



Westonbirt, the National Arboretum

Evaluation Report
Phase One of
The Westonbirt Project
2013-2017



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Acknowledgements: The team at Westonbirt would like to thank all the supporters, donors, community participants, volunteers and staff who have helped make this project possible. Special thanks also to the Heritage Lottery Fund for awarding us a £1.9m grant which enabled us to achieve so much.

Foreword

Robert Holford was a Victorian entrepreneur who was also a plant collector and visionary. He created at Westonbirt in the 19th century one of the world's finest collections of trees, laid out in the picturesque landscape style. After passing through successive generations of Holfords and Morleys, in 1956 the arboretum came into the care of the Forestry Commission (FC). As a public institution it took on a broader range of objectives from plant conservation and scientific research to recreation and learning.

In 2001 Westonbirt was awarded the status of National Arboretum with a mission 'to connect people with trees to improve the quality of life'. By this time it was recognised that public access was having a negative impact on the heritage and landscape. The site lacked facilities to properly accommodate the number of visitors, yet there was inadequate revenue to reinvest. A decade passed while many ideas were discussed until the plan, Phase One of which formed this Heritage Lottery Fund project, won approval.

The 'Westonbirt Project' has brought the arboretum into the 21st Century and utterly transformed its ability to meet its mission. Through carefully considered infrastructural improvements and imaginative approaches to interpretation and engagement, Westonbirt has taken a step change in its accessibility and value for enjoyment and learning.

Successful initiation of the Heritage Lottery supported Phase One gave the FC and our partners, the Friends of Westonbirt Arboretum charity, the confidence to embark immediately on Phase Two. Phase One has created an enhanced visitor welcome and enabled landscape and habitat restoration as well as a greater level of participation. Phase Two provided an award winning STIHL Treetop Walkway and improved operational facilities for the care of the tree collection. The two phases complement each other and have resulted in a much more sustainable basis for funding and conserving the arboretum.

We are immensely grateful to all those who supported the development and implementation of this project: The Friends of Westonbirt Arboretum, Heritage Lottery Fund and many other donors, our staff, volunteers and contractors. When it has been such a great collective effort it is invidious to pick out any individuals but we pay particular tribute to Stephen Segar OBE, then Chair of the Friends, who galvanised trustees and members into championing a project an order of magnitude larger than anything undertaken before; Miranda Winram who brought together a decade's worth of well-considered but disorganised ideas and knocked them into a credible plan. And Sophie Nash who managed the project brilliantly for 6 years, providing the thread of continuity and considerable skill and determination.

Simon Toomer, Arboretum Director 2009 - 2015

Andrew Smith, Arboretum Director 2015 – to date

Executive Summary

1.1. What was the Project?

Based in the Cotswolds, Westonbirt, the National Arboretum is one of the world's finest botanical collections of trees and shrubs in 600 acres of a beautiful historic Grade I registered park and garden. Since 1956 the arboretum has been managed by the Forestry Commission (FC). It has been supported by the Friends of Westonbirt Arboretum Charity (FOWA) since 1985. The arboretum now attracts over 500,000 visitors per year.

In 2012 the arboretum team undertook a large capital project at a cost of £4.3million. The project included the creation of a new entrance building known as the Biffa Award Welcome Building, a new visitor car park for over 400 vehicles and removal of the former visitor car park from the centre of the arboretum to restore this area back to its original state. The project also included a variety of visitor exhibitions and interpretation to enable them to improve engagement and understanding of the site and the development of a new community programme for young people and older adults at risk of exclusion. The project is referred to as Phase One of the Westonbirt Project.

1.2. Project Management Success

At commencement Phase One was by far the largest and most ambitious projects ever attempted by the FC and FOWA. The project has been hugely successful and was delivered on time, on budget and to a high standard and resulted in a number of awards and shortlists. The successful delivery of the main capital elements built confidence and led to the development and delivery of Phase Two of the Westonbirt Project, which has also been delivered on time, on budget and received multiple awards.

1.3. Project Achievements

From the 17 project outcomes, 16 have been fully or partially achieved through completion of 59 project outputs. Some of the project achievements and resulting outcomes are shown below.

Restoration of our Heritage

- Over 15,000sqm of Grade 1 Downs landscape have been restored following the relocation of the former visitor car park. The restored area is now contributes to two Biodiversity Action Plan habitats which are in national decline, lowland calcareous and lowland meadow grassland. The flora species recorded in the former car park have now increased in each quadrat from 7 to 19, this is a long term restoration project which is showing positive signs of improvement.
- The restored area now provides grassland habitat and has been regularly surveyed by volunteers for bees and butterflies both have increased in species and number. We also held a successful BioBlitz event with 1,000 biological records gathered over two days.
- 3,534m of the historic boundaries have been restored and reinstated as part of the restoration of the historic landscape.

Visitor Welcome and Experience

- Completion of all elements of the original planned project including the new Welcome Building and all of the planned new interpretation. The change has resulted in over 80% of visitors' saying there was something for their entire group to do, and over 93%

visitors' saying they would recommend the arboretum to friends and family in our 2017 surveys.

- Visits have increased from 300,000 to over 500,000. FOWA membership has also increased from 28,000 to almost 32,000. Visitor and member profiles have also changed to represent the wider population with an increase in families and younger couples.
- The Interpretation Support Officer role created as part of the Project, has now become a permanent staff position within the arboretum team.

Community Programme

- Was one of the most successful elements of the project exceeding targets. 554 community group sessions were led by the two community officers with engaging with 4,944 participants & 141 different organisations.
- The evaluation demonstrates that participants now have an increased understanding and interest in trees and woodland management. Participants, staff and volunteers have also demonstrated an improvement to their mental health and wellbeing. The community programme will continue following the end of the HLF funding demonstrating its success.
- A permanent Community Coordinator role has been created within the arboretum team, following the success of the community programme.

Volunteering

- 403 individuals volunteered as part of the project, contributing over 21,000 hours towards the project.
- Nine new project volunteering roles were created and will continue beyond the end of the project
- In total, 38 external training sessions were held with 1,150 volunteers attending internal and external led training sessions.

1.4. Lessons Learnt

A number of lessons learnt are included within the individual section and summarised within section 10. The main lessons learnt are;

- Project management and use of specialist project managers to develop and deliver a project of this scale
- Ensure project team integration and wider team engagement from day-to-day staff throughout the project from planning through to delivery.
- Plan marketing and promotion and be prepared to make changes and try new things especially technology based interpretation.
- Flexibility in delivering and setting targets when creating a project of this scale, especially when creating a new community programme which we had little experience and expertise of when developing our Activity Plan.

1.5. What's Next?

- We will continue to develop our community programme looking at ways to build on the success of this element of the project with a focus on mental health and wellbeing and to ensure the arboretum is seen by the local community as a place and resource for them.

- We are planning to develop and continue to refresh the Welcome Building exhibits. We are also planning to build on the success of two of the specialist trails; Birt's i-Spy Adventure and The Little Book of Disappearing Trees and develop an arts strategy.
- We have plans to build on the success of the capital elements of the project including the development of a new activity (learning) centre, science facilities and new offices.

1.6. How to Navigate this Report?

This report is split into ten sections. Sections 1 – 4 provide the overview of the project, the outcomes and indicators, how we collected evidence of achievement, what we wanted to happen and what actually happened. Sections 5, 6 & 7 explain in more detail the three main project aims, their associated outputs and the outcomes. Section 8, 9 and 10 explains what didn't go as well as we would have liked, the lessons learnt from our project and what are plans are for building on our lessons learnt and achievements.

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C	The Team & HLF Funded Roles
D	A Five Year Assessment of the Grassland Habitats and their Restoration' Forest Research
E	2017 Fauna Report, Volunteer Fauna Group
F	Visitor Experience Report, Forest Research
G	Photos of the Interpretation, the TreeQuest App & Specialist Trails
H	Welcome Building Interpretation, Focus Group, Heritage Insider
I	A Calm, Peaceful and Beautiful Place' Community Programme Evaluation Report, Forest Research
J	'How to Hygge a Tree', Community Programme Resource
K	Volunteer Survey Report, 2017
L	Project Volunteers and Community Participant Interviews
M	Summary of Survey Monkey Responses: Community Group Leaders
N	Communication Examples & Articles, including the FOWA Magazine
O	Awards and Case Studies

1. What We Wanted To Happen

1.1. Background

Based in the Cotswolds, Westonbirt, the National Arboretum is one of the world's finest botanical collections of trees and shrubs, with over 2,800 taxa and 15,000 specimens growing in 600 acres of a beautiful historic Grade I registered park and garden. Since 1956 the arboretum has been managed by the Forestry Commission (FC). It has been supported by the Friends of Westonbirt Arboretum charity (FOWA) since 1985. The arboretum now attracts over 500,000 visitors per year, a significant increase from 321,118 visitors in 2012/13 when the project began. The arboretum is now the largest pay to enter attraction in Gloucestershire.

In late 2012 the arboretum was awarded a £1.9m grant from Heritage Lottery Fund (HLF) towards Phase One of the Westonbirt Project in addition to £2.4m raised from other donors. This grant enabled the project team to go-ahead with the largest capital project undertaken at the arboretum. The project included; a new entrance building known as the Biffa Award Welcome Building, a new visitor car park for over 400 vehicles and removal of the former visitor car park from the centre of the arboretum to return this area back to its grassland state. The grant also enabled the team to deliver an activity plan which included a variety of visitor exhibitions and interpretation to enable them to improve engagement and understanding of the site and the development of a new community programme for young people and older adults at risk of exclusion.

In the meantime the successful initiation and fundraising for Phase One unlocked the potential for, and gave the FC and FOWA the confidence to, embark on a separately £2.4m funded Phase Two project that has been completed in parallel. Phase Two has delivered three further award winning structures: the 300m STIHL Treetop Walkway which is fully accessible to visitors and the Wolfson Tree Management Centre which comprises two operational buildings, a Machinery Store and Mess Building. The two phases were designed to complement each other.

1.2. Our HLF Aims and Outcomes

The aims and outcomes for the project stemmed from the Conservation Management Plan and over 10 years of planning. From this three main aims of the project were defined as;

Aim 1: Enable our visitors to increase their learning about and appreciation of Westonbirt Arboretum's tree collection and landscape heritage by improving their welcome,

Aim 2: To conserve the Grade 1 historic landscape of Westonbirt Arboretum to enable us to be good custodians of our landscape heritage,

Aim 3: To increase the number of people and the range of people who take an active part in Westonbirt Arboretum's heritage.

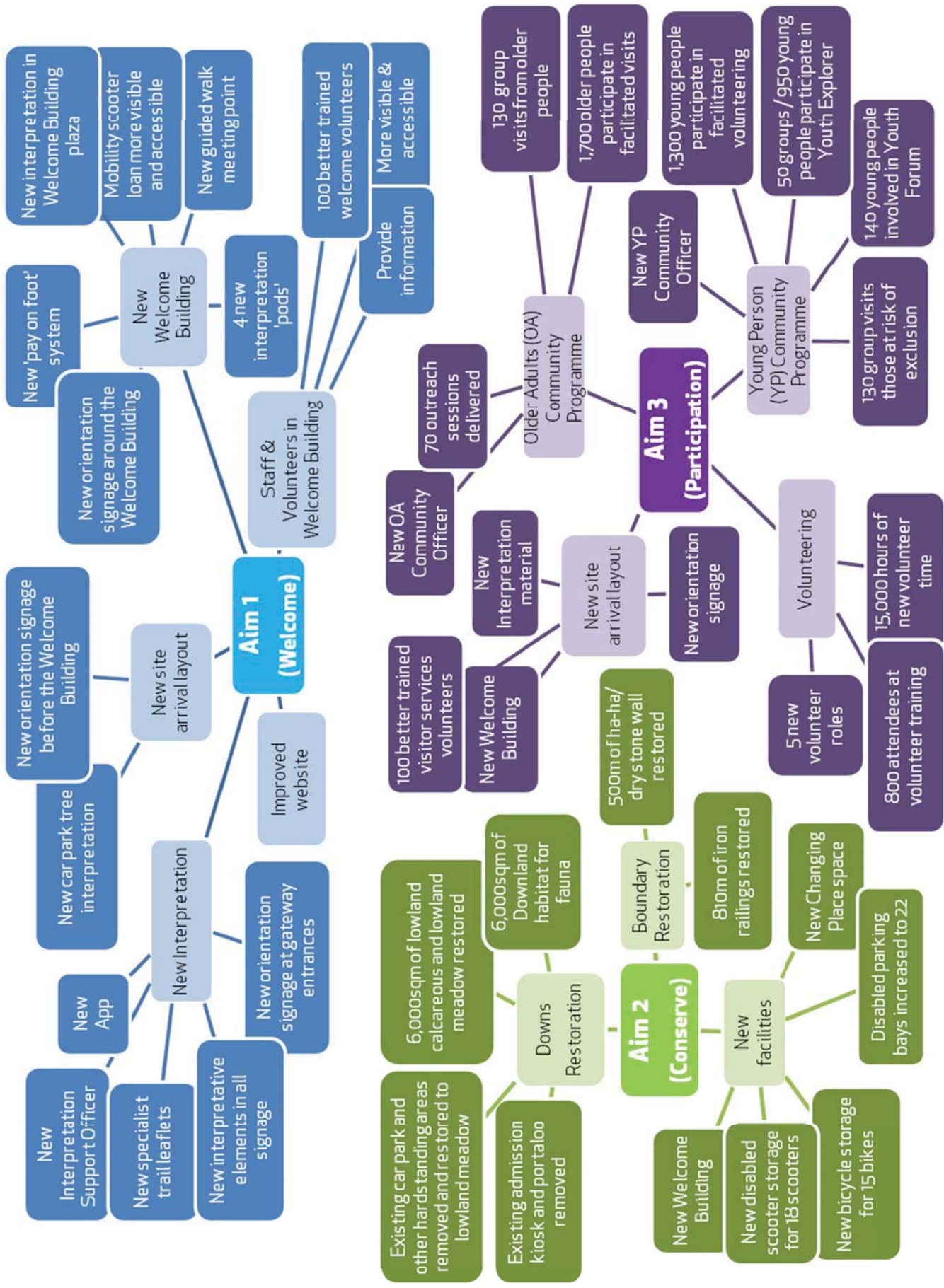
The following table shows the three aims and their associated outcomes.

Project Aims	Outcomes Linked to that Aim
Project Aim 1: Enable our visitors to increase their learning about and appreciation of Westonbirt Arboretum’s tree collection and landscape heritage by improving their welcome.	1. Visitors receive an improved ‘welcome’ to the Arboretum.
	1.2 Visitors are happy and comfortable that they can find their way around.
	1.3 Visitors are as informed as they wish to be after passing through the Welcome Building.
	1.4 Visitors have learnt about Westonbirt’s heritage during their visit.
	1.5 Visitors enjoy learning from and experiencing Westonbirt, and want to come again.
Project Aim 2: Conserve the Grade 1 registered historic landscape of Westonbirt Arboretum to enable us to be good custodians of our landscape heritage.	2.1 The landscape is an exemplar of the picturesque movement with appropriate ‘parkland’ tree planting on the Downs, appropriate species diversity and a tree age structure that maintains the picturesque vision for generations more.
	2.2 The landscape sympathetically meets the needs of all modern visitors through appropriate provision of facilities, discretely located and styled.
	2.3 The condition of landscape boundary structures is stabilised.
	2.4 The Downland environment provides a habitat that contributes to the declining UK stock of BAP grasslands.
	2.5 The Downland environment provides a habitat that supports diverse species, including indicator species of bees and butterflies.
Project Aim 3: Increase the number of people and the range of people who take part in Westonbirt Arboretum’s heritage.	3.1 An increased number of younger people volunteer or participate at Westonbirt.
	3.2 An increased number of older people at risk of exclusion have engaged with Westonbirt.
	3.3 Volunteers come from a wider background.
	3.4 Volunteers are more highly skilled and professional in delivering their tasks.
	3.5 Westonbirt is attracts more and new volunteers.
	3.6 Westonbirt’s visitor profile is broader and more reflective of the wider population.
	3.7 More people enjoy coming to Westonbirt.

1.3. Outputs and Performance Indicators

From the above outcomes there are 59 project outputs. The project outcomes, outputs and performance indicators are detailed within Section 4. The outputs and outcomes are also included within each of the main sections of this report and are described in further detail.

The following diagram shows the three project aims and the original project outputs.

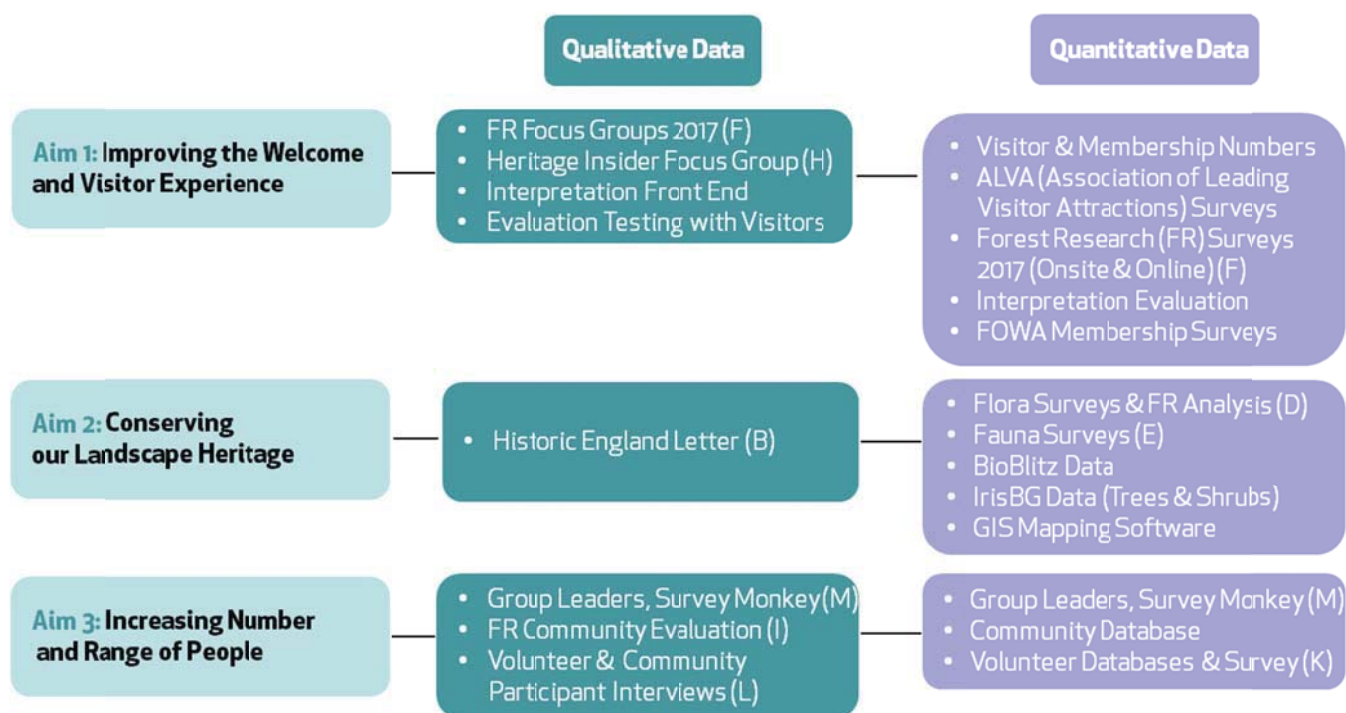


2. How We Collected Evidence Of What Happened

2.1. Evaluation Plan

In order to evidence the success and level of achievement of each of our outcomes we developed a Monitoring & Evaluation Plan that aimed to gather a mixture of both qualitative and quantitative data from a variety of sources. The plan formed part of the HLF Round 2 application.

The following diagram summarises the different sources we have used as part of our evaluation. A brief description is also included below, for more details see the separate appendices (see brackets e.g (H), which contain further information



2.2. Changes Made to our Monitoring & Evaluation Plan

We adapted the original plan to broaden evaluation of the Community Programme and include the impact on mental health and wellbeing as well as adding in additional evaluation sources including the Forest Research (FR) visitor experience surveys. We organised training for our staff and volunteers in monitoring and evaluation in order to reduce survey costs and to retain this valuable skill for future evaluation projects. Due to the large amount of data we also created a number of bespoke databases to help with project monitoring and reporting.

2.3. Evaluation Budget

The original budget of £19,250 was increased to £29,297; 14% of the grant. This was spent on;

- Community Evaluation and Report, Forest Research
- Visitor Experience Evaluation, Focus Groups and Report, Forest Research
- Welcome Building Interpretation Focus Group and Report, Heritage Insider,
- Two additional bespoke questions as part of the ALVA (Association of Leading Visitor Attractions) surveys,
- Incentives and costs for seven visitor & member focus groups.

Costs for other evaluation and reports were included within the relevant project budgets.

2.4. Evaluation Sources

2.4.1. Aim 1: Improving the Welcome and Visitor Experience

Visitor and Membership Numbers

Visitor numbers were monitored by our admissions team; memberships were monitored by the FOWA team and by using a hand held clicker to count members entering the site each day.

Following the completion of the Welcome Building, collecting more detailed and accurate data has been realised. We can now monitor peak entry times and frequency of visits from members and visit durations.

Association of Leading Visitor Attractions (ALVA)

ALVA conducts a standardised visitor survey for a number of national attractions based on a range of topics including; the shop, restaurant and visitor facilities. They have surveyed visitors to the arboretum since 2007 for their feedback, providing data for the site and a comparison with other visitor attractions. Between 190- 300 visitors are surveyed onsite each season except winter. Most questions have been asked each year although some were removed by ALVA in 2012 including two which were project indicators. In 2012 the question scale was changed from a 5-point to a 10-point scale, this has in some cases meant that there is a larger difference between the baseline score versus the mid-year and end-year results. The results from the ALVA surveys are included as outputs within the relevant sections of this report.

Due to the additional costs to add bespoke questions to the ALVA survey we decided to develop our own arboretum specific visitor survey to ensure we captured data on the wider impact of the project. Working with FR we created a bespoke onsite and online survey which was conducted in 2017, see below.

Forest Research (FR)

Independent Researchers and Statisticians from FR with input from arboretum staff in 2016 developed an onsite and online survey to capture information including visitor demographics and questions relating to the visitor offer and impact of the project. Volunteers and staff were trained and surveyed 767 visitors between January to November 2017 both on weekdays and weekends. The monthly target of surveys proportionally matched the number of paying visits in 2016; the table below shows the increase in surveys in September and October to reflect the peak autumn season.

An online version was also created and sent out to the Westonbirt mailing list with 1,310 visitors and members responding in August 2017. See Appendix F for further information and results of both surveys.

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Month	Actual Sample	Target Sample	Difference
Jan	31	50	-19
Feb	25	57	-32
Mar	54	50	4
Apr	55	50	5
May	69	43	26
Jun	54	23	31
Jul	63	33	30
Aug	73	76	-3
Sep	88	55	33
Oct	255	283	-28
Total	767	720	47

Table 1 – Onsite surveys in 2017

Visitor Focus Groups

To provide qualitative data, FR also conducted six follow-up focus groups in October 2017. The six, 1.5hr sessions were organised into different audience types (young families, families with older children, dog owners, visitors, members post Welcome Building opening and long standing members).

Independent consultants, Heritage Insider, were also appointed to carry out a single focus group on the Welcome Building Interpretation with 13 FOWA members. The data and results from these focus groups are included in Appendix F & H.

Interpretation: Formative& Front End Evaluation

For the development of the App and the Welcome Building exhibits we carried out formative and front end evaluation. The designers conducted visitor focus groups and prototyping testing with visitors for the Welcome Building exhibits during the development phase.

We undertook user testing days for the TrailQuest version of the App, both with organised groups and ad hoc visitors and undertook group testing for Team Quest (the facilitated group section in the app). We also conducted onsite and online visitor surveys to understand whether an App would be used and carried out testing with our resident Youth Forum.

'Westonbirt is bigger than anything we would normally be involved in; having an App based on our choices is cool',

'Feel proud that we contributed to the App'

Comments from members of the Westonbirt Youth Forum

Interpretation: Summative Evaluation

For the App we have monitored use by using Google Analytics which provides quantitative data including download totals, average duration of use. For the specialist trails we inserted visitor feedback forms into both 'Birt's i-spy' and the 'Little book of disappearing trees' to provide both quantitative and qualitative data. For the other two trails we have monitored the use of hashtags and social media activity.

FOWA Membership Surveys

FOWA surveyed their members in 2012 and in 2016. In 2016 2,729 responses were received; a 20% response rate. The results from the 2016 survey are included within Section 4 and within other sections of the report.

2.4.2. Aim 2: Conserving our Landscape Heritage

Landscape and Historic Boundaries

Grassland and boundaries which have been restored or reinstated have been measured using our mapping system. We have also photographed these elements of the project before, after and during restoration and have received positive feedback from Historic England.

Flora and Fauna

In 2012, 2015, 2016 and 2017, a Research Biologist from Forest Research and the volunteer Flora Group surveyed the Downs using both quadrat surveys and site species walks. Since 2012 the volunteer Fauna Group surveyed the same area for bumblebees and butterflies each year. See Appendix D & E.

Trees, Shrubs and Hedges

All trees, shrubs and hedges are recorded on our tree collection database, 'IrisBG, Botanical Garden Collection Management'. The database shows species, date planted, date removed, condition and other information including seed source.

2.4.3. Aim 3: Increasing Number and Range of People

Community Groups and Participants

A new database was created to store and enable reporting on the number of community groups and participants, the type of group and activity and other important session data.

Group Leader Evaluation via Survey Monkey

We have regularly sent community group leaders Survey Monkey questionnaires following a multi-visit or day visit. This has provided us with feedback, satisfaction percentages and comments for improvements and benefits of the programme. A summary of the two main surveys are included, see Appendix M.

FR Community Evaluation

Since January 2016 we have worked with FR to evaluate the impact of the community programme based on the New Economics Foundation (NEF) 'Five points of wellbeing: mental and physical, connect with nature, connect with people, share, learn and take notice'. Volunteers and staff were trained to observe community participants, and were supported by observations and interviews by FR at the first and final sessions. For day visits the whole group was observed, for multi visits a small number of individual participants were observed to monitor change throughout the programmes. In total 49 groups were observed and 61 participants interviewed, see Appendix I.

Volunteers

A database was created to monitor the number of volunteers, hours and tasks to provide quantitative data, supported by data from the Westonbirt Volunteer database. Volunteer

surveys were conducted in 2012 and 2017, see Appendix K for the 2017 report. Volunteers were also interviewed as part of the FR Community Evaluation project, and two detailed interviews conducted to gather additional qualitative data from a Landscaping volunteer and a Community volunteer.

2.4.4. Project Delivery

In November 2017 a workshop was held with staff and a project steering group trustee, to discuss the aims and impact of the project and gather individual views which have been incorporated into this report.

3. What Actually Happened

3.1. Working Relationships

The project has been the largest partnership project the FC and FOWA have undertaken together at the arboretum to date. Through the development stage of the project, collaboration and close working relationships were required at all levels; organisationally, between teams and individuals, staff and FOWA trustees and volunteers. It was clear to all involved; working together would be the key in achieving success on this scale.

'I think the biggest learning points for me were around the benefits of partnership... The other area was the involvement of both FOWA trustees and FC and FOWA staff in the fundraising drives. Our information sessions for potential donors in particular, became professional and very collaborative.'

FOWA Trustee and Project Steering Group Member

3.2. Project Management

The project was completed on time, on budget, and under budget in some areas, and to a high standard, see Appendix O for some of the award certificates. A small team of staff managed the day-to-day delivery of the project, led by the Project Manager. The arboretum Project Manager was supported by an external Project Manager who provided additional support for the management of the capital works consultant team and the Welcome Building main contractor.

The capital elements of Phase One were phased to meet the time restrictions from some funders and to reduce impact on our visitors and members. All elements of the project were dependent on each other but could be delivered as separate contracts. The phasing of the works enabled the project team to phase the procurement and tender processes for the major elements. This meant that some of the national FC staff originally planned to support delivery did not have the capacity at the time or spare resources to be able to meet the planned timescale.

Phasing also enabled us to benefit from lower costs at tender stage versus our original budgets. The visitors' car park cost £200,000 less than budgeted due to the competitive market at the time, this underspend was reallocated to the Welcome Building. This enabled us to increase the size of the building to include a mezzanine storage level, increase the storage space for the mobility scooters and increase the office space as well as improving the specification of features including materials used and fixtures and fittings.

Raising the funds for the project was a challenge in 2009/2010, due to our inexperience of raising funds or delivery of a large scale project. The main turning point for both project delivery and fundraising was the recruitment of specialist full time staff dedicated solely to the project. Fundraising began in 2010 with a Head of Fundraising recruited by FOWA in January 2011; by the end of 2012 £4.3m had been raised from 138 donors including the £1.9m grant from HLF.

The successful track record in project delivery and fundraising helped build confidence in the project team and wider staff team and ensured successful delivery of Phase Two of the Westonbirt Project.

3.3. Project Milestones

As shown below, most of the significant milestones were achieved with almost all elements starting and completing on time. The three main capital projects were built in phases to reduce the impact on the arboretum and visitors and to ensure staff capacity to procure and manage the contractors.

Task	Planned Timeframe	Actual
Capital		
Visitor Car Park (non-HLF)	January - June 2013	January - August 2013
Welcome Building	July 2013 – February 2014	July 2013 – June 2014
Welcome Building – Interpretation	March 2013 – January 2014	March 2013 – June 2014
Downs Restoration	October 2014 – December 2014	March 2014 – May 2014
Boundary Restoration	June 2013 – November 2016	July 2013 – November 2017
Changing Place	Complete April 2014	Completed October 2015
Activity Plan		
App developed	Aug 14 Completion	Jan 2015 – Aug 2015
Interpretation Support Officer	In post March 2013	In post March 2013
Estate Volunteer Supervisor	In post Sept 2013	In post Sept 2013
Community Officers (x2)	In post January 2014	In post January 2014
Student Arborist (x2)	June 2015	June 2015

Table 2 – Project Milestones

Capital Projects

- The main contractor for the visitor car park went into administration in the first week of the contract. This was resolved swiftly and therefore the impact on the overall delivery timescale was minor.
- The opening date of the Welcome Building was pushed back by a few months to allow more time for the interpretation development and to coincide with HRH Duchess of Cornwall’s availability for the formal opening of the Welcome Building.
- In the original programme we underestimated the amount of time needed for interpretation content production.
- The Downs restoration was brought forward to the summer months and to coincide with the completion of the Welcome Building.
- The boundary restoration work was split into smaller projects in order to phase the work, partly to fit in with staff capacity but also as only a small number of contractors bid for the work. One section of ha-ha restoration was delayed following the discovery of great crested newts.
- The Changing Place was purposefully delayed to ensure the new disabled toilets at the Welcome Building were operational and to allow for install of additional baby changing facilities in both the male and female toilets

Activity Plan

- All staff posts were recruited on time as they were externally advertised immediately in order for us to ensure fair and open competition, also reducing the reducing the time needed for recruitment.
- We reached our target for the community engagement in March 2017, nine months before the end of the project.
- The development of the App was pushed back to allow for a period of consultation with visitors and the youth forum and due to the development and delivery of the Welcome Building interpretation.
- Development of the specialist trails was phased to allow the interpretation support officer to develop content and procure design services.

3.4. HLF Funded Roles

Five new roles additional staff roles were included in the Round 2 HLF application. Each role was appointed on time and all were externally advertised to ensure open and fair competition. An additional role of 'Project Administrator' was funded by HLF in the final year to support the project team; this role was not included within the original Activity Plan. Details of each staff role and training undertaken is included in Appendix C 'The Team'.

In addition to the HLF funded staff, the project was also supported by a number of existing staff and teams at the arboretum and wider FC.

3.5. Staff & Volunteer Training

We have followed the Volunteer Training Plan which included a combination of both internal and external training courses, a total of 6,800 project hours. Half of the volunteer training was externally delivered; the rest has been delivered internally. Over the last five years 310 volunteers attended external training courses including specialist courses for bee identification, customer service, inclusion awareness and outdoor first aid training. Internally run training courses have included manual handling, guide training, on job training for the Flora Group with Matt Parratt (FR biologist) and the Community Volunteers led by the Community Officers.

For more information including all external courses, volunteer comments and satisfaction ratings see Section 8.

3.6. Project Communication & Marketing

We have used a variety of different communication tools and methods for various stakeholder groups, which are shown in the table below. Some examples are included as Appendix N including FOWA member magazine articles, social media posts and articles from national magazines and journals.

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Stakeholders	Communication & Marketing Tools
Internal	
Staff	Communication Meetings (monthly)
Staff	Led tours of construction sites
Volunteers	Newsletter (monthly)
Volunteers	Familiarisation Tours (pre- Welcome Building opening)
External	
Visitors/Members	Press releases (magazine & newspaper articles)
Visitors/Members	Onsite posters, pedestrian and roadside banners
Visitors/Members	Onsite construction hoardings and temporary signage including 'donor seed bank labels'
Visitors/Members	'Behind the Scenes Blogs' Social Media channels - Facebook & Twitter
Visitors/Members	FC & FOWA Website- 'Behind the Scenes Blogs'
Members	FOWA members magazine
Donors	Monthly Newsletter

Table3 - Communication & Marketing tools used during Project

4. Summary of Project Achievements Against Outcomes

4.1. Project Outcomes, Outputs and Indicators

From the 17 project outcomes, 16 have been fully or partially achieved through completion of 59 project outputs. The following table shows the three main aims of the project, their associated outcomes and outputs. The table also shows the supporting indicators which demonstrate the achievement and progress made towards each of the outcomes.

As noted in Section 2, we have added some additional indicator sources to enhance our understanding and ability to demonstrate the impact of the project and progress made. The table also shows if the target has been achieved or if work is ongoing and what steps are being taken to continue to improve.

Project Aim 1 - Outcome: 1.1 Visitors have a relaxed arrival experience

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>How quickly visitors were able to park and pay for their entry ticket.</p> <p>New ALVA Q. <i>'How do you rate your speed of parking and paying for entrance ticket today?'</i></p>	<p>90% Visitors find parking and paying time 'good/ excellent'</p>	<p>73% rated this 'Excellent/9/8 out of 10) 2013- ALVA Survey</p>	<p>92% 'Excellent/ 9/8 out of 10' Spring/Summer / Autumn 2017 ALVA survey.</p>	<p>Achieved. Target achieved, we have seen an increase of over 19% from baseline score following change from paying from 'car window' to 'paying on foot' at the Welcome Building. Progress was evidenced in the mid-year results following opening of the Welcome Building with a score of 83%. Following comments from FOWA members for a fast track entry, Members cards now contain individual barcodes so they are able to scan themselves in, to avoid queuing with day admissions visitors</p> <p>We are continuing to ensure parking and payment remains quick and efficient, following the introduction of handheld ticket machines for peak days and contactless card payment. We will continue ensuring fast payment to allow staff more time to introduce the arboretum and welcome visitors.</p>
<p>Visitors find staff and volunteers friendly and welcoming.</p> <p>ALVA Q. <i>'How do you rate the friendliness and welcome from staff?'</i></p>	<p>Achieve rating of 70%</p>	<p>52% 2010-2011. ALVA survey</p>	<p>57% rated friendliness and welcome as 10 or 9 out of 10 in Spring/ Summer/ Autumn 2017 ALVA survey</p>	<p>Improving/ Achieved. Score improving from baseline result and following a drop in the mid-year result (41%) from the ALVA survey.</p> <p>However 92% of visitors strongly agreed/ agreed that the 'arrival was relaxed and welcoming' from the FR onsite survey, 2017. Scores were high from members, non-members from the onsite and online surveys.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Visitors find staff and volunteers effective. ALVA Q. 'How do you rate Westonbirt for ticket desk/admission staff?'</p>	<p>Achieve rating of 55%</p>	<p>46%'Excellent' 2010-2011, ALVA survey.</p>	<p>Unknown (ALVA removed Q from survey in late 2012)</p>	<p>Ongoing. From the FR onsite survey 2017, 47% of visitors' strongly agreed 'staff and volunteers were accessible and helpful', this compares to 82% if strongly agreed/agreed scores are combined. Therefore there has been a small improvement from the original ALVA baseline score. Considering the scale of the changes made to the visitor experience there is further work needed to improve the welcome experience, customer service and introduction to the arboretum.</p>
<p>How many cars park on roads outside to avoid queuing or paying. Survey road behind Hare and Hounds at 12 noon on a weekday x 4 & Saturday x 4, 1st Oct - 15th Nov.</p>	<p>Total 2 cars</p>	<p>Total 20 Cars counted. 2011. New indicator physical survey.</p>	<p>Total 27 cars were counted at 12 noon on a weekday x 4 and on a Saturday x 4 during 1st Oct - 15th Nov.</p>	<p>Ongoing. Numbers of cars parked on side roads has varied significantly following the opening of the Welcome Building with only 8 cars counted during autumn 2015. Parked cars outside of the arboretum boundary occurs for a variety of reasons; those avoiding paying, queues due to large numbers of visitors arriving at the same time and on a few occasions due to reaching car parking capacity following the opening of the STIHL Treetop Walkway. We are continuing to monitor cars parked in these locations, consulting with highways and communities on traffic restrictions and reviewing car parking capacity and capacity of the arboretum and visitor facilities.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
How easily visitors found their way to Westonbirt's entrance. ALVA Q: 'How do you rate the ease of finding your way to Westonbirt?'	Achieve rating of 60%	51% 'Excellent' 2010-2011, ALVA survey.	61% rated as 10 or 9 out of 10 in Spring/ Summer / Autumn 2017 ALVA survey	Achieved. We have seen an improvement since the baseline survey from 54% from the mid-year results to reaching our target in the final year. New roadside signage, orientation signage through the car park to the Welcome Building entrance has all been implemented as part of the project.

Project Aim 1 – Outcome: 1.2 Visitors are happy and comfortable that they can find their way around

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
ALVA Q: 'How do you rate Westonbirt for information to help find your way around?'	75% of visitors find information to find their way around 'excellent'	48% 'Excellent'/ 9 out of 10' 2010-2011, ALVA survey.	50% rated as 10 or 9 out of 10 in Spring/Summer/ Autumn 2017 ALVA survey 39% of visitors strongly agreed 'they could easily find their way around the site' in combined FR Westonbirt survey onsite and online 2017	Achieved? Improving. Improving from baseline score from ALVA surveys results but declined according to result from Westonbirt FR 2017 survey. The new orientation and interpretation gateway signs have been well received and are in the top activities on site as shown in the FR 2017 surveys. We know that some of our visitors and members would like to see more signs in the tree collection to help orientate them. Refreshment of all directional arboretum signage is planned for 2018/19 as the existing signage has been in place for over ten years and requires updating.

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Visitors find it easy to find staff (incl. volunteers) to help them.</p> <p>ALVA Q 'How do you rate the ease of finding staff to help you, if needed?'</p>	<p>Achieve rating of 45%</p>	<p>37% 'Excellent/ 9 out of 10' 2010-2011. ALVA survey</p>	<p>32% rated as 10 or 9 out of 10 in Spring/Summer/Autumn 2017 ALVA survey</p>	<p>Ongoing. Score has dropped following an increase from the mid-year result of 40%. From the FR 2017 surveys scores ranged from 67-84% which shows a marked difference to the results of the ALVA survey.</p> <p>Further work needed to ensure visitors can find staff and volunteers. As part of refresher training we are encouraging volunteers to engage with visitors around the Welcome Building and not stay inside the information centre. FOWA are also planning to increase the membership team presence at the Welcome Building on weekends and peak periods. The location of the Welcome Building has resulted in a reduced FC staff presence around the restaurant/shop hub where some visitors expect to find them.</p>

Project Aim 1 – Outcome: 1.3 Visitors are as informed as they wish to be after passing through the Welcome Building

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Whether visitors find out enough information to enjoy their visit.</p> <p>New ALVA Question: <i>'Were you given enough information to know how to make the most of your visit to Westonbirt?'</i></p>	<p>70% 'Excellent'</p>	<p>34% 'Excellent/ 9 out of 10) New ALVA Q.21</p>	<p>52% rated as 10 or 9 out of 10 in Spring/Summer/ Autumn 2017 ALVA survey</p>	<p>Improving. Significant improvement in score from baseline and mid-year results, although we have not achieved our target.</p> <p>Further work needed to prioritise and vary messages and information. A digital sign has been installed in early March 2018 and further work planned to ensure staff and volunteers provide a consistent welcome and introduction to the arboretum.</p>
<p>Visitors find staff and volunteers efficient and knowledgeable</p> <p>ALVA Q. <i>'How do you rate the efficiency and knowledge of staff?'</i></p>	<p>Achieve rating of 65%</p>	<p>50% 'Excellent or 9 out of 10' 2010-2011 ALVA survey</p>	<p>40% 'rated as 10 or 9 out of 10 in Spring/Summer/ Autumn 2017 ALVA survey</p>	<p>Ongoing. Results are improving following a low of 25% from the mid-year results although we have not increased our score from the baseline year. However visitors and members are now encountering a wider range of staff and volunteers based at the Welcome Building, when previously the majority would only have engaged with staff at the entrance shed.</p> <p>More work needed to increase staff and volunteer efficiency and knowledge about the visitor offer and wider arboretum.</p>

Project Aim 1 – Outcome: 1.4 Visitors have learnt about Westonbirt's heritage during their visit.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Interactive map usage.</p> <p>Number of users of interactive map.</p>	<p>20,000 users per annum</p>	<p>3,797 Users</p> <p>2012 Data</p>	<p>2,594 users in 2017 up to beginning of Nov 17.</p>	<p>Ongoing.</p> <p>Our original target was very ambitious given the number of users in 2012. Usage has fluctuated since the baseline in 2012; in 2013 (553) & 2014 (480), 2015 (979). The drop from 2012 could partly be due to issues with the internet connection to the computer in 2013 which was used regularly by volunteers. The computer was moved in 2014 into the Welcome Building and has since seen a steady rise in users.</p> <p>We have purchased a new tree collections database 'IrisBG' and plan to use this to develop a more visitor -friendly accessible version which can be accessed onsite and online.</p>
<p>Visitors have learnt something about each of Westonbirt's four interpretative themes.</p>	<p>75% of visitors are able to recall a key fact relating to each of the four themes</p>	<p>-</p>	<p>-Little Book of Disappearing Trees and trail. 96% 'Understand more about the role of botanic gardens in conservation', 100% 'Understand more about threatened trees and their threats'</p> <p>-Birt's i-Spy Adventure', 89% of adults confirmed 'It enabled me to talk about how the trees are cared for with my children', 85% learned to find trees and labels.</p>	<p>Achieved.</p> <p>Target exceeded for two of the specialist trails. We are considering future developments for both of these trails following their success.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Interpretation provided is used and learnt from.</p>	<p>25% of trail leaflets taken are used</p>	<p>12% of trail leaflets taken and used 2007</p>	<p>Little Book of Disappearing Trees: 7,000 printed; 2,900 used (42%). 50 feedback responses received so far. These include; 96 % 'understand more about the role of botanic gardens within conservation'; 95% 'understand Westonbirt's international botanic links' & 100% 'understand more about threatened trees and the threats they face'. Birt's iSpy Adventure: 12,000 printed; 9,500 used (79%). Picture Perfect: 10,000 printed, 1,000 used. Feedback has been anecdotal. CreativiTree Arts Events: 10,000 of postcards printed. Monitoring use on site. Facebook; 4,116 views & 15 engagements, Twitter; 15,597 views & 226 engagements, 199 views on website page. TreeQuest App: 6,870 downloads (66% returning, 33% new).</p> <p>26% of visitors picked up a leaflet, from the combined data FR visitor surveys 2017 and 73% followed the seasonal trail/ family trail (leaflet).</p>	<p>Achieved Target exceeded for two HLF trails and the App for use and learning targets. The other two trails have been evaluated using other methods including social media and online activity (post read/shared). Target also exceeded for trails picked up and the number of visitors who followed the seasonal trails.</p> <p>There is a marked difference between the levels of visitor engagement for the HLF trails which may have been the result of the different levels and methods used to promote the trails. This is something we will be addressing through further marketing and promotion on site and online.</p>

Project Aim 1 – Outcome: 1.5 Visitors enjoy learning from and experiencing Westonbirt, and want to come again

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Number of visitors becoming regular visitors.</p> <p>FOWA membership database</p>	<p>10% yr on yr increase from Yr 2 (40% increase -overall) Target 37,268</p>	<p>28,000 members April 2012</p>	<p>31,859 individual members (14% increase) (NB. Children are not counted in the totals above as members are allowed to bring up to four children each)</p>	<p>Improving. FOWA memberships have continued to increase following the completion of the Welcome Building in 2014. Despite some challenges and issues for some members the numbers of members has continued to rise. The original target was very ambitious although we hope numbers will continue to rise over the coming years Membership demographics have also changed with an increase in family groups.</p>
<p>Conversion of 'one off' visits to repeat visits.</p> <p>ALVA data</p>	<p>75% visited in the last 12 months</p>	<p>78% 'excellent' 2010-2011. ALVA survey</p>	<p>72% in Spring /Summer / Autumn 2017 ALVA survey.</p>	<p>Ongoing. Score has varied with 78% achