic management plan in place for the management of The Smestow Valley Local Nature Reserve, we understand that an updated document to include the new habitats and areas is in preparation and will be completed before the end of the project.

The grassland areas, both in the wider reserve and on the WEC, will require an annual cut and clear to secure their development as flower-rich meadows. The woodland will not require such intensive management, although it will be important to ensure that the *Rhus typhina* does not recolonise or increase its distribution.

The extensive work to open up the pond should ensure that it is several years before further work is needed, but modest work to keep down marginal trees and shrubs rather than waiting until they reach a large size will be beneficial.

Depending on the levels of use, it is likely the wood chip surfaced paths will need occasional maintenance.

Extent of Works

In our view the work carried out on the WEC, which was a combination of access works and habitat works across the whole site (except the area planned for housing development) was better considered as rehabilitation, as it is restoring a derelict and unused site to provide a significant public amenity.

This has the effect of moving across approximately 0.8ha of land from improvement of conservation status to rehabilitation.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Smestow Valley	Meadow		5.0	5.0		3.2	3.2	0.0	-1.8	-1.8
	WEC	4.0		4.0	5.8		5.8	1.8	0.0	1.8
	Woodland		2.4	2.4		1.8	1.8	0.0	-0.6	-0.6

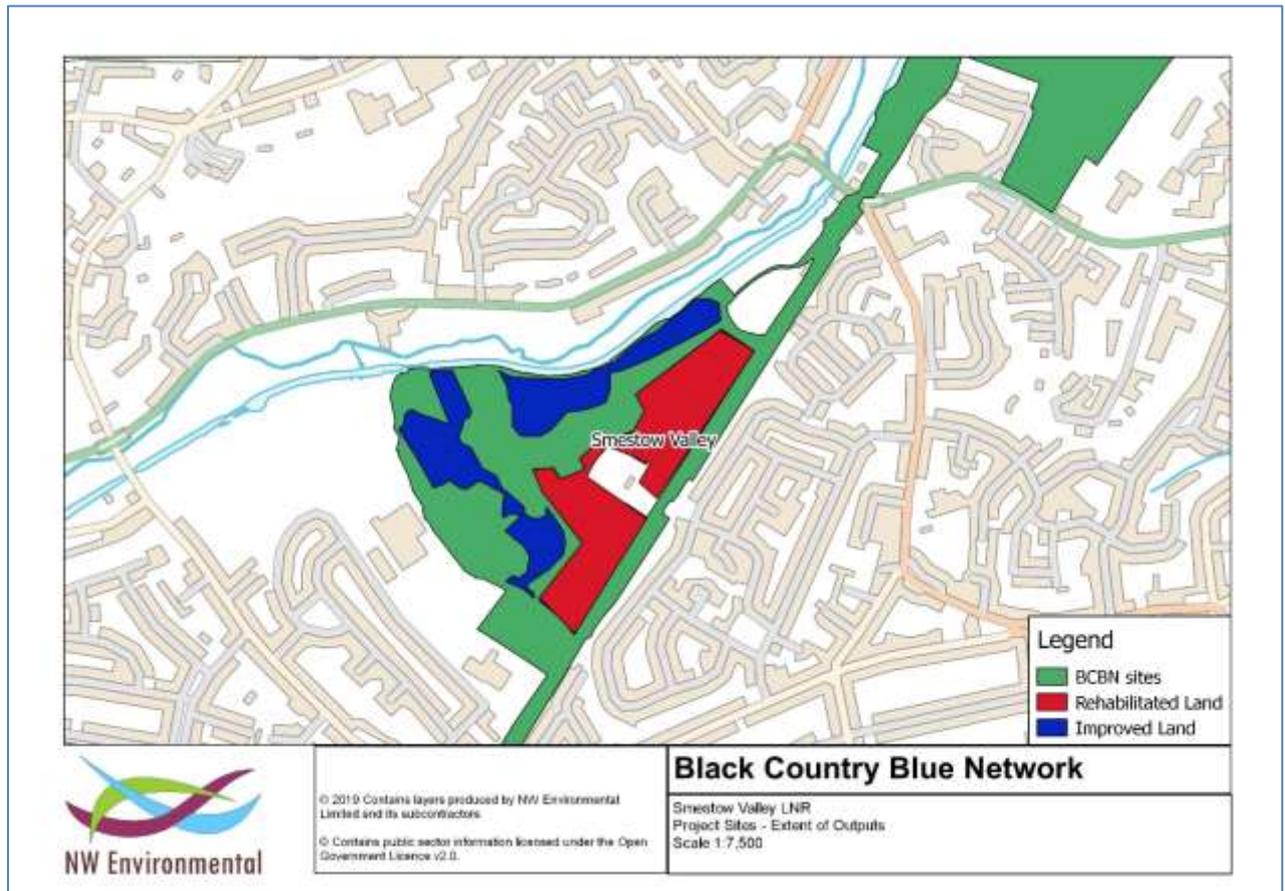


Figure 18 - Extent of works at Smestow Valley. Note that parts of the site away from the improvement/rehabilitation works are not shown

Wyrley & Essington Canal

(Wolverhampton): improve 1 hectare through: woodland management to improve the variety of habitat and creation of wildflower meadows to increase the diversity of wildlife.

Signage to promote access has been installed along the canal. As originally proposed a series of sites along the canal were to see habitat improvement works. We understand that when these were reviewed by Wolverhampton Council and the Canal and River Trust it was decided to focus the habitat works on the stretch of the canal near Wednesfield, Figure 19. Further sites for habitat improvement (12, 13, 16) were added to the east (see later).

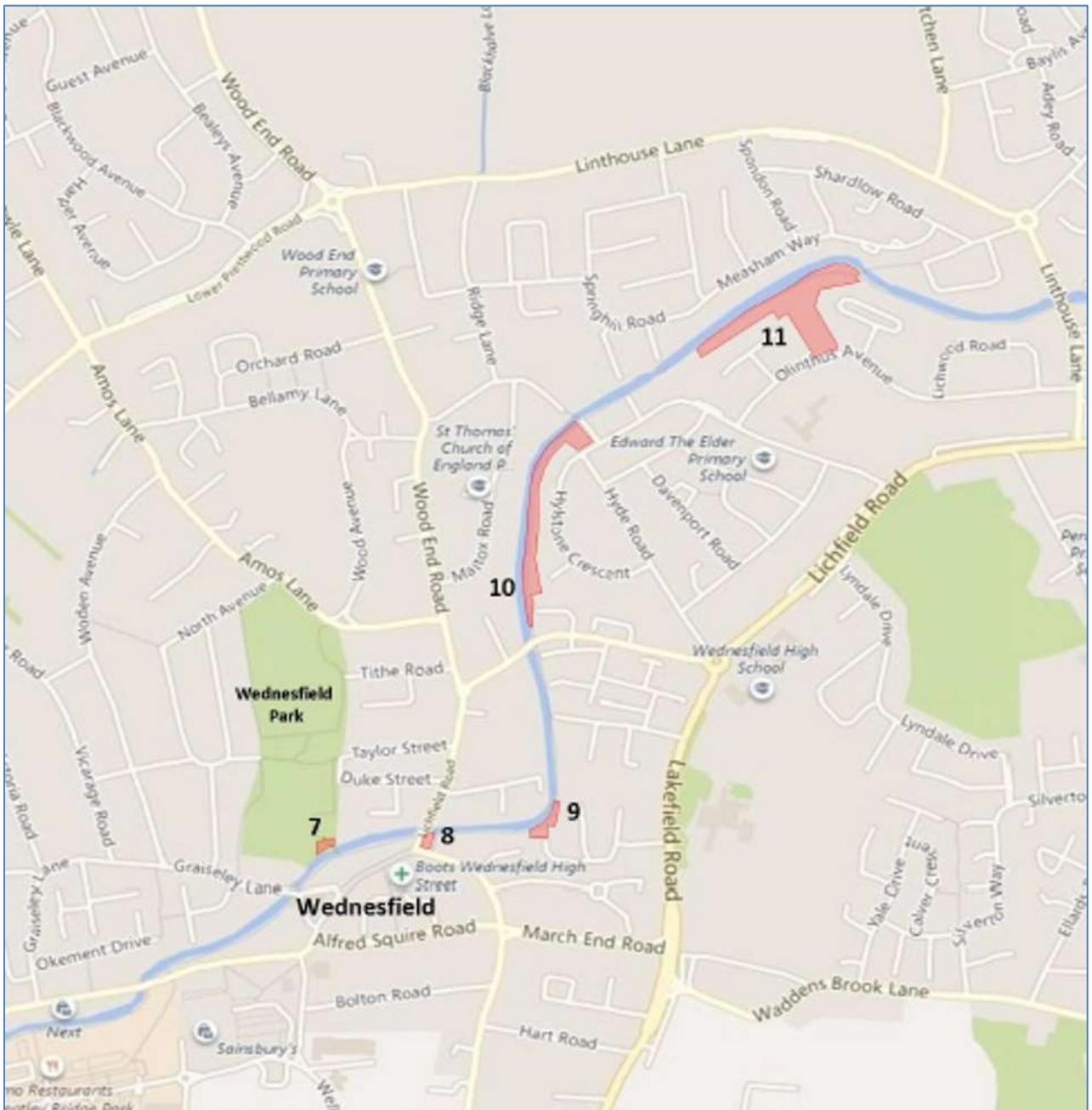


Figure 19 - Locations of the main habitat management sites on the Wyrley and Essington Canal

In August 2018 Landscape Matters Design (an external landscape architectural practice) was appointed by the City of Wolverhampton Council to take forward the development of the scheme, due to in-house staff shortages. Sites 7 to 14 and 16 have been surveyed and detailed designs produced for each, complete with budget costings. In early November designs were finalised allowing a tender process to take place in time for the works to be commenced in February with completion by the end of March 2019.

The Council also appointed FW Design Ltd to oversee the design and manufacture of the monolithic signs and interpretation panels that will be strategically positioned along the canal towpath. Their design has been approved and the signs were installed during November, see the section on communications.

The main habitat creation and improvement sites are:

Open space and a large woodland strip to the south of the canal to the rear of Hylstone Crescent. (10)

The woodland is presently of very even age, mostly field maple, ash and some oak, and appears to be of plantation origin. The tree cover is sparse but aside from some ash regeneration there is little understory aside from brambles and some invasive species (*Spiraea* and snowberry).



Figure 20 - The open space at the northern end of Area 10 and overgrown hawthorn at its southern end.

The open space area will be planted with native wildflowers and bulbs. The woodland has been heavily thinned and the overgrown hawthorns, which possibly mark an old boundary hedge, have been pollarded. A great deal of rubbish has been removed from these areas.



Figure 21 - woodland thinning(left) and pollarded hawthorns

Underplanting with native trees and fruit trees and wildflower introduction, with several thousand wildflower bulbs is taking place during March. This should significantly improve the structure of the

woodland as well as improving its amenity value to canal users. Also, hibernacula for amphibians will be constructed using brash and logs from the thinning work.



Figure 22 – wild daffodil planting (left) and planting in progress

An open space adjacent to the canal at Olinthus Avenue (11)

Currently this area is managed as gang-mown amenity grassland although its size and location make it of little value for sports and recreation. Some traditional fruit tree species will be planted together with native bulbs. Restoration as a wildflower rich meadow area will bring local ecological benefits whilst also creating an important ‘gateway’ into the proposed Local Nature Reserve. In addition some woodland management and enhancements is in progress adjacent to the canal.



Figure 23 - Olinthus Avenue: open space for orchard planting and meadow creation (left) and woodland management near canal

Hedgerow alongside the canal at rear of Bluebell Crescent. (9)

Originally it was planned to convert an adjacent area of amenity grassland to meadow with a footpath link to the canal, however the link was unpopular with nearby residents and was omitted. A reduced proposal has seen the overgrown hedge cut back to be followed by underplanting with wildflowers and bulbs. The northern half of the open space is to be scarified and seeded with an appropriate wildflower meadow mix.



Figure 24 - The hedgerow at Bluebell Crescent before and after management works

Land at Neachells Lane (8)

This area currently comprises a small area of tree planting and amenity grassland near the edge of Wednesfield town centre. Tree works and the establishment of a small area of wildflower meadow is will provide another attractive 'gateway' into the LNR. Trees and shrubs have been removed to open up the canal landscape setting and make it more user-friendly; new works include some native hedge planting, fruit trees, bulbs, as well as the meadow.



Figure 25 - Area 9 before and after the removal of a diseased tree and works to open up the area for bulb planting

Land within Wednesfield Park (7)

This is a relatively small area accessed via a footbridge crossing the canal and linking the park with Wednesfield town centre. It was proposed to undertake meadow restoration on relatively small areas of poor amenity grassland somewhat isolated from the main part of the park. Part of this area was too heavily shaded for successful meadow establishment and instead has been selected for native tree and hedgerow planting, meadow creation, and bulb planting with woodland ground flora.



Figure 26 - Part of the land within Wednesbury Park to be developed as wildflower meadow.

Expected Impact on Visitors

The Canal and River Trust welcome the project works as they feel that it will provide visitors with visible and tangible evidence that the declaration of the new Local Nature Reserve has been accompanied by an investment in the biodiversity and management of the canal corridor.

This impact will be assessed through a visitor survey once the signage has been installed.

Future Management

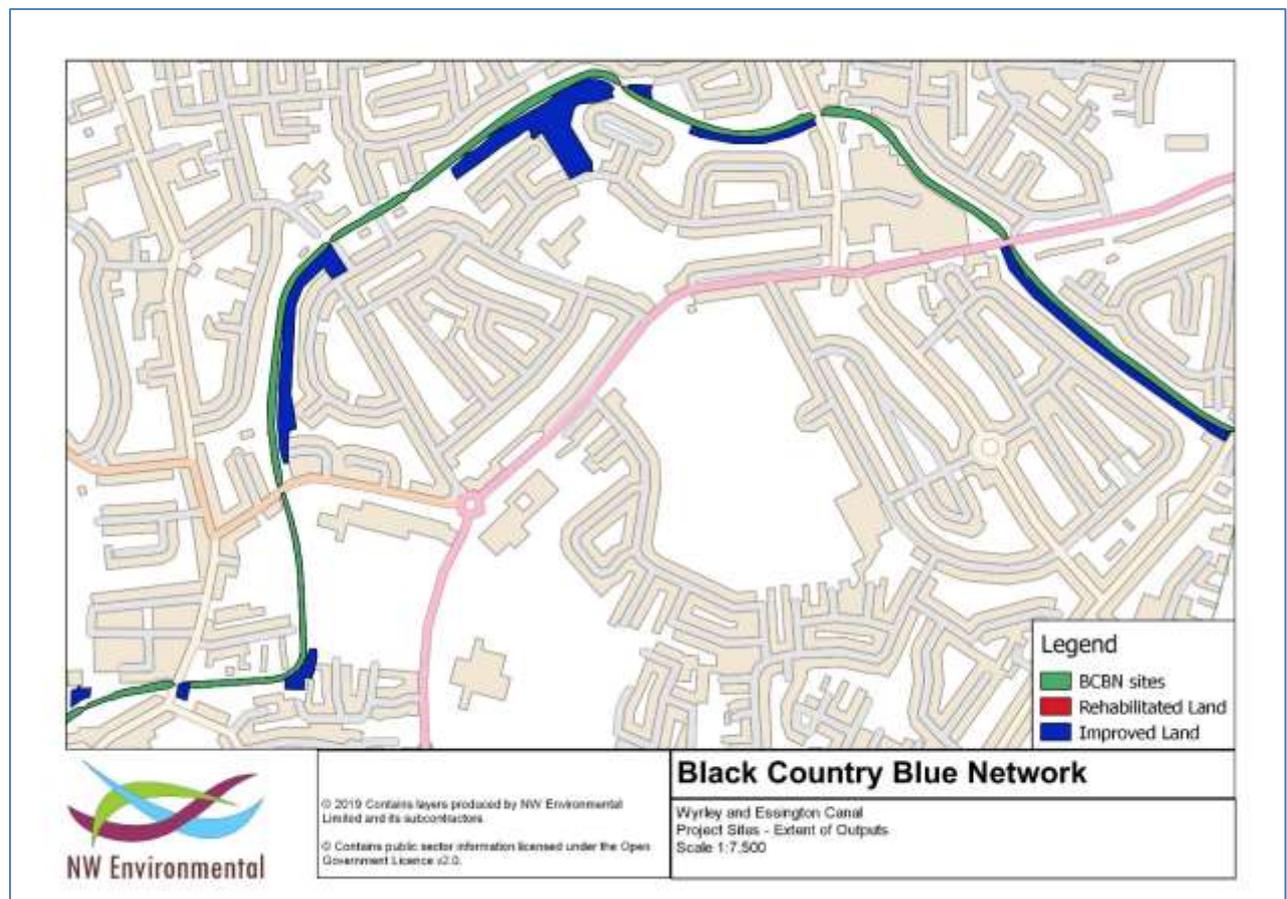
There is an agreed management plan in place for the future management of The Black Country Wyrley and Essington Canal Local Nature Reserve. This is in the process of being updated to reflect the additional work carried out by the project. We understand this will be completed by mid-April.

Extent of Works

Signage has been put in place at sixteen locations along the length of the Wyrley and Essington canal.

The practical habitat improvements have been undertaken at eight sites concentrated along an extensive section of the canal running from Wednesfield to New Invention in Wolverhampton, considerably exceeding the original planned output.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Wyrley & Essington			3.4	3.4		4.5	4.5	0.0	1.1	1.1



Bradley Arm Canal

Improve 6 hectares through: improving the habitat through dredging to improve open water habitat, building vegetated banks, removing invasive weeds, planting new native species benefiting pollinating insects, water voles and improving water quality.

Habitat Works

The Canal and River Trust's ecologist had identified that increasing the water depth accompanied by marginal habitat improvements could greatly increase the value of this stretch of canal, notably for water voles as well as aquatic and terrestrial invertebrates, fish and water plants. At present the depth of the canal is sufficient for navigation (1.3 to 1.4m) and there is a relatively low level of boat movement, which means dredging is not an operational priority and would not be carried out without the support of the project. However, in many places the navigable channel is relatively narrow and much of the canal is shallow and clogged with vegetation.



Figure 27 - South western end of canal after raking out of the central section but before dredging

In order to control invasive aquatic weed species and aid boat navigation the central channel was raked clear by the Canal & River Trust. This operation was successful in June 2018, and the central channel has remained clear through to October when it was last inspected.



Figure 28 - Raking and collecting in progress

The dredging and marginal planting works, together with the erection of the ERDF signage took place in December/January 2019.



Figure 29 - Dredging in progress.



Figure 30 - dredging work being carried out (left) and example of the material removed.

Access Works

Access works as part of the Bilston Urban Village Strategic Environmental Infrastructure Improvements have taken place concurrently with this project. These are briefly mentioned here as they are likely to have had an additional positive impact, particularly on visitors and the work should be seen as complementary to the BCBN work, however they have not been included in the outputs for this project.



Figure 31 Gravel dressed towpath surfacing (May 2018)

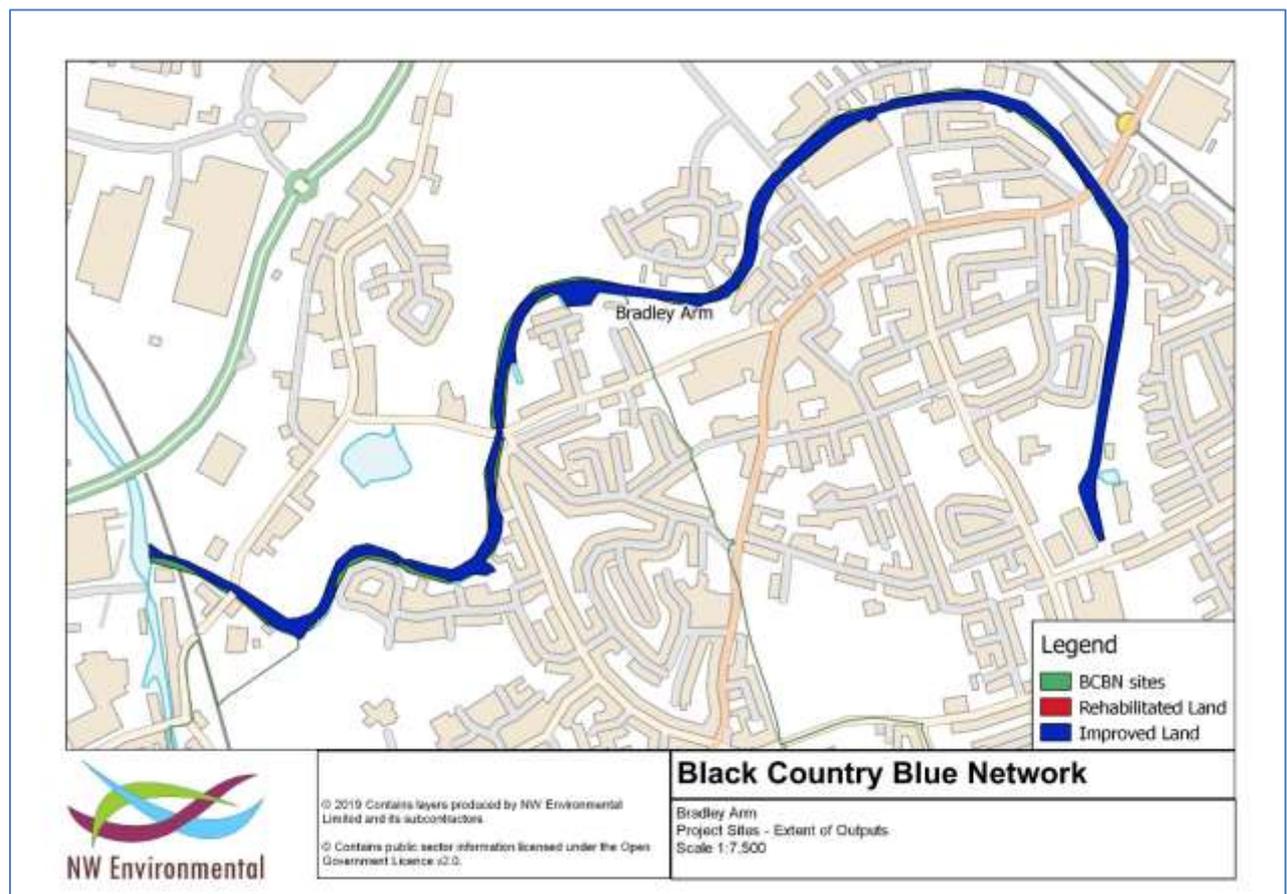
Extent of Works

The works have taken place along the full length of the existing western section of the Bradley Canal Arm.

The application form has some ambiguities, mentioning 6ha of habitat improvement, but elsewhere 6ha of rehabilitation and 4ha of habitat improvement are listed and these figures appear to have been used to calculate the overall project output targets. There appears to have been double counting, as the total site area is 6ha.

The project partners have classified the outputs as rehabilitation on the basis that other canal dredging projects under ERDF have been similarly treated. It is our view that it would be beneficial to clarify the guidance on this point to benefit future projects.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Bradley Canal	Dredging	6.0		6.0	6.0		6.0	0.0	0.0	0.0
	Creation		4.0	4.0		0.0	0.0	0.0	-4.0	-4.0



Ford for the Future

As originally envisaged, this project element was intended to be the removal of an obsolete aqueduct, addressing invasive species and creation of priority habitat improving 1.3 hectares. The removal of a barrier improving downstream habitat and fish passage; wetland habitat creation; and control of non-native species.

The cost estimate for the work proved unrealistic if the project was to be delivered through the EA's existing contractor framework Agreement. Although it appeared likely that an alternative route to carrying out the work might be possible, it became clear to the partners that this was not the case and it would not be possible for this element of the work to go ahead as originally envisioned. The partners looked at several alternative strategies:

- Handing over the delivery of the project to an alternative partner. This proved impractical.
- Implementing an alternative project on the same site, replacing the aqueduct removal with further habitat works. This would have been a preferred option, but it proved impractical to draw up a satisfactory alternative scheme in the time available.
- Bring forward an alternative scheme to be delivered by the Environment Agency. Again, this proved impractical.
- At the steering group meeting in October, the other partners were invited to suggest alternative projects that could be brought forward or to look for ways of extending some of the other projects. It was identified that there could be benefits from further wildflower seed planting and two potential additional projects were suggested.

As of the date of this report it appears that the EA is no longer an active delivery partner. Although no alternative action has yet been confirmed the other partners are confident that the project outputs will be achieved. Wolverhampton Council have identified £15K of match funding allowing £30k work to be carried out as part of open space improvements along the Wyrley and Essington Canal.

The impact on the programme was to reduce the expected area of habitat to be improved in conservation status by 1.3ha.

It is not clear how this situation could have been avoided, as it appears the cost issue was related more to overall issues around the framework agreement involved than a gross error in calculating the costs of the work involved.

Extent of Works

As explained above this element of the project was withdrawn.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Ford for the Future	River		1.3	1.3		0.0	0.0	0.0	-1.3	-1.3

Reedwood Park Improvements

(Walsall): improve 2.67 hectares through a range of habitat improvements including wildflower strip, heathland creation, tree planting, wetland improvements, scrub removal, dead wood habitat creation, improvements to the canal including dredging watercourse and clearing vegetation growth, woodland management, pond clearance, woodland management, scrub removal, wildflower areas and meadows.

Meadows

The initial suspension of mowing in year 1 reportedly had a dramatic impact with good numbers of several locally significant species, including bee orchids and a common spotted orchid appearing. Increased abundance of foodplants like bird's foot trefoil resulted in an increase in butterflies.



Figure 32 Cavendish Road Area 12 - gang mown amenity grassland in 2016

In 2018 the meadows were less spectacular floristically, however, they were still full of abundant butterflies and other insects. It was notable that despite the dry weather the meadow had far more of an abundance of species in flower than adjacent land and this was probably why it had proved so attractive to insects.



Figure 33 Bee Orchid (L) and Southern Marsh Orchid at the Cavendish Road grasslands in 2017

It needs to be made clear that these species must have already been present in the grass sward in order to become apparent so quickly, however this does highlight three significant points:

1. The site was obviously a good choice for this management change from an ecological perspective.

2. Previous management was apparently suppressing a number of species from flowering; in time this could have led to their disappearance from the site.
3. The first-year flush of flowering was not repeated to the same extent the following year.



Figure 34 When visited on 12 July 2018 the drought meant most of the meadows had already gone to seed.

This less spectacular show of wildflowers in 2018 may be because of several reasons:

- The extreme dry, hot weather is likely to be the chief cause, further exacerbated by a number of local fires which affected relatively small areas around the periphery of the meadow where flowers would have been most visible to visitors.
- Some species (such as Bee Orchids) usually die after flowering, and it may be a number of years before the next generation becomes evident.
- There were issues with clearing the grass growth from the meadow in 2017. This could suppress meadow flora almost as much as excessive mowing.

None of these should be seen as a cause for concern, provided that the new cut and remove regime fully implemented in 2018 is sustained. This is essential in order to realise the greatest benefit from the new management regime.



Figure 35 Skipper (L) and Meadow Brown (R) butterflies at Cavendish Road in 2018.

It is also recommended that the meadow is monitored on an annual basis beyond the end of this project to monitor the impact of ongoing management and possibly fine-tune it. It is also possible other species of conservation significance that had been suppressed in the sward may become apparent in future years.

There are several signs in place explaining the works carried out and the benefits arising from them.



Figure 36 Interpretation sign for meadow management

Interviews with site users indicate that there is good awareness of the work and in general people are sympathetic. Walkers and cyclists expressed appreciation for the mowing of paths through the meadow areas. A minority of visitors stated that the meadows were no longer suitable for young people to play football or cricket. We note that areas of grassland suitable for such sports are present on the southern part of Reedswood Park within a five to ten-minute walk.

When visited in February 2019 the Cavendish Road and Reedswood Lane Entrance meadow areas remain much as they had when previously visited. It was too early to see or determine whether the floristic diversity has been increased as a result of the amended land management regime, but this can only be accurately assessed later in the growing season. A number of shopping trolleys had been abandoned on the edge of the meadow area. These have been reported internally to the council so they can be removed by the fly tipping team.



Figure 37 - abandoned shopping trolleys

Woodland

The woodland area being improved as part of the project is one of the many new areas of woodland established around the turn of the Millennium as part of the Black Country Urban Forest (BCUF). Some twenty years after planting, the trees were approaching maturity and the site had the appearance of established woodland. In common with many of the BCUF sites the woodland was in urgent need of thinning to reduce crowding of the trees and new glades and coppice coupes were created to increase the amount of light reaching the ground layer and increase structural diversity. There was also an

opportunity to plant additional understorey species to further improve the structural diversity of the woodland. Essentially such work will help the woodland in transitioning to a more natural and varied structure, which should bring benefits for its biodiversity by increasing the range of micro-habitats present.



Figure 38 Woodland glade creation in winter 2017

The large birch plantation area within the park continues to develop well. The thinned birch trees have allowed light to reach the woodland floor such that the native tree and shrub planting stations are generally developing well. The increase in light has however meant that the grassland areas have also grown rapidly such that in places they are effectively competing for nutrients and water. Whilst the native planting has survived, this competition for resources may have reduced their growth rates. Future management should monitor this situation and cut back the grass during the next growing season or consider replacing it with bark mulch. In some locations sycamore and maple natural regeneration was also in evidence. Although currently small it would be recommended that these be removed in due course before they start to out-compete the native planting. The coppiced hazels have rapidly re-grown from their bases to form multi-stemmed rich green foliage. During October primrose plug planting has been implemented on the woodland edges which should provide visual and ecological interest next spring.



Figure 39 Saplings suppressed by rank grass (L) and Primrose planting in October 2018 (R)

Work was carried out on three neighbouring areas of planting, divided by two broad 'rides' and surrounded by a circular path/ride inside a boundary hedge which has effectively overgrown to become a further component of the woodland. It is immediately apparent that the management work carried out has considerably opened up the woodland, although as no major clear felling was involved there has been no significant impact on the landscape value of the woodland.



Figure 40 Flush of spring flowers following thinning of the birch plantation

We were able to inspect the woodland in late summer after work was carried out the previous winter. Several beneficial effects were apparent:

- The rate of thinning had been quite high, as evidenced by cut stumps and the spindly nature of many of the remaining trees, however, even after one growing season the canopy cover was still almost continuous over much of the woodland.
- The increased light reaching the woodland floor where thinning has been used to open up some areas even more appears to have encouraged the spread and flowering of various ground flora species.
- Coppice shrubs, such as hazel, appear to have responded well to the interventions.
- The conditions have been established to support the introduction of further ground flora species.
- Significant numbers of butterflies, hoverflies and other insects were observed, attracted by the combination of increased sunlight and increased amounts of wildflowers and blossom.
- Underplanted species appear to have established themselves which augers well for the woodland developing a more diverse structure.
- It is now possible for visitors to walk through the woodland with the reassurance of being able to see a good distance in all directions.



Figure 41 Healthy regrowth of coppiced hazel.

Felling of birch trees to open up the canopy had been done sensitively; felling technique good with well-cut low stumps together with stump treatment to prevent re-growth; uncertain whether some of the understorey tree and shrub vegetation is natural regeneration or has been planted due to random pattern, closeness of some of the plants, and the presence of non-native species e.g. horse chestnut. No vandalism; visually the area looks light and welcoming, more natural, with low-key young planting standing a good chance of establishing to maturity.



Figure 42 Thinned birch plantation with new tree sapling and understorey planting (May 2018)

When visited in July 2018 the woodland areas had clearly been impacted far less significantly by the ongoing drought conditions. It was apparent that the thinning work had allowed a considerable flush of woodland vegetation which had, in turn, attracted good numbers of butterflies and other insects. First season regrowth of coppiced hazel was healthy, although, presumably because of the dry season, it was not as tall as might have been expected. The establishment of underplanted shrubs and trees was in evidence across the area with a good rate of growth.



Figure 43 Signage for woodland management in a recently created glade

Visitors seemed to be less aware of these habitat works, presumably as the woodland is not one of the busiest parts of the park. The signage present around the woodland area was well positioned and should help encourage more visitors in future.

Heathland Creation

One conservation priority for Walsall is to increase the amount of heathland within the borough, following major loss of this habitat over the 19th and 20th centuries. A raised area of spoil of apparently low fertility in Reedswood Park was identified as a potential heathland creation area.



Figure 44 Before heathland creation works

Topsoil stripping and strewing of cut heather was undertaken in the winter of 2017, with three irregular patches being covered in freshly-cropped heather to a depth of about 10cm.



Figure 45 Immediately after spreading of heather

Site preparation appeared good; heather/heathland brash strewing evenly spread; quality of brash appeared satisfactory; no vandalism. On visiting the site in the summer of 2018, it was apparent that although a reasonable amount of the heather remained on site, there were no signs of heather regeneration and minimal signs of the establishment of other species.

By July the heathland creation areas remain in evidence. During the drought it was observed that some of the area and adjacent scrub were deliberately set on fire, and whilst some of the shrubs have been killed, the heathland brash appears to have largely survived. In amongst the numerous plantains, docks, and thistles there was the occasional ox-eye daisy and red campion in evidence. No heathland species seem to have come through as of October 2018.

Soil testing carried out after the establishment work suggest that the pH of the area may be too high for the successful long-term establishment of heathland. Presumably, this is part of the reason for poor establishment of vegetation on the area in 2018 although the extended dry weather may also have been a factor.

As of February 2019, no further burning has taken place. The two plots have changed little over the winter period as one might expect. The brash remains visible together with extensive areas of bare ground so if there is viable seed and the ground conditions are suitable then new seedlings should hopefully begin to establish this spring. Where young vegetation is coming through it contains typical pioneer species such as thistle, plantains, coarse grasses and the like. These will need to be monitored to ensure that they do not become over-dominant and swamp the heather and heathland species. If necessary, hand weeding or spot spraying may be required over the coming growing season. If insufficient quantities of heather and heathland species establish then consideration should be given to over-seeding or additional hay strewing

Victory Pools

The Victory Pools comprise a fairly large pool at the western end of the park, and a smaller network of three linked pools. Prior to the project the pools were badly overgrown by reedmace and other species with relatively little open water remaining. There were also issues with rubbish such as dumped shopping trolleys. All the pools were dredged over the winter 2017/18.



Figure 46 Dredging of Victory Pools

The western pool has been excavated effectively with a shelving bank profile, irregular, natural-looking bank outline and deeper water towards the centre, complete with a rocky 'island' that should enhance its ecological value; rough grassland and scrub habitats retained nearby provide good cover; excavated material spread appropriately around the pool periphery and part graded into the adjacent topography. The eastern 'natural' pools are much smaller and significantly shallower, which provides a slightly different habitat to the western pool. Whilst it was holding water in May 2018, due to its limited depth, this may have a tendency to dry out in the summer. No vandalism or fly-tipping was evident although at the eastern pond some vegetable waste had been tipped into it.



Figure 47 Eastern Victory Pools in October 2018

In mid-July 2018 the pools were visited, and it was clear that dredging had been effective in greatly increasing the extent of open water. Dredgings had been moved at least seven metres from the pools, and there does not seem to be any risk of them being washed back into the pools. Large numbers of common newts were observed in the smaller pools together with frogspawn and frog tadpoles. It was apparent that both pools had greatly benefited from the dredging work. It is unlikely that the smaller pools would have had sufficient water for amphibian breeding without the dredging work.

The dredging work obviously resulted in a decrease in the amount of emergent vegetation, however, some recolonisation was in evidence.

The pools were revisited in August, at the height of the extended drought. The shallowest of the eastern pools dried out. All of the other waterbodies still contained water and tadpoles and common newts were still present; This was taken as clear evidence that the dredging works had brought a significant benefit to the local amphibian population.

When surveyed in October clear water had returned to all the pools. Due to their lack of depth, and the fact that they don't appear to be fed by a ditch or watercourse, these eastern pools are likely to be seasonal features. Whilst some aquatic vegetation was only starting to establish in them it is likely that

over the next few years these may well cover both pools unless creatively managed. The larger, deeper western pool appears to be more sustainable as a water feature for the long term. The water was generally clear, although some pallet timbers were floating over the far side. The excavated material that had been placed near the foot of an adjacent electricity pylon was still in situ and, despite beginning to scrub over, is not considered appropriate. If this could be spread out more sensitively and seeded with wildflower seeds after the SINC scrub removal works are implemented, then this should improve the visual appeal of this locality. Given the presence of well-worn desire lines to all three pools they would appear to be popular with the local community.



Figure 48 Western Victory Pool (L) and spoil (R) in October 2018

As of February 2019, the lower two eastern ephemeral pools were in good condition with a satisfactory level of clear water containing developing aquatic vegetation. The one closest to the path unfortunately had a number of potatoes and cabbages that had been thrown into it which were somewhat unsightly but in time these will rot down and disappear from view. There were no frog spawn or newt eggs visible although it is very early in the season. The large permanent pool towards the western end of the site was encouragingly full with water (although slightly less clear). Since it was last visited the dredged spoil has been reprofiled and appears much more visually sympathetic, and a new well-designed metal platform erected on the eastern shore, complete with safety railings. This together with the new concrete steps, hoggin paths, and small section of tarmac path near the entrance by the adjacent housing area has been a great improvement in terms of accessibility, visual appearance, and as a more welcoming environment. From the number of shoe marks visible on the hoggin path sections the site is being well used. Significantly no vandalism or fly-tipping was evident.



Figure 49 - new platform at Victory Pools

The only concern relating to this work is that the pools will inevitably be recolonised by aquatic/emergent vegetation and it will be beneficial for them to be monitored in the long term and further clearance

carried out as required. Now the pools have been opened up it should be feasible for this to be carried out manually on a smaller scale with only a proportion of each pool being cleared in any given year.

Avenue Tree Planting

The ten lime trees (65 litre heavy standard *Tilia cordata* Winter Orange) appeared to be of good quality stock with straight leaders, clear stems, and well-developed crowns. No assessment could be made of their root systems, the tree pit preparation works, or how well the trees were planted although none of them appeared to be showing signs of stress. All had been double staked complete with cross bar and rubber tie. No air or irrigation tubes had been included, nor some kind of mulch around the base which may hinder their successful establishment. Whilst none of the trees had been vandalised some of the tree stakes had been removed and taken away, and some of the tree ties had been broken or removed completely. Given the location of this tree avenue, along one of the principal paths within the park, it would be recommended that the stakes and ties be replaced both to provide the necessary support to the tree and for their visual appeal.



Figure 50 Reedswood Park Avenue Tree Planting (May 2018)

These trees have been planted with the intention of restoring a formal avenue at one of the park's main entrances. A locally appropriate and native species, *Tilia cordata* (small leaved lime) has been chosen in preference to the more commonly planted hybrid lime (*Tilia x vulgaris*). Small-leaved lime is a relatively scarce tree in the area, although it was formerly more widespread. They are a popular food plant for aphids which in turn provide a food source for many other species including ladybirds, hoverflies and insect eating birds. The larvae (caterpillars) of several moth species feed on lime leaves, including the large and impressive Lime Hawk Moth as well as the vapourer, scarce hook-tip and the peppered moth.

In October 2018 the earlier unwanted removal of some of the tree stakes and damaged ties have all been rectified. Only one tree had a timber cross piece between two stakes that had been prized off the stake at one end (although still firmly attached at the other). If this could be resolved swiftly then that would demonstrate good stewardship.

As of February 2019, the planted lime tree avenue seems to be in good condition and well maintained.

Access Works

Access works at Reedswood Park have been limited to the area around Victory Pools in the western part of the site. These have comprised the provision of a dipping platform and surfaced paths, including a tarmacked portion where the path gradient is quite steep. There was also some vegetation management

to improve access along nearby paths. These were nearing practical completion when inspected on 28 February 2019, with the installation of a handrail, the final element, in progress.



Figure 51 - New dipping platform (left) and surface path at Victory Pools.

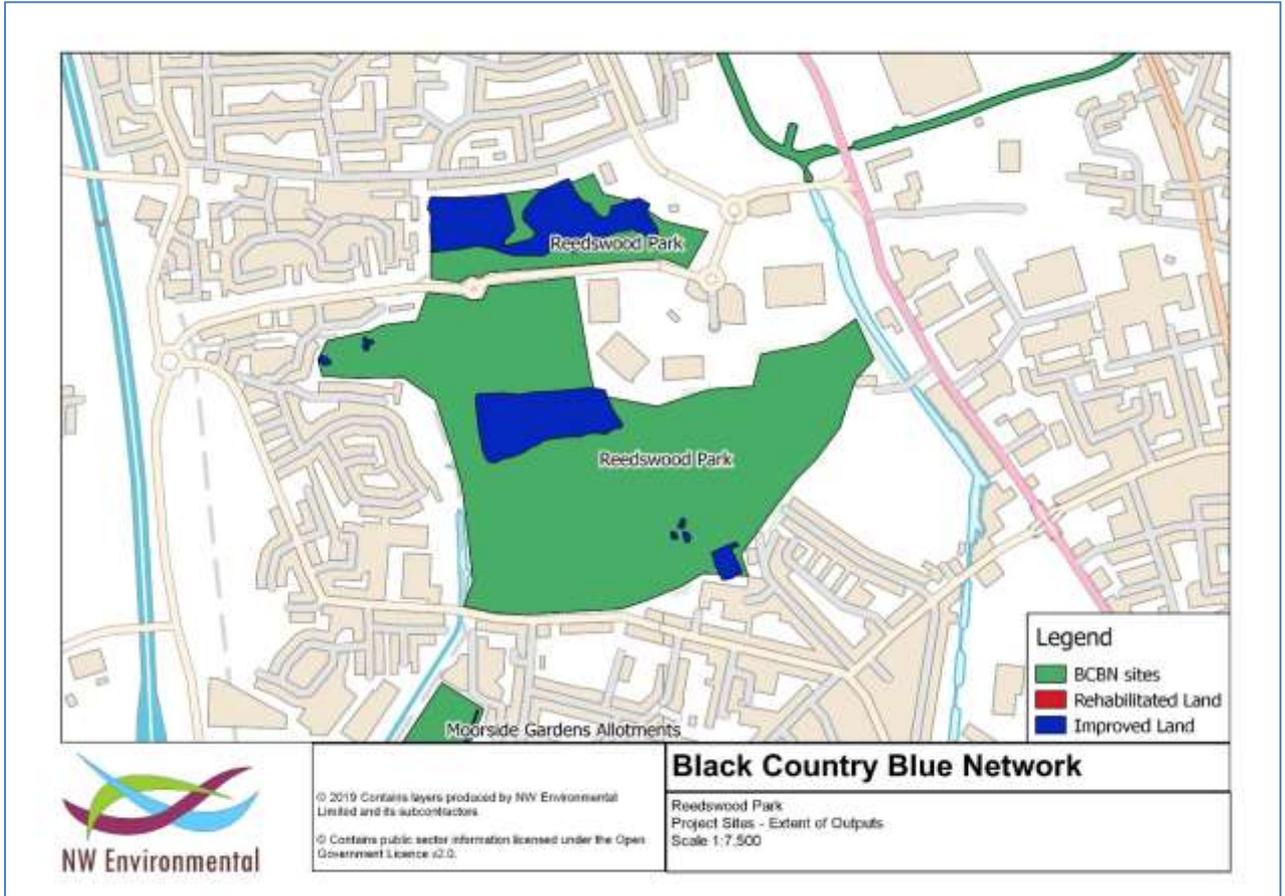


Figure 52 - Tarmacked section and handrail installation (left) and vegetation managed along path.

Extent of Works

The works have taken place at various locations within the park. A significant additional area of habitat improvement was achieved at this site. The map below does not include the locations of signs, access works or tree planting along the avenue.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Reedswood	Heathland			0.0		0.2	0.2	0.0	0.2	0.2
	Woodland		2.0	2.0		2.0	2.0	0.0	0.0	0.0
	Meadow			0.0		5.0	5.0	0.0	5.0	5.0
	Wetland			0.0		0.8	0.8	0.0	0.8	0.8



Anson Branch Canal

Slightly away from Reedswood, the disused Anson Branch Canal has had a section approximately 100m long restored to open water and the remainder of its length has seen spot dredging to create small areas of open water and prevent the total loss of any wetland habitat to other vegetation. Footpath access along the towpath has also been improved, with the cutting back of trees and shrubs.

Whilst none of the canal dredging or footpath improvement works were evaluated prior to our beginning this work it was clearly evident from the non-dredged areas that the disused canal would have been completely clogged with dense marginal vegetation, and the adjacent shrubs and scrub would have been dense and unkempt features giving an enclosed and psychologically threatening towpath setting. To enable the back-actor access to undertake the dredging the bank-side vegetation has been trimmed back to provide a much more open and appealing environment. The spot dredged areas were clearly evident and have been effective in restoring open water to the canal; they are of limited extent in relation to the total length of the branch canal, but they should still have increased ecological benefits. The excavated material has been sensitively deposited in linear strips to the rear of the towpath verge next to the retained areas of shrubs and scrub.



Figure 53 Dredging at the Anson Branch Canal

When the site was visited in summer 2018 it appeared that the various areas dredged had responded in different ways, dependent on the exact level of the water table and how shaded the individual sections were. It was clear that the dredging had brought multiple benefits:

- The area of open water was considerably increased, enhancing the habitat diversity of the site.
- Newts were breeding in areas that previously contained no open water.
- As a result of the dredging work many of the small pools created persisted over the period of intense drought, increasing the likelihood of successful breeding by newts and invertebrates.
- Ease of access along the canal had been improved.
- An interpretation board had been installed.



Figure 54 Pond skater, Anson Branch Canal

A considerable number of invertebrates including wetland species such as dragonflies and pond skaters and terrestrial species such as bees, hoverflies and butterflies were observed. These all appear to have benefited from the general opening up of the habitat as well as the dredging. Common newts were observed, and their eggs found on site in the recently dredged areas which would have been wholly too dry for amphibian breeding prior to the work being carried out.



Figure 55 Breeding damselflies, Anson Branch Canal

A revisit later in the summer showed that despite extended drought most of the dredged areas were still holding reasonable depths of water (estimated at 100 to 400mm). One of the areas had dried out completely – this is not a concern as a range of conditions is likely to support a wider range of species, as some require seasonal water bodies. It was clear that the dredging had a significant beneficial impact on habitat quality.

Visitors spoken to on an informal basis at the site were supportive of the work carried out and recognised that it had benefited wildlife.



Figure 56 Pool with approximately 400mm water depth and dry pool showing the range of conditions created by the dredging works.

The works were inspected again in October. Due to the immature tree thinning and scrub removal next to the towpath last winter it was encouraging to see that the route beside the canal remains relatively open and welcoming. The brash has been sensitively laid to one side to form dead hedge features. There is an interpretative sign near the main entrance which is in good condition (although beginning to be partially obscured by regenerating shrub growth). The relatively large dredged section of canal on the opposite side from the sign remains largely free from aquatic vegetation re-growth which was encouraging, although chickweed is developing a blanket cover. Further to the south-west the various spot dredged sections remain evident, but their small size and relatively shallow depth has meant that some dried or partially dried out during the drought and they are becoming re-colonized by marginal vegetation.



Figure 57 Spot dredged areas in October 2018. The pool on the right is the one above that was totally dry during the drought.

When visited in February 2019 it was apparent all but one of the dredged areas was full of water, despite the very dry February. One area was not completely full but it was noted that this was over a bridge and that this has probably affected the local hydrology. Permanent signage was in place including acknowledgement of ERDF funding.



Figure 58 - In February a single dredged area was not fully covered in water.

The main concern for the future is that the dredged areas will be vulnerable to re-establishment of emergent vegetation such as reedmace, reed sweet grass and iris. Ideally the dredging exercise could be repeated at intervals of two to three years with the ultimate aim of creating a series of several larger, deeper pools by linking and expanding those established by the project.

As of February 2019, the dredged material that was placed discretely to one side is beginning show some signs of regrowth which will help then to blend in with their surroundings. The previously dredged areas all seemed to be holding water (although some are clearly deeper than others). The smaller, shallower pools are already showing signs of marginal vegetation re-growth which although acceptable in the short term will probably mean that in a few years they are likely to become overgrown again by reedmace and other invasive species unless further dredging works are undertaken.

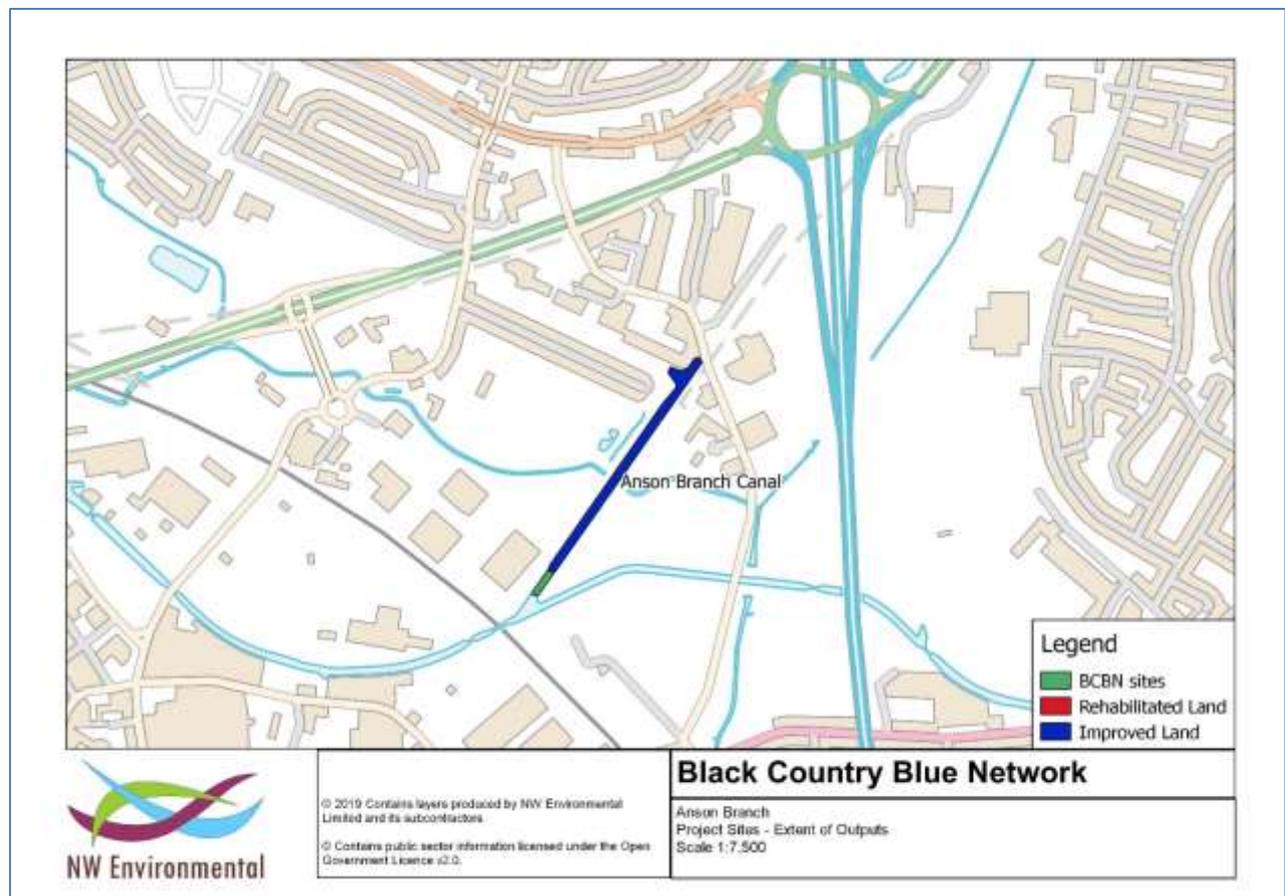
A 'Ladder Sign' has been installed at the Boundary Way entrance -see the section on Interpretation.

Extent of Works

The works have been taken as a series of excavations along all but the infilled section at the southern end of the site. By the creation of a habitat mosaic the whole of the wet section site has benefitted from these works. The output targets for this site were included in Reedswood park on the original application.

Public access has been improved along the whole length of the site by the clearing back of vegetation alongside the path.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Anson Branch Canal	Wetland		0.8	0.8		0.8	0.8	0.0	0.0	0.0



Lane Avenue Allotments

This site is also known as Moorside Gardens Allotments, this Site is close to and hydrologically connected to the Anson Branch and Reedswood Park. The work carried out was dredging of the small streams which also act as drainage for the allotments.



Figure 59 Ditch dredging in progress

It is understood that prior to the works the ditches and watercourses were almost obscured by tall, dense, rank bank-side vegetation. The restoration of these features has allowed light to reach down into the steep sided cuttings and the water-bodies; improve water flows; reduce flooding; and improve their biodiversity value. Numerous patches of frog spawn were evident in May. The excavated material had for the time being been crudely spread onto the allotment banks which looked unsightly. But this was rectified during the summer of 2018.



Figure 60 Excavated material alongside the ditch (L) and dredged ditch showing free flow of water (R).

Although amphibians normally prefer still waters large quantities of frog spawn and tadpoles as well as common newts were observed on site. A second visit in August was following heavy rains. While these might have been expected to wash many of the amphibians downstream, there were still abundant tadpoles present, as well as adult common newts. During this visit we observed wind/water-borne litter and waste material being removed from the stream by a team of young offenders on Community Service.

It was evident that these two watercourses on the site are important for amphibian breeding as well as supporting a variety of other wetland biodiversity.

In October the new interpretative signs were in place and appeared to be in good condition.

When visited in February 2019, the site was looking in excellent condition with some waste material that had been removed from the streams now having been taken off-site. It was clear that the streams are being well maintained by the allotment association. We also noted frogs present in the stream showing continued use by amphibians.



Figure 61 - The dredged watercourses in February 2019

A significant extra benefit was noted in that the project has helped encourage several other initiatives by the allotment association including:

- New bridges across the stream.
- Creating a new wildlife/picnic area
- Commencing refurbishment of a sensory garden.

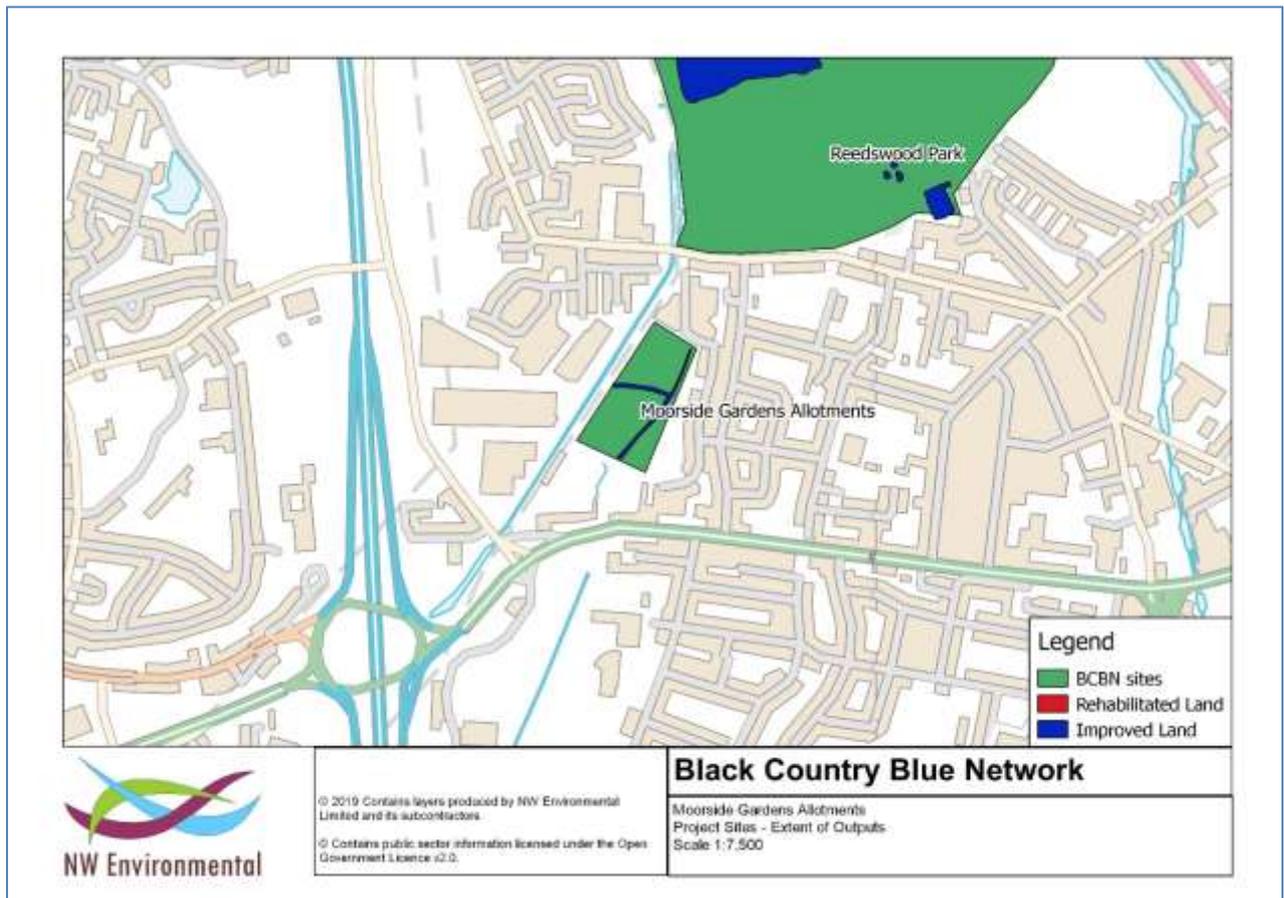


Figure 62 -Added value - bridge installed over the stream (left) and area cleared for new allotments and nature area

Extent of Works

The works took place along the two watercourses on the allotment site. The outputs for this site were included with Reedswood Park on the original application.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Moorside Gardens Allotments	Stream			0.0		0.3	0.3	0.0	0.3	0.3



In the context of what was mostly a rather sterile, formal park aside from two areas of established woodland, the planting will lead to the structural diversity of the area increasing significantly as well as greater amounts of fruit and flowers. This can be expected to result in a worthwhile long term benefit for wildlife, particularly birds and insects. Hopefully local communities will feel able to enjoy the produce of the orchard once it starts to become productive as well.



Figure 65 Specimen trees (left) and new avenue

The planting has been done to a high standard with the woodland and orchard trees being staked and mulched, Figure 64. The shrub planting has been planted as unsupported whips, there is a slight concern that these could be vulnerable to damage by gang mowing. It would be beneficial to add marker posts around these areas. Vandalism has been minimal, although one specimen Magnolia has been snapped in half and should be replaced, Figure 66. The Orchard area does not have any official access other than from the park, although there are two informal entry points where the low retaining wall to the north has been broken down and it could be beneficial to turn one of these desire lines into an official access.



Figure 66 Damaged standard tree (left) and informal entrances to orchard area.

Extent of Works

The works have taken place across the site, Figure 67. The native planting in the west of the site has effectively created a 'nature area' comprising virtually the whole area to the west of the avenue with the remaining areas of grassland likely to become 'rides' through a larger area of woodland as the planting matures. In effect a larger area has been brought into conservation management than just the planting area.

These works were wholly additional to the original proposals.

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Rushall Park	Woodland			0.0		0.2	0.2	0.0	0.2	0.2

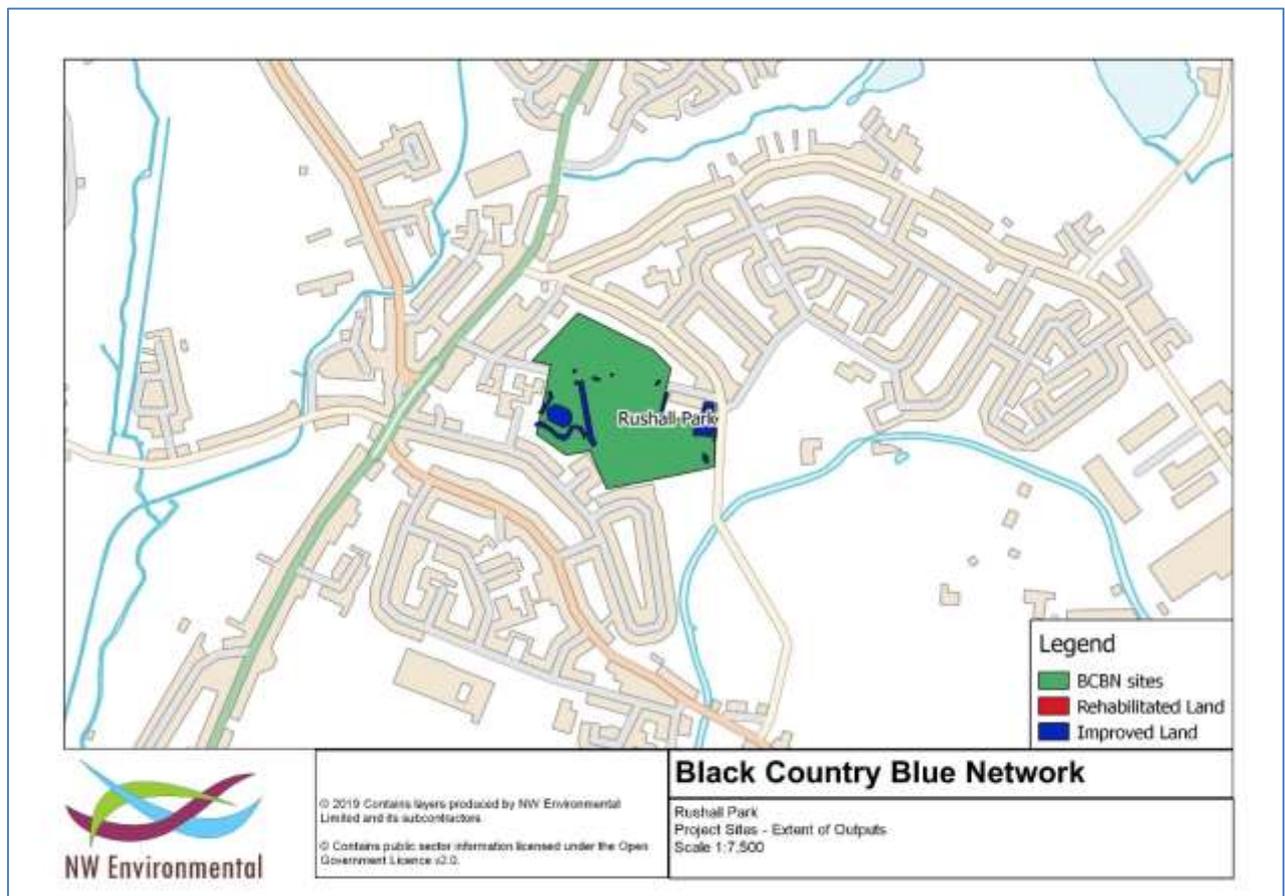


Figure 67 - Rushall Park, extent of works

Communications

The project has been supported by communications consultants (Acer Marketing), who were able to provide branding, web content and other support for the project. However, their ability to promote the project through social media was hampered by delays in approving newsletters and things like social media accounts.

Project communications cover various areas:

- Overall project communications strategy and branding.
- Funding acknowledgement plaques
- Permanent signage
- Temporary signage
- Newsletter
- Web presence

The project was well

Project Branding

To ensure consistency in project branding, including the use of the project and ERDF logos, a set of branding guidelines have been produced and shared with partners.



Figure 68 Project brand guidelines document

The guidelines include a project logo and details of how to use it and the ERDF logo on project outputs. The guidelines have been used consistently across the project's web presence, interpretation and signage and newsletter.



Figure 69 Project logo

Funding Acknowledgement Plaques

A design has been agreed for funding acknowledgement plaques to be placed at each of the project sites. These follow a consistent design with site-specific text being inserted as appropriate. The plaques include the project logo and ERDF logo as required.



Figure 70 | Design for funding acknowledgement plaque

Interpretation Signage

As of February 2019 interpretation signage has been installed on all the Walsall Sites (except Rushall Park) and on the Wyrley and Essington Canal.

The original contract only included finger posts for Smestow Valley; this has been revised and two interpretation boards are to be installed as well.

Walsall

Across the Walsall projects interpretation signs drawn from a set of consistent designs and wooden 'ladder' signs with the site names are being used.

Reedswood Park

Fifteen interpretation signs had been installed but were not present in May 2018. During the previous winter all had been vandalised (some removed from site altogether, some uprooted, and some in situ but badly damaged). Walsall MBC acted swiftly and removed the uprooted and in situ damaged signs such that by May 2018 only the lecterns were present. It is unclear why such a level of vandalism should have arisen. Such signs should under normal conditions have been acceptable although from a design perspective the fixing of a relatively large sign onto a single upright (rather than two) might give the appearance of being less robust.



Figure 71 Installation of lectern and subsequent damage (winter 2017)



Figure 72 Lectern base (May 2018)

Following discussions between Walsall Council and the suppliers of the signage and lecterns replacement with a much more robust design of lectern was agreed. The council has a stock of replacement boards which can be fitted to the lecterns if they are subject to major vandalism. We have advised the insertion of a protective layer of polycarbonate if any signs have to be replaced.

By July previously vandalised signs have all been replaced with clear, sturdier boards and lecterns. Although some of these signs have been the subject of minor vandalism, they appear to be much better suited to their situation and are all in acceptable condition. Only two seemed to be 'failing' in that the main Bentley Lane entrance sign has slipped down in the frame to expose a gap and tape along the top; and the sign at the end of Birchover Road had been partially marker pen graffitied on. Although not visible some of the signs could be partially rotated around the central circular support post. This lack of sturdiness may 'encourage' further vandalism unless the post can be set rigid.



Figure 73 Replacement lectern and signage at Reedswood Park (L) and minor vandalism (R)



Figure 74 Project signage and meadow creation at Reedswood Park

As of February 2019, the interpretation signs remain in situ and have not been removed or heavily vandalised. There are a number however where the interpretation boards have either been scratched, defaced, pushed so that they have become concave within the frame or such that they have become loose and dropped down within the frame. One of the top rear portions of a sign lectern had been partly damaged where someone had tried to leverage off the lid. In terms of the interpretation panels consideration should be given to either replace them on a regular basis so that the material stays fresh and in good condition; or making the panels more robust e.g. by including a stiffer backing board and/or adding packers and adding a clear front fascia layer that would be scratch and knife resistant as well as easily cleaned of graffiti. It would also be prudent to reconfigure and clean the slightly damaged panel frame so that this sign looks well maintained. For future reference a slightly different, more robust frame and lid detail might be beneficial to help prevent them from being vandalised.

As of 28 February, the ladder signs had not been installed, but see Anson Branch Canal below.

Lane Avenue Allotments

A single sign of the 'Ponds and Wetlands' theme has been installed at Lane Avenue Allotments close to the point where the stream enters a culvert and leaves the site. This is very close to the entrance and has a good level of visibility. A ladder sign had not yet been installed, but see Anson Branch Canal below.



Figure 75 - Signage at Lane Avenue Allotments

Anson Branch Canal

At the Anson Branch Canal a single interpretative sign consistent with the Reedswood park signs has been installed. This is a woodland sign and is placed near a small area of woodland at the site. One of the 'wetland' signs would have been more appropriate, it may be possible to change the board to a spare wetland sign in future.

On the date of the site visit a ladder sign had been newly installed but the funded by ERDF signage had not yet been placed on the lower board. Similar signs were being installed at Reedswood Park and Lane Avenue allotments as part of the same programme of work.



Figure 76 - Signage at Anson Brach Canal including the first of the 'ladder signs' to be installed

Wyrley and Essington Canal

New interpretation signage to inform, educate and help manage visitors along the length of the new LNR has been installed.

The installation of interpretive signs along the Wyrley and Essington Canal was repeatedly postponed. The chief problem was that the Canal and River Trust changed its logo in mid-2018 and embargoed the new logo until an official launch. The unfortunate consequence of that was a major delay in releasing the artwork for the new logo to the designers of the interpretative materials. This delay has been compounded by delays in finalising the artwork.

The interpretation signs were installed in mid-November 2018. This mainly comprised location markers in tall (Figure 77) and low (Figure 78) designs along the length of the canal.



Figure 77 - Example of one of the tall direction posts at site 7, land within Wednesfield Park



Figure 78 - small format sign at site 12 (left) and tall sign at site 16

The signs are of steel construction with a vitreous enamelled finish. It appears that one sign has received minor damage and lost a section of enamel.



Figure 79 - Damaged sign at site 13

All the signs seem to have been installed in their proposed locations. It is understood that only one of the smaller directional bollard signs was vandalised, in that it was pulled out and throw into the canal). But this was successfully retrieved and re-concreted in more robustly than before and since has not been harmed.

Overall, they are as intended - noticeable, well-positioned, look attractive, and provide a good amount of legible text with graphics. The only criticism is where (for example at Site 10) if one looks at the graphic map to see in which direction one should travel along the canal, because one is facing away from the canal, the directions on the map graphic appear the wrong way around. From a factual perspective the information given isn't in itself wrong but unless you are a good map-reader you may read the information incorrectly. For future projects it might be advisable if the map graphic is on the side of the signpost such that the viewer sees the canal in front of them and the directional information is therefore clearer and less likely to be incorrectly interpreted.

Temporary Signage

Opportunities for communicating the work of the project have been limited in part by the fact it has been carried out largely by contractors or has not happened over an extended timescale.



Figure 80 Temporary signage at Anson Branch Canal during project works

We saw evidence that Walsall Council used temporary signage to explain the work being carried out. This signage has included appropriate acknowledgment of ERDF support. The Wyrley & Essington canal works and possibly also the Smestow Valley works would have benefitted from clear temporary signs explaining what was being undertaken, and maybe encouraging locals to keep the sites tidy following the major litter-picking exercise.

Project Newsletter

A project newsletter, 'Connected Naturally', has been produced. The first issue is Autumn 2018 and covered the projects achievements from the start of the project in July 2017. This was distributed in December. A further edition is planned to mark completion of the project.



Figure 81 Cover of first newsletter

Project Web Presence

Web pages conforming to the guidance have been set up by four of the project partners. Wolverhampton Council, Walsall Council and Canal and River Trust web pages give the same summary information and link to other project partners. ERDF funding is correctly acknowledged.

There was a page on the Wildlife Trust website, but the link was broken by an update to the website. They have been informed and have stated the page will be restored.



Figure 82 Wolverhampton Council (left) and Walsall Council project web pages



Figure 83 - Canal and River Trust project web page

Social Media

Presence on social media is limited. A twitter account for the project has been set up but to date it has not made any tweets. twitter.com/BCBluenetwork.

The account was set up in August 2018 and got off to a slow start, with the first tweets in late November 2018. Eighteen photos and videos have been posted by the account which currently has 89 followers and 206 likes.

In retrospect, as well as starting earlier, it would possibly have created more profile for the project to have put the main focus on a hashtag to back up the account and encourage partners to retweet the account's tweets and to make tweets about their own activities. Between the two Councils, the Wildlife Trust and the Canal and River Trust there are over 138,000 followers (not allowing for double counting).

Relatively few tweets put through these channels would have exposed the project to a far wider audience but appears only a single tweet was made (by Wolverhampton Council) using the phrase 'Black Country Blue Network'.

This failure to promote the project through partners' own social media channels, especially Twitter, is disappointing as even the minimum of retweeting the coverage put out on the project account could have reached a very large and relevant audience. Specific tweets by partners about the project would have been even better.



Figure 84 Project Twitter Home Page

A Facebook home page is at www.facebook.com/BCBluenetwork/ but it only shows the project logo and profile pages as it has not been used.

Media Coverage

We were unable to find any media coverage for Black Country Blue Network, although there has been widespread and positive coverage of the Wyrley and Essington Canal Local Nature Reserve proposals.

Impact of Project Communications

The delay in establishing project communications is disappointing, as the responses to visitors and their high awareness of the interpretation works suggest that there would have been a positive response to additional publicity.

Local Nature Reserve Designation

Alongside the practical outputs of the project it is proposed to declare a new Local Nature Reserve on the Wyrley and Essington Canal and an extension to the existing Smestow Valley Local Nature Reserve.

Black Country Wyrley and Essington Canal Local Nature Reserve

it is proposed to establish a Local Nature Reserve along its whole length within Walsall and Wolverhampton.

The requirement to co-ordinate designation across the boundary and the fact that most of the proposed LNR is in third-party ownership (Canal and River Trust, a project partner)

In South Staffordshire there is already a stretch of canal designated as the 'Wyrley and Essington Canal Local Nature Reserve', confusingly this is actually the Cannock Extension Canal, a branch of the W&E. The consequence of this is that the new LNR will be named 'The Black Country Wyrley and Essington Canal Local Nature Reserve'.

As of February 2019, a date for designation of the new LNR has not yet been confirmed.

Smestow Valley Local Nature Reserve Extension

Once the works to rehabilitate the former Wolverhampton Environment Centre (WEC) are complete it is proposed to designate the land to create a 6ha extension to the existing LNR.

As of February 2019, a date for designation of the additional area has not yet been confirmed.

Growing Local Flora

Growing Local Flora is an initiative by the Wildlife Trust for Birmingham and the Black Country. It produces plants for the project from locally collected seed and propagates wild plants. Local provenance plants and seed are not available from another supplier. The aim was to provide plants and seeds of local provenance to ensure the project is supplied with materials of the highest ecological quality.



Figure 85 The main area for growing plants as plugs (left) and woodland ground layer species are grown under shade netting

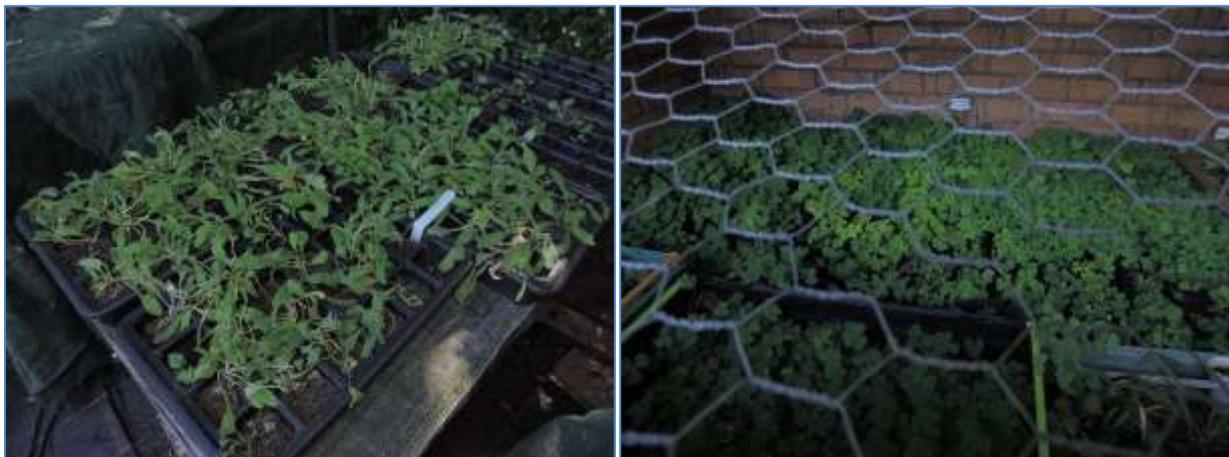


Figure 86 Field Scabious plantlets being grown in plug trays(left) and wood sorrel being grown inside a cold frame.

Plants are being grown at the EcoPark in Small Heath Birmingham, using locally collected wildflower seed, grown initially as plugs, and then moved to pots and grown on before being planted over the winter season 2018-19.

We visited the EcoPark in July 2018 and were able to view plants being grown in two ways. The majority were being grown as plugs in a naturally shaded nursery area, many of the plants were further protected by shade netting which was pulled back to allow the photographs to be taken. The plants appeared healthy and in good numbers. Other plants were being grown distributed among woodland areas of the EcoPark, these were more difficult to assess.

Plants were supplied to Walsall Council in late summer 2018, and further plants were supplied to Wolverhampton Council in October. As of 28 February 2019 the following plants had been supplied, Table 2.

Table 2 Species produced by Growing Local Flora

Common Name	Scientific Name	Reedswood	Smestow Valley
Primrose	<i>Primula vulgaris</i>	100	
Violet	<i>Viola canina</i>	55	84
Sanicle	<i>Sanicula vulgaris</i>	55	106
Wood Sorrel	<i>Oxalis acetosella</i>	55	262
Woodruff	<i>Gallium odoratum</i>		158
Ground Ivy	<i>Glechoma hederaceae</i>		115
Wood Speedwell	<i>Veronica montana</i>		
Wood Sedge	<i>Carex sylvestris</i>		30
Greater Stitchwort	<i>Stellaria holostea</i>		24
Ramson	<i>Allium ursinum</i>		20
Red Campion	<i>Silene dioica</i>		
Foxglove	<i>Digitalis purpurea</i>		
Total		265	799

This is a total of 1,064 plants. A further 2,000 plants are expected to be supplied and planted by the end of March for a total of over 3,000 plants, including some or all of the species not numbered above.

The cost per plant worked out rather higher than commercially supplied wildflower plants in 9cm pots, however the project costs also cover the bespoke collection of local seed and planting and do not share the economies of scale of a commercial nursery.



Figure 87 - Wildflower planting at Smestow Valley LNR

This element of the project faced a number of challenges:

- 1. The delays in starting the project had an impact on collecting sufficient seed of suitable quality.**
- 2. The extreme hot/dry weather in summer 2018 meant the plants required extra attention over the summer season.**
- 3. The work placed quite a high demand on human resources, and it would not have been possible for the Wildlife Trust to deliver the outputs without significant volunteer input.**

This should be seen as a successful pilot, for future projects consideration should be given to repeating the exercise but increasing the proportion of plants sourced in this way, perhaps two or three-fold. Although this would proportionately increase the labour requirements for collection, seeding, potting on and planting there would be some gains to be made in terms of the general maintenance of the plants during the growing periods (e.g. watering, shade control) making the project more viable for the Wildlife Trust. In this case, more advance notice and clearer requirements in terms of species and quantities at the beginning of the project will also help with planning the work.

Other Works

A number of minor works have been undertaken by the project partners to support the overall program, these include:

Soil Testing

A soil-testing exercise was undertaken by the Wildlife Trust to evaluate the suitability of the various sites proposed for grassland and heathland creation and remediation. On each site measurements of available phosphorus, nitrogen and potassium were made, as well as testing the soil pH.

A comprehensive report of the results of the testing has been produced.

The results generally indicated that the sites were of relatively high pH (calcareous) with most of them being of low to moderate nutrient status. Aside from the Reedswood Mound the results were available in time to influence the choice of species and hay donor sources for the meadow rehabilitation/creation sites. Additionally, by confirming the generally low nutrient status it showed that these sites were likely to be successful and not be vulnerable to rapid overgrowth by aggressive weed species.

The results indicated that the Reedswood Mound, identified for heathland creation, was too high in pH although it does have a particularly low nutrient status. Unfortunately, the soil testing was carried out after the heather strewing at this site.

The soil testing was a valuable exercise; the example of the Reedswood Mound illustrates that such work is a potentially valuable exercise to be undertaken at all potential habitat establishment sites.

Ecological Surveys

In order to better understand the impact of the project work, Walsall Council commissioned ecological surveys by local conservation experts from a number of organisations including the Birmingham & Black Country Wildlife Trust and BrumBats, the Birmingham & Black Country Bat Group. The groups surveyed included birds, butterflies and other insects, wildflowers, great crested newts and bats.

Great Crested Newts

Surveys were undertaken by NW Environmental for great crested newts using the environmental DNA (eDNA) technique at the following sites:

- Reedswood Park
- Lane Avenue Allotments
- Anson Branch Canal

At each of the three sites, two separate water bodies were sampled for great crested newt eDNA according to the standard methodology and the samples were tested by ADAS. As well as the ADAS laboratory report a full report of the survey and its findings was produced.

The survey was carried out in summer 2018, following the dredging work the previous winter. All ponds were considered as suitable habitat for common and great crested newts, with sufficient depth of water, good water quality and clear patches on the pond beds suitable for newt mating rituals. In addition, common newts were observed at all sites if not in all the ponds, and frogs at both Reedswood Park and the Allotments.

Considering how badly silted the ponds had been before work was undertaken it was remarkable that common newts had occupied the open water so rapidly, with clear evidence of breeding on the Anson Branch – a pondweed leaf folded to protect eggs laid inside the loops. There was also evidence of frog breeding (tadpoles) at the allotments and Reedswood Park.



Figure 88 Leaf folded to contain common newt egg

Although great crested newt DNA was not detected, the survey concluded it is worth keeping a watch over these ponds and possibly retesting in one or two year's time, as these are less abundant than common newts and may take longer to recolonise the ponds.

The important finding of this survey is that the work taken to restore these water bodies immediately benefitted other amphibians - frogs and common newts – by providing improved breeding habitats. Incidental observations of damselflies, pond skaters, whirligig beetles and gammarid shrimps also support the contention that restoration of these smaller water bodies, which are isolated from nearby fish-rich waterbodies (e.g. the Walsall Canal) has benefited a broad range of wildlife.

It was somewhat optimistic to undertake the great crested newt survey at such an early stage, however by identifying the rapid re-establishment of other amphibian species and the general suitability of the sites the value of the work carried out by the project for these species was confirmed.

Note western and eastern Victory Pools are shown as 'trolley' and 'triple' ponds on the plan below.

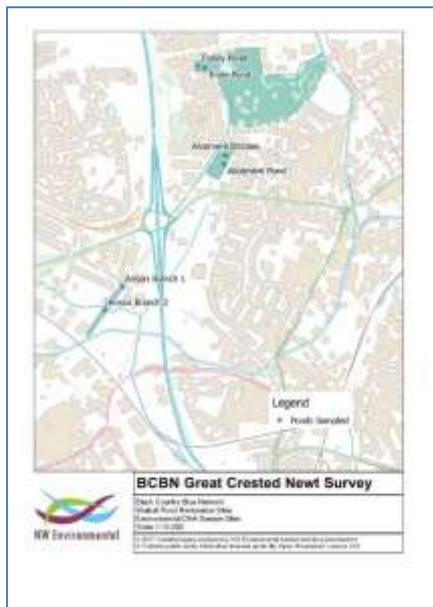


Figure 89 - New Survey Sites

Water Vole Survey

A water vole survey was undertaken at the Ford Brook/Rough Brook confluence area by Worcestershire Wildlife Consultants, ahead of the proposed works on this site.

Although definitive evidence for the presence of water voles was not found the survey concluded that in the light of some other recent evidence there was likely to be a population of water voles along the Ford Brook.

If the Ford Brook project element had gone ahead, this information would have been valuable in informing the work and also in determining if there were any licencing requirements.

Lessons Learnt

Timetabling of Work

The combination of delays in project approval, the uncertainty around the consequences of the Brexit vote and the relatively short project timescale (due in turn to that uncertainty) had real consequences on the practical delivery of the project. Then most obvious of these is how much of the practical delivery has been telescoped into the first quarter of 2019.

Although it is clearly understandable that partners are reluctant to undertake too much preparatory work ahead of the project getting confirmation of funding, the project could have benefitted from more detailed preparation ahead of the official start date and also an additional year for delivery.

These delays also required deferring the end date for evaluation, as otherwise too many project elements would have been incomplete.

Another impact of the short timescale was that it was not possible to include a full year of maintenance to cover things like beating up failed planting.

To a certain extent these problems could have been anticipated earlier in the project, in particular:

- many (but far from all) of the works carried out in early 2019 could have been put out to tender earlier, say in summer 2018 avoiding the rush to complete the works by the end of March 2019.

Although this project suffered something of a ‘perfect storm’ of timetabling challenges, for future projects it is suggested that consideration is given to:

- A provisional delivery timetable and outline specifications for the work are produced in greater detail at the earliest possible stage.
- That if additional time for delivery is likely to be available advantage should be taken of this, even if only to add an extra year’s maintenance to the project, as this would provide an extra backstop in the event of delays

Role of the Project Manager

It has been very clear throughout this evaluation that the role of the project manager in keeping delivery on course, particularly over the final six months has been invaluable to the success of the project. It is difficult to see how the partners could have successfully dealt with the challenges faced by the project without this central role. Of importance were:

- Dealing with MHCLG regarding changes in the project.
- Ensuring full understanding of and compliance with tendering requirements.
- Acting as secretariat to the Project Steering Group.
- Making sure consistent, accurate and timely data on finance and outputs was supplied for the reporting.

The lesson is that:

- Having a Project Manager was in place throughout delivery and able to allocate a full 50% of their time to the project, meant that they had a detailed knowledge of the outputs and project sites as well as being able to maintain a consistent and supportive working relationship with all the partners.

Commitment to Joint Working

Although on one level the project can be seen as a collection of individual sub-projects with limited inter-dependence, aside from the presence of a single project manager the projects enjoyed many benefits from the familiarity of the partners with working together and their regular liaison over the project. This was especially evident when the project faced challenges such as the loss of Ford for the Future and of delivering some additional outputs near the end of the project. There were also efficiencies such as the employment of a single communications consultant and external evaluator.

- Effective joint working enabled the project to deal with changes and challenges and facilitated more efficient delivery.

Anticipating the Response of Grassland Areas to Changed Management

The sudden and impressive response of the inhibited wildflowers within the sward at Reedswood Park to the suspension of gang mowing could only have been better anticipated with extensive and careful survey beforehand. On the other hand, the much greater accumulation of grass and vegetation by the end of the season could have been anticipated and steps should have been in place to ensure that this was cut and collected in a timely fashion. Cessation of management by regular mowing may have enabled the grassland to reveal its potential, but the *change* of management to an annual hay cut and collection of the cut material is the element which makes this change sustainable and will promote ongoing increases in the area's biodiversity.

- A dramatic response to changes in grassland management by suspension of regular mowing should be anticipated, and managers should be prepared for the need to remove large quantities of hay/haylage at the end of the summer.

Hay Strewing and Fire Risk

Although the hot, dry conditions associated with an extended drought were exceptional, it is apparent that strewn hay potentially poses a fire risk during any period of dry, warm weather. The expedient of distributing the hay as isolated patches with approximately 4 metre 'firebreaks' as was used following the arson attacks at Reedswood Park and Smestow Valley. This approach is recommended for future work to enhance meadows by hay strewing in populous or vulnerable areas.

- In areas where arson may be an issue, consider leaving firebreaks in areas of strewn hay.

Soil testing

The failed attempt to establish heathland at Reedswood Park illustrates the value of simple soil testing in situations where there may be a question of the suitability of an area for establishment of new habitats.

Understand the potential of overgrown ponds

It was apparent that the wetland sites brought into management might all have been considered of low potential for amphibian breeding. The pools and canal were heavily overgrown with virtually no open water. The ditches at the allotments were subject to rapid flows of water during storm conditions. Despite this the dredging works resulted in immediate and successful breeding of frogs and common newts. One reason for this will be that populations of these amphibians can persist around wetland areas even when the available breeding habitat is severely limited. It is also possible that such a population can be reinforced by individuals that have survived in adjacent garden ponds or other isolated water bodies. The fundamental lesson is that, from an amphibian conservation perspective, the restoration of even severely degraded ponds can be of real benefit.

- The positive impact on amphibian populations of restoring even fairly small and apparently isolated ponds, even in urban areas should be appreciated.

Future Management

The evaluation of the impacts of the work of this project has had to be done with the assumption that all of the sites will continue to be appropriately managed for the foreseeable future. While site managers have been able to articulate their proposals for ongoing management, where responsibilities will lie and the availability of resources to do this, except in the case of Reedswood Park there is not yet a complete management plan in place that formally sets out this information.

We understand that management statements are in preparation for the other sites and note that these are a requirement of LNR designation that will apply to the Wyrley and Essington Canal pLNR and Smestow Valley LNR extension.

The retrospective production of management plans for the works carried out is a missed opportunity for the project. There would have been benefit from documenting management prescriptions for the various areas at the beginning of the project. This would have helped address issues like the delayed cut and remove on the Reedswood Meadows in year two, for example. It would also have given an opportunity for any issues around the management proposals to be worked out and for the prescriptions to be revised before being finally integrated into site management plans.

This pre-emptive approach would also have helped facilitate and confirm the availability resources for the future management of the project sites.

- Management plans should be prepared at an early stage, rather than retrospectively, in order to maximise their usefulness and help secure ongoing management beyond the project lifetime.

Improved Communications

The project was well supported by communications consultants (Acer Marketing). The style guide helped ensure quality and attractive interpretation, other signage and web presence. However, their ability to promote the project more widely was hampered by delays in approving newsletters and things like social media accounts.

The failure to promote the project widely through partners' own social media channels, especially Twitter, was disappointing as even the minimum of retweeting the coverage put out on the project account could have reached a very large and relevant audience. Specific tweets by partners about the project would have been even better.

The quality of interpretation and directional signage produced for the project was very good, but the use of temporary signage during the undertaking of site works was limited. Greater use of temporary signage would have helped raise public understanding of the activities.

- Greater use of partner's own social media channels would have helped improve project communications.
- Temporary signage can be effective in communicating the purpose of work in progress to local communities.

Stakeholder and Partner Workshop

A stakeholder and partner workshop took place on 27 November. The workshop was attended by twelve people including representatives from all project partners and several stakeholder organisations. It looked at Black Country Blue Network and its achievements in the context of other existing and potential landscape-scale initiatives including:

- The Birmingham and Black Country Nature Improvement Area
- Black Country Geopark
- West Midlands Waterways Strategy
- A potential Cannock Chase to Sutton Park Biosphere Reserve
- The Tame, Mease and Anker Catchment Management Plan
- Lower Severn Catchment Management Plan

The workshop also addressed lessons learnt from the project and their implications for future projects.



Figure 90 - Workshop Agenda

The workshop was attended by twelve people including representatives from all project partners and several stakeholder organisations. The workshop also included a session on the project’s communications strategy which will hopefully help kick start the active promotion of the project and its achievements. The findings of the workshop have been used to inform various aspects of this report.

Social Impact

In order to assess the impact of the project on local communities a visitor attitude survey was undertaken across the larger project sites, where reasonable numbers of interviewees could be found.

140 interviews were completed between October 2018 and February 2019. Because of the late phasing of some of the work, we carried out interviews as far as possible where works had been more or less completed, but if not when a significant proportion of the works had taken place:

- 34 in the southern, more formal part of Reedswood Park close to the meadow enhancement, heathland and woodland management areas.
- 10 in the northern part of Reedswood Park on the additional meadow management areas split between the northern and southern parts of the site.
- 46 at Smestow Valley after the meadow enhancement work was completed but before the conclusion of the work on the WEC and Woodland.
- 10 on the Bradley Canal near Bilston once the dredging was carried out (note these interviewees may also have been influenced by work carried out in a similar time frame for the Bilston Urban Village Strategic Environmental Improvements project.
- 40 on the Wyrley and Essington Canal, once the interpretation signs had been installed and management works commenced.

We found there were insufficient visitors at the Anson Branch Canal to make interviews there viable, and the Lane Avenue Allotments were unsuitable due to the nature of community use of the site.

The main conclusions of the survey are:

- Nearly 80% of visitors are regular and come weekly, with 18% visiting monthly and only a handful of occasional visitors.
- A quarter of visitors had unprompted awareness of access improvements, and 10% of interpretation signage.
- Prompted awareness of the projects work was very high with over half recognising access improvements, nearly half being aware of the signage and a quarter being aware of wildlife and habitat management.

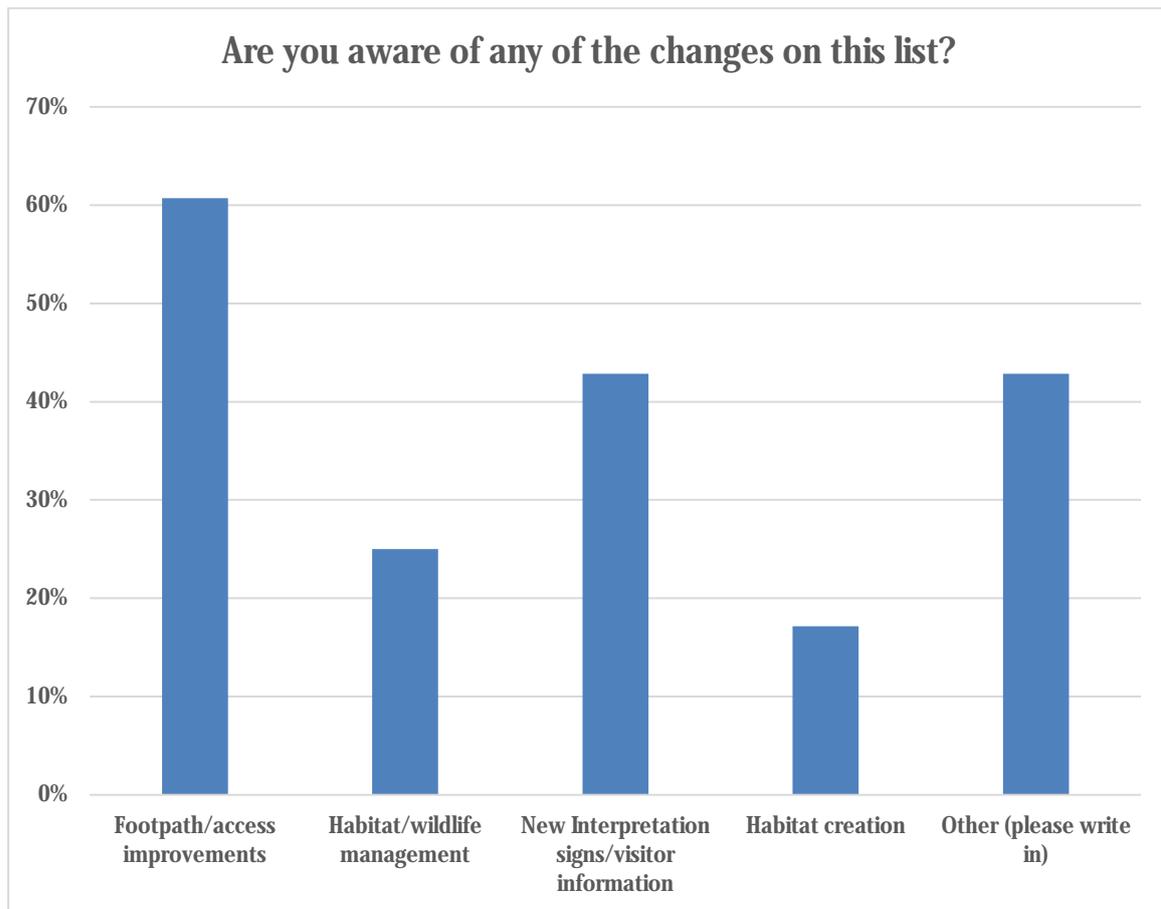


Figure 91 Prompted Awareness of Project Work

Perception of the changes at the sites was very positive, with an average response of 4.4 on a scale from 1 (very negative) to 5 (very positive).

Despite most visitors being 'regulars' (at least once a week) on average respondents said they thought they would visit more often in future – 3.7 on a scale from 1 (much less often) to 5 (much more often).

- The majority of visitors were walkers and dog walkers and including these the most popular activities were different forms of exercise/physical activity.
- There were high levels of cycling (30%) with the majority of these respondents being visitors to the canals.
- About 15% of visitors quoted jogging or running.
- Around a fifth of visitors mentioned wildlife/birdwatching as a reason to visit.

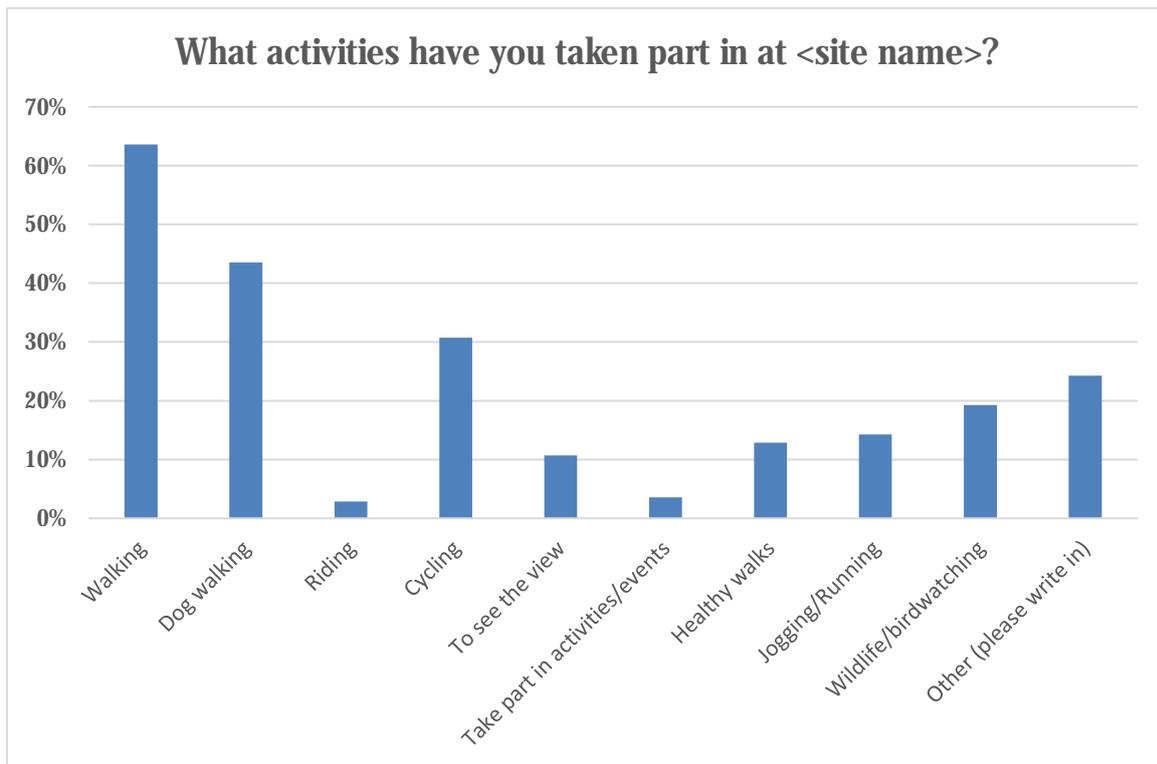
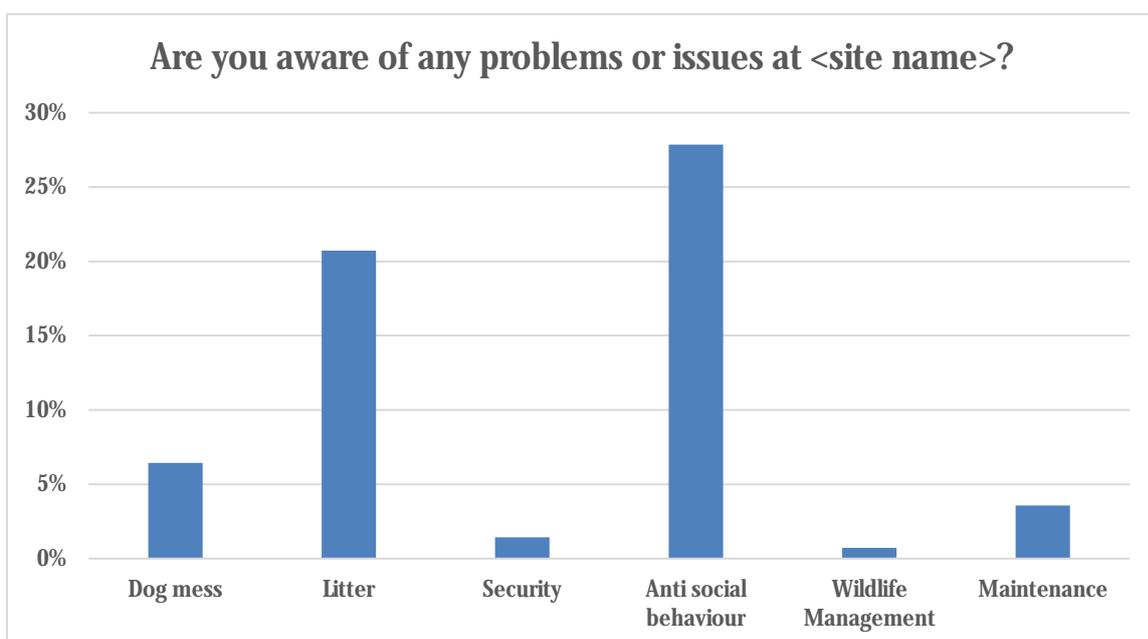


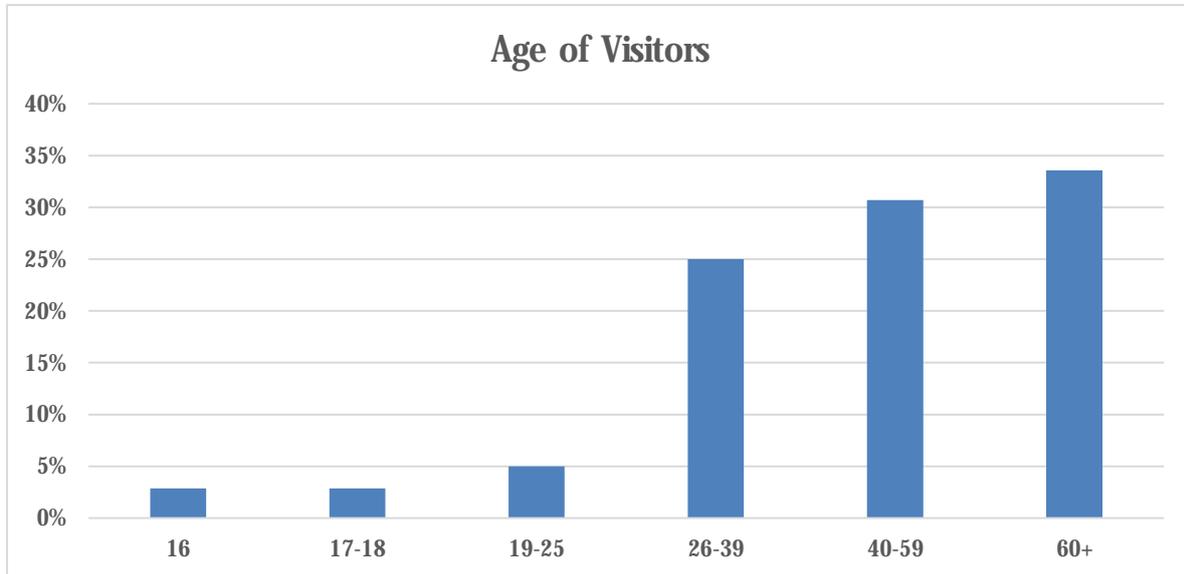
Figure 92 Activities undertaken by visitors

- **Problems highlighted were chiefly anti-social behaviour and litter, but complaints relating to wildlife management and maintenance were minimal.**

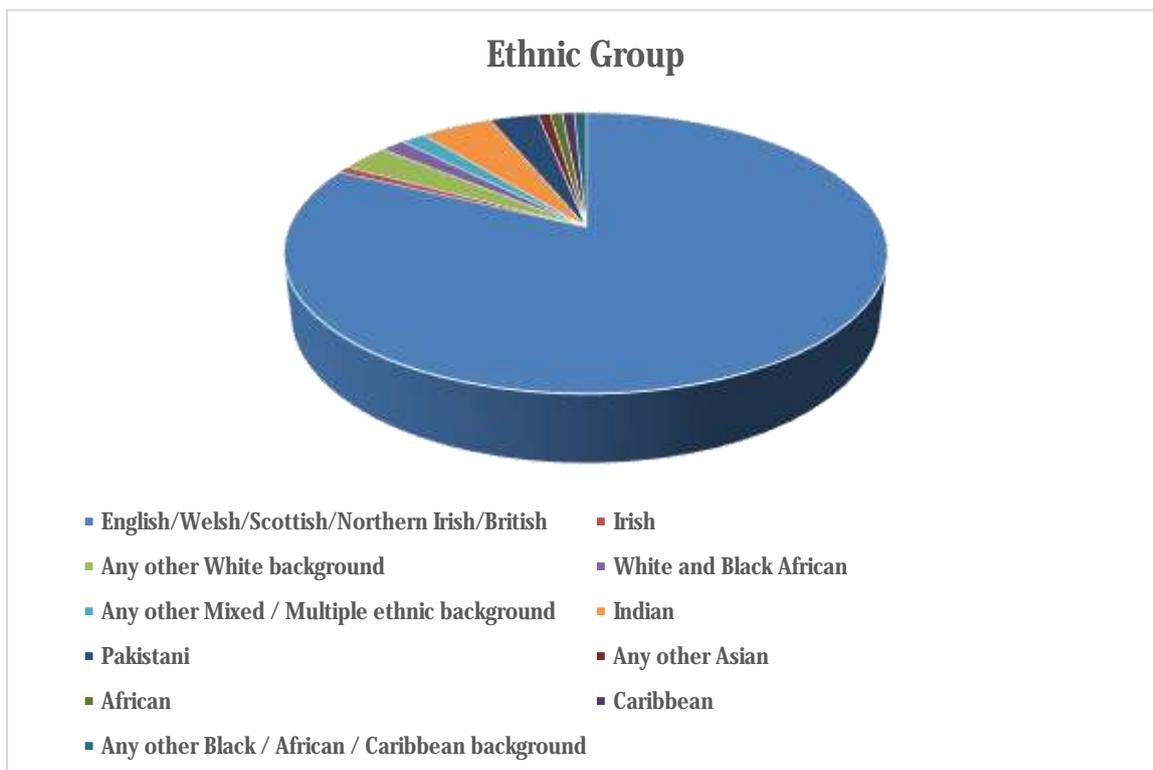
Only a small percentage of respondents said dog mess was an issue, this may be because many interviewees were dog walkers. The 'other' category has been excluded as virtually everything mentioned was easily assigned to the specific categories. This includes the use of motorbikes and quad bikes (assigned to anti-social behaviour) with 8 complaints at Reedswood Park and 11 at Smestow Valley, representing about 25% of visitors to these sites.



- Visitors feel positive about the changes on site (3.9 on a scale 1-5) and work undertaken and are almost all likely to visit again in the future (4.8 on a scale 1-5).
- Correcting for the different widths of the age bands, the age spread of visitors is very even covering the range 16 to over 60, although 19-25 years olds may be slightly under-represented.



- The great majority of visitors (79%) are white British. The local profiles for Wolverhampton is 68% white British and for Walsall 77% white British, so from an area-wide perspective ethnic minority groups are somewhat under-represented. However, this cross-section reflects the demographics of the communities most local to these sites.



- The number of visitors considering themselves to have a disability was 9%. This compares to an area-wide figure of around 20%.

Visitors are almost entirely local, with all but a handful coming from postcodes remote from the sites where people were interviewed.

- The socio-economic background of visitors appears remarkably evenly spread across groups B to E, however we did not interview any visitors from the most affluent group, A (typically professionals and senior managers).
- Visitors at the Smestow Valley appeared generally to be from more affluent backgrounds likely to be reflecting local demographics.

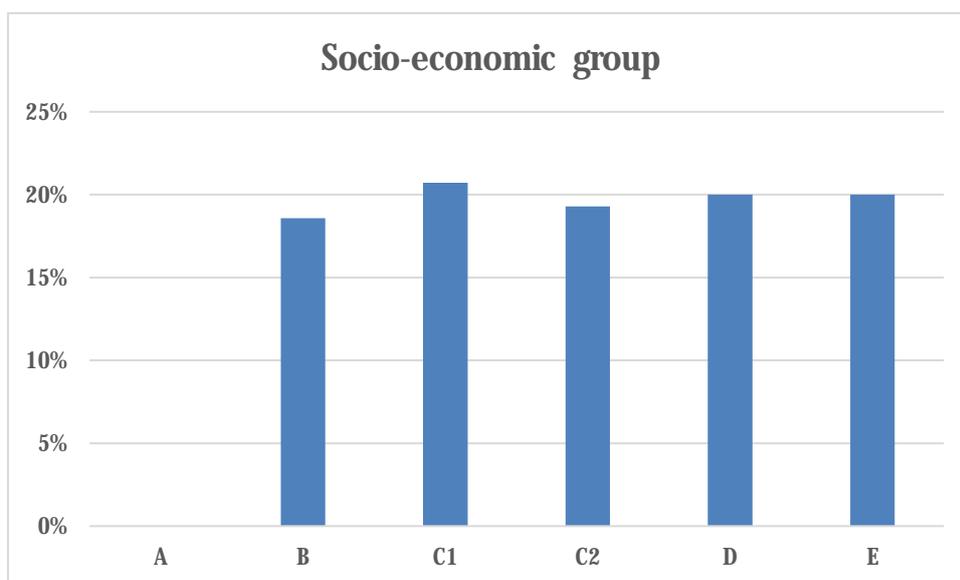


Table 3 - Explanation of Socio-Economic Groups

Grade	Social class	Chief income earner's occupation	Approx. UK Percentage
A	upper middle class	Higher managerial, administrative or professional	4%
B	middle class	Intermediate managerial, administrative or professional	23%
C1	lower middle class	Supervisory or clerical and junior managerial, administrative or professional	28%
C2	skilled working class	Skilled manual workers 20%	
D	working class	Semi-skilled and unskilled manual workers	15%
E	non working	State pensioners, casual and lowest grade workers, unemployed with state benefits only	10%

Evaluation Against ERDF Criteria

Project Context

Black Country Blue Network set out to rehabilitate 8 hectares and improve the conservation status of 21 hectares of green space linked by the canal and river network (blue network) within the Black Country.

The economic and policy context at the time that the project was designed was the 30 year Vision for the Black Country, underpinned by the Black Country Study which identifies two key drivers for change:

- Education and skills and
- Transformation of the environment

Transformation of the Environment is the core issue addressed by the project.

The basic market failure addressed by the project is a 'vicious circle' whereby perceptions of low environmental quality deters the inward investment that could resource environmental improvement. The logic model for the project sets out a convincing argument that intervention to raise the quality of the environment ultimately makes the area a more attractive place to live and work (as well as addressing a range of other needs), thereby helping attract the investment that can help support further improvement.

The rationale for the project is sound in the light of three main considerations:

1. The project is clearly set within a wider strategic context rather than being an arbitrary response to environmental concerns. As such it can potentially achieve synergies with and avoid duplication of or conflict with other environmental initiatives.
2. By aggregating a number of smaller projects under a strategic umbrella it is able to make a measurable impact.
3. The project is having an impact at the level of local communities and also on the significant local indicator 'provision of Local Nature Reserves'.

It is apparent that the scale of this, or almost any single, project is not capable of achieving environmental transformation alone, and the success of the project should not be judged against such a high bar.

The success of the project in achieving its targets and supporting its wider objectives evidences that it was appropriately designed, and the delivery model is appropriate for the project. It was not perfect as the situation regarding the withdrawal of the Ford Brook element demonstrates, however, the partners were able to compensate for this and other changes. The delays to finalising the specific scheme designs resulted in late implementation towards the very end of the project timeline

The output targets set for the project for rehabilitation and improvement of habitats were realistic and deliverable and will both be met. The wider biodiversity targets were realistic and achievable, albeit chiefly at the level of the sites themselves with limited impact on the wider landscape.

During delivery there were a number of challenges, mostly as a result of the fairly short timescale compounded with the uncertainty around Brexit which contributed to a slow start. The project dealt well with this challenge and also some changes in the sites where outputs would be delivered. Ultimately, the project has overcome these difficulties.

Were the targets set for the project realistic and achievable?

To rehabilitate 8.4 hectares of greenspace

This target was realistic, easily measurable and will be achieved by the project.

To support 21 hectares to attain better conservation status

This target was realistic and achievable, however to evidence the degree of success would require long-term monitoring.

To reverse the decline in, restore and enhance degraded ecosystem services halting overall biodiversity loss.

This target was realistic and achievable, albeit chiefly at the level of the sites themselves with limited impact on the wider landscape. To evidence the degree of success would also require long-term monitoring.

To increase the biodiversity of the areas, including woodland management, wildflower meadows and measures to encourage native species

This target was realistic, and the evaluation work carried out suggests that much of the work carried out has already had positive impacts on biodiversity.

To increase access to green space for local residents improving their quality of life

At Smestow Valley access to an additional 5ha of land will be provided at the former Wolverhampton Environmental Centre (WEC). Across other sites, surveys of site users suggest that the majority of visitors feel that the sites have been improved.

Increase numbers of visitors using the sites

This target is realistic, but without a previous baseline measure of visitor numbers it is not possible to objectively assess changes in numbers. Instead, site users were asked about their visiting habits.

The visitor surveys carried out did not identify many new users, noting that the catchments of the sites were almost wholly local people, however they did indicate that, on average:

users expect to visit more frequently following the works.

To make the areas more attractive to investment by improving greenspace in strategic regeneration areas

This is a very subjective target, but the improved perceptions of the sites by users are likely to reflect an overall improvement in perceptions. This is most likely to have a significant impact in the context of Reedswood Park and the Wyrley and Essington Canal by virtue of their locations and size. It is also likely that the improvements to Smestow Valley will bring benefits, particularly in the context of the new housing development near the site.

Ultimately, from this perspective the project has to be seen within the wider context of the environmental transformation of the Black Country, where it is one of the most significant recent projects addressing this issue through work on accessible natural greenspaces.

Greater understanding of biodiversity through marketing and signage

This target is realistic. The survey of site users showed, where new interpretation was in place that many of visitors were aware of it and also a fair number of respondents showed understanding of the biodiversity and habitat management works.

Improving water quality in line with Water Framework Directive

Several project elements contributed to improving water quality. The dredging of pools at Reedswood Park, and work on the Anson Branch Canal have clearly benefited the ecological status of these waterbodies. The work programmed for the Bradley Arm Canal also brought significant benefit in terms of ecological quality.

The removal of an aqueduct structure on the Ford Brook was withdrawn from the program. The original proposal for this work appeared realistic and achievable, but it was not possible to commission the work through the EA's framework agreement within the agreed budget.

Overall it is clear that the project has contributed to the incremental progress towards achieving the objectives of the Water Framework Directive.

How did the context change as the project was delivered and did this exert any particular pressures on project delivery?

The main contextual change throughout project delivery has been the ongoing impact of austerity measures and uncertainty around Brexit and the future resources for ongoing management beyond the project lifetime.

The pressures this placed on project delivery were:

- Constraints on staff capacity to support project delivery.
- Uncertainty around the impact of Brexit on the ERDF programme, compounding the effect of a delayed start and limiting the timescale for delivery (the project timetable was agreed before the availability of ERDF funding beyond 31 March 2019 was confirmed).
- Wider uncertainty around possible availability of resources for future projects building upon Black Country Blue Network.

A more minor impact was the withdrawal of the Biodiversity Action Recording Scheme during 2016 which had been proposed as the mechanism for recording the project's biodiversity outputs. Instead project ecological records will be lodged with the ecological record centre for Birmingham and the Black Country, EcoRecord.

Bearing in mind any changes in context or weaknesses in the project design/logic model, can the project reasonably be expected to perform well against its targets?

The project is expected to slightly exceed its targets.

Project Progress

Overall the project is projected to achieve 95% of its planned spend (£1,172,866).

This is split, with capital works at 92% of planned expenditure (£887,741). Revenue costs exceeded target at 105% (£285,125).

These variations were agreed with MCHLG.

The project exceeded its output target for rehabilitation of land by 3.8ha but missed that for habitats supported for improved conservation status by 1.2ha:

- (C22) Total surface area of rehabilitated land, target 8ha, delivered 11.8ha.
- (C23) Surface area of habitats supported in order to attain better conservation status, target 20ha, delivered 18.8ha.

There are two significant factors that have impacted on the project's performance:

The planned start date was 1 January 2017. The Grant Funding Agreement was signed with DCLG on 6 July with a retrospective start of 1 January. Aside from planning and development work only limited practical work was undertaken prior to this date as part of Growing Local Flora and the change of grassland management at Reedswood Park.

The withdrawal of the Ford Brook element. The original proposal for this work appeared realistic and achievable, but it was not possible to commission the work through the EA's framework agreement within the agreed budget. It appears the original cost estimate was reasonable and that this difficulty could not have been easily foreseen.

There were also some less significant issues that affected delivery:

- The original signs for Reedswood Park were inadequately robust and the contractor had to upgrade them.
- During the 2018 heatwave there were several instances of the grassland and strewn hay being set alight.
- Delays in approval of signage for the Wyrley and Essington canal due to issues around the Canal and River Trust logo change.
- Delays associated with the process involved in the declaration of the new Wyrley and Essington LNR and extension of the Smestow Valley LNR.

When the project draws to a close, it is expected to have achieved what it set out to. It is anticipated that, other than the Ford Brook element the project will have delivered all its outputs, partly by substituting additional work on new and existing project sites to compensate for land lost from the programme.

Project Delivery and Management

The project has been well managed. The combination of a steering group comprising a good range of persons representing various roles across all the partners and the support of a part-time Project Manager have been essential to the success of this rather complex project. This structure has enabled the project partners to deliver and achieve project targets despite having to incorporate several changes as the project has progressed.

The delivery of project outputs has been to a consistently high standard, which is commendable given the way the project is spread across so many different sites and the involvement of a great many subcontractors.

The project could have been improved if more planning of the conservation work had been carried out at an earlier stage, this might have allowed much work to take place earlier and would have simplified the setting up of land management arrangements for the sites post-project. The project could also have benefitted from a prompter start to its communications work and greater engagement of the partners in delivering communications, especially through social media.

The project did not have any direct beneficiaries.

Face to face interviewing was undertaken with 140 visitors to the majority of project sites. The response of stakeholders to the project was almost entirely positive with very high levels of awareness of the project and satisfaction with the quality and type of work carried out.

Governance of the project was good, with work undertaken before submission to gauge the opinions of local stakeholders and the project work addressing local priorities that have been set via a democratic and inclusive processes. The cross section of interviewees suggested that the beneficiaries of the project were both drawn from local communities and, allowing for the sample size, broadly representative of the demographics (race, socio-economic status, age, disability) of those communities. Sustainability issues appear to have been taken seriously by the project partners with responsible choices of materials and the work itself playing an active role in addressing the sustainable management of biodiversity and green spaces and increasing their resilience to climate change.

Project Outcomes and Impact

The outcomes set out in the project's Logic Model are given below.

Table 4 Outcomes set out in Logic Model

	Indicated Outcome	How is it measured?
1	Increased biodiversity	Biodiversity Actions Reporting System (BARS)
2	Increased access to green space	fixed point photography before and after record of access works
3	Increased visitor numbers	Visitor count, visitor survey, staff monitoring
4	Increased understanding of biodiversity	Photographic audit of interpretation and signage

The project rehabilitated 11.8 hectares of greenspace and supported 18.8 hectares to attain better conservation status. This clearly will have a significant positive impact on biodiversity. The wider

objectives *to reverse the decline in, restore and enhance degraded ecosystem services halting overall biodiversity loss and to increase the biodiversity of the areas, including woodland management, wildflower meadows and measures to encourage native species* were realistic, albeit chiefly at the level of the sites themselves with limited impact on the wider landscape. The evaluation work carried out suggests that the work carried out has already had positive impacts on biodiversity across the sites and this can be expected to increase over time, especially if positive management is sustained. Increased Access to Green Spaces and increased visitor numbers - an additional 5ha of accessible land was provided and surveys of visitors to other sites suggest that the majority expect to visit more frequently following the works. It is likely that these objectives have been met. The majority of visitors interviewed were aware of the interpretation provided by the project, it is assumed that this will lead to an increasing in the understanding and appreciation of the site's biodiversity.

The following impacts were set out in the logic model:

Table 5 - Impacts from Logic Model

Impact
More flora and fauna
Better quality of life
Positive health outcomes
Increase attractiveness to investment

Table 6 Impacts set out in Logic Model

Unfortunately to accurately assess the long term increase in flora and fauna would require further work stretching over several years. In the short term there was evidence that some of the work had a strong short-term effect:

- Use of restored open water by amphibians and other wetland species.
- Recovery of ground flora under managed woodlands.
- Response of grassland areas to new management.

It is not possible to make any assessment of works carried out since summer 2018, however the work carried out is of good quality and follows good practice and increases in the diversity of flora and fauna are to be anticipated.

The three other impacts can only be addressed subjectively due to lack of clear baseline data and difficulties in proving causality. It is evident that site users were highly appreciative of the project work and that the sites play an important role in supporting healthy lifestyles and the project can be expected to bring incremental benefits to quality of life and health outcomes. Attractiveness to investment is very difficult to judge, as the sites are only one element in the much wider work to improve the environment of the Black Country, and hence its attractiveness to investors. That said, it is hard to conclude that the project work has made a positive contribution in this area.

To what extent are the changes in relevant impact and outcome indicators attributable to project activities?

The direct outputs were all clearly attributable to the project.

To fully evidence the degree of success in achieving the various other outcomes would require long-term monitoring and it would still be very hard to accurately attribute any changes to the project. The lack of comprehensive baseline data, and confounding factors obscuring the impact of these benefits with those arising from other initiatives and the long-term nature of the impacts of the work undertaken mitigate against statistically robust analysis of these benefits. This evaluation should be seen as evidencing progress in support of achieving these objectives by supporting the overall strategy for achieving transformation of the Black Country's environment.

The project will clearly support the ERDF programme result indicators through its contribution to the rehabilitation and improvement of conservation status targets.

What are the gross and net additional economic, social and environmental benefits of the project (where relevant and applicable to project activities)?

Economic Benefits

The project does not have any specific economic objectives. Nonetheless it is likely that the project will have some economic benefits through supporting the environmental transformation of the Black Country.

This is particularly as a consequence of its investment in green infrastructure and increased natural capital. These benefits of the project are intangible and not easily measured, but are likely to include:

- Reduced healthcare costs by promoting and facilitating healthier and more active lifestyles.
- Increasing the attractiveness of the area for inward investment.
- Supporting property values by improvement of the area's image.

Environmental Benefits

A challenge faced by this evaluation is that although we can observe and quantify the amount of work carried out to rehabilitate and improve the conservation status of habitats and make informed assessments of their appropriateness and likely future impact, the nature of natural habitats is that the full impact of the project will only be observable after several growing seasons.

Allowing for this, the project still appears to have brought many environmental benefits already and we expect further benefits as the work continues. These benefits should continue to accrue for several years beyond the end of the project.

Social Benefits

The lack of baseline data (such as information on visitor numbers and attitudes) limits the amount of objective assessment that can be made of the project's social impact. Our approach has been to undertake visitor attitude surveys on the larger sites.

The objective of the surveys was to collect data on site use by visitors (frequency, nature of activities), their socio-economic profile and, most importantly, their awareness of the works carried out and their subjective views on the impact of the works and how it is likely to affect their use of the sites.

The responses to the surveys support a number of tentative conclusions:

- A significant number of site users are aware of the project work.
- The work on the sites is generally perceived positively and is often considered to be indicative of improved overall management of the sites.
- A considerable proportion of users stated that the improvements would encourage them to make more use of the sites in the future.

The project has had a positive impact on local communities by:

- Providing improved natural accessible greenspace for recreation and amenity.
- Promoting healthy and active lifestyles.
- Increasing appreciation, awareness and understanding of the local environment.

Can these benefits be quantified and attributed to the project in a statistically robust way?

The lack of comprehensive baseline data, and confounding factors obscuring the impact of these benefits with those arising from other initiatives and the long-term nature of the impacts of the work undertaken mitigate against statistically robust analysis of these benefits.

Project contribution to ERDF programme result indicators

The project addresses two ERDF programme result indicators:

C22 Total surface area of rehabilitated land

C23: Surface area of habitats supported in order to attain better conservation status

The project exceeded its target for C22 but fell slightly short on C23, although the overall total was higher than planned (30.6ha instead of 28ha).

Although the target for C23 was missed this was arguably due to how the outputs were classified rather than an actual failure of the project to deliver, as the 6ha delivered at Bradley Arm could have been classified under either target.

Strategic Added Value that the project has created

The stakeholder survey clearly showed the importance of the project sites in supporting healthy, active lifestyles. While the impact of the project on health cannot be quantified, it is apparent that the project is likely to have had a positive impact by improving and providing additional accessible natural greenspace for a wide range of activities supporting healthy lifestyles.

The project has also been successful in adding value in other areas:

- The project work appears to have catalysed additional works alongside project activity.
- There has been valuable community and volunteer engagement with several of the project elements.

- The project has strengthened wider biodiversity networks.
- Demonstrating the feasibility and benefits of a strategic approach to conservation management

Value for money

Provide a brief analysis of the value for money that the project has provided and, where possible, benchmarks against other similar interventions.

It is not possible to perform a simple calculation of value for money on a basis such as the cost per hectare of the works undertaken, as they are not directly comparable with standard figures for typical land management costs. This is for a number of reasons:

- Additional costs associated with the works such as preliminary surveys and production of revised management plans.
- Extra interventions such as interpretation signage and access improvements.
- Additional access and interpretation works on parts of the sites that do not count towards the output hectareage.
- Additional works such as project management, communications, administration and evaluation.

Whilst these additional costs do not relate directly to land rehabilitation and the improvement of the conservation status of land, they have been material to ensuring the success of the project, supporting the long term management of the sites post-project but chiefly in bringing the benefits of the project to a wider cross section of the local communities.

The costs associated with the project have all been subject to open tender processes consistent with procurement requirements. All the various works have been delivered with costs in line with typical prevailing costs for such work.

We note that the ultimate reason for the withdrawal of the *Ford for the Future* project was that it was not possible to secure the required services to carry out the work within the forecast budget.

Our conclusion is that the project represented value for money in the context of its wide-ranging impact on greenspaces and the communities that use them

Conclusions and Lessons Learnt

Strengths

- Exceeding the project's overall output target, although the target for C23 was missed this was arguably due to how the outputs were classified rather than an actual failure of the project to deliver:

(C22) Total surface area of rehabilitated land, target 8ha, delivered 11.8ha.

(C23) Surface area of habitats supported in order to attain better conservation status, target 10ha, delivered 18.8ha.

- Achieving these targets while keeping total spend under budget:

Overall the project is projected to achieve 95% of its planned spend (£1,172,866).

This is split, with capital works at 92% of planned expenditure (£887,741). Revenue costs exceeded target at 105% (£285,125).

- Undertaking a major and intensive changes in management to put the various project sites in 'good places'.
- Drawing together a positive cross-sectoral partnership.
- Having in place sound arrangements for governance and management.
- Robust tendering processes which ensured that subcontractors delivered high quality at reasonable cost.
- Using strategic plans and additional strategic approaches (such as the Biodiversity Enhancement Area) to inform the actions taken.
- Using this strategic approach to tie together a number of discrete sites into a coherent whole by using the areas 'blue network' to link them but not requiring all project sites to be 'blue infrastructure'
- Achieving transformative change on sites that are well used by local communities and of real value for biodiversity.

Weaknesses

- Lack of a clear plan and objectives for communications, compounded by delays in appointing a communications consultant.
- Delays in producing management plans for the sites; ideally these should precede management work being undertaken.
- Inconsistencies of outputs in the original planning stages, compounded by lack of clarity about how some outputs might be best classified.

Specific lessons for audiences:

Grant recipient/project delivery body

- Many (but far from all) of the works carried out in early 2019 could have been put out to tender earlier, say in summer 2018 avoiding the rush to complete the works by the end of March 2019.
- Greater use of partner's own social media channels would have helped improve project communications.
- Temporary signage can be effective in communicating the purpose of work in progress to local communities.

Those designing and implementing similar interventions

- A provisional delivery timetable and outline specifications for the work are produced in greater detail at the earliest possible stage.
- That if additional time for delivery is likely to be available advantage should be taken of this, even if only to add an extra year's maintenance to the project, as this would provide an extra backstop in the event of delays
- A dramatic response to changes in grassland management by suspension of regular mowing should be anticipated, and managers should be prepared for the need to remove large quantities of hay/haylage at the end of the summer.
- In areas where arson may be an issue, consider leaving firebreaks in areas of strewn hay.
- Having a Project Manager was in place throughout delivery and able to allocate a full 50% of their time to the project, meant that they had a detailed knowledge of the outputs and project sites as well as being able to maintain a consistent and supportive working relationship with all the partners.
- Effective joint working enabled the project to deal with changes and challenges and facilitated more efficient delivery.

Policy makers

- The transformative value of strategic biodiversity projects and their positive impacts on communities.
- The positive impact on amphibian populations of restoring even fairly small and apparently isolated ponds, even in urban areas should be appreciated.
- Lack of clarity in the 'grey area' between rehabilitation of land and improving the conservation status of habitats.

Other (please specify)

- Management plans should be prepared at an early stage, rather than retrospectively, in order to maximise their usefulness and help secure ongoing management beyond the project lifetime.

Table 7 Project Funding Profile (as of 28 February, not finalised figures)

Original Values		ERDF / ESF (a) (£)	Public Match (b) (£)	Private Match (c) (£)	Total (d) (£)	Intervention rate (%) (a)/(d) x 100	Total public funding (%) (a+b)/d 100
Capital	ERDF	484,957	484,958		969,915	50%	100%
Revenue		135,445	135,454		270,899	50%	100%
Sub Total		620,402	620,412		1,240,814	50%	100%
TOTAL		620,402	620,412		1,240,814	50%	100%

Projected for end of Project		ERDF / ESF (a) (£)	Public Match (b) (£)	Private Match (c) (£)	Total (d) (£)	Intervention rate (%) (a)/(d) x 100	Total public funding (%) (a+b)/d 100
Capital	ERDF	443,870	443,871		887,741	50%	100%
Revenue		142,562	142,563		285,125	50%	100%
Sub Total		586,432	586,434		1,172,866	50%	100%
TOTAL		586,432	586,434		1,172,866	50%	100%

Projected Spend as a Percentage of Original Value		ERDF / ESF (a) (£)	Public Match (b) (£)	Private Match (c) (£)	Total (d) (£)	Intervention rate (%) (a)/(d) x 100	Total public funding (%) (a+b)/d 100
Capital	ERDF	92%	92%		92%	100%	100%
Revenue		105%	105%		105%	100%	100%
Sub Total		95%	95%		95%	100%	100%
TOTAL		95%	95%		95%	100%	100%

Table 8 - Delivery of Project Outputs Against Targets

Site	Habitat	Planned			Achieved			Variance		
		Rehabilitate	Improve	Total	Rehabilitate	Improve	Total	Rehabilitate	Improve	Total
Smestow Valley	Meadow		5.0	5.0		3.2	3.2	0.0	-1.8	-1.8
	WEC	4.0		4.0	5.8		5.8	1.8	0.0	1.8
	Woodland		2.4	2.4		1.8	1.8	0.0	-0.6	-0.6
Wyrley & Essington			3.4	3.4		4.5	4.5	0.0	1.1	1.1
Bradley Canal	Dredging	4.0		4.0	6.0		6.0	2.0	0.0	2.0
	Creation		6.0	6.0		0.0	0.0	0.0	-6.0	-6.0
Ford for the Future	River		1.3	1.3		0.0	0.0	0.0	-1.3	-1.3
Reedwood	Heathland			0.0		0.2	0.2	0.0	0.2	0.2
	Woodland		2.0	2.0		2.0	2.0	0.0	0.0	0.0
	Meadow			0.0		5.0	5.0	0.0	5.0	5.0
	Wetland			0.0		0.8	0.8	0.0	0.8	0.8
Anson Branch Canal	Wetland		0.7	0.7		0.8	0.8	0.0	0.1	0.1
Moorside Gardens Allotments	Stream			0.0		0.3	0.3	0.0	0.3	0.3
Rushall Park	Woodland			0.0		0.2	0.2	0.0	0.2	0.2
Totals*		8.0	20.0	28.0	11.8	18.8	30.6	3.8	-1.2	2.6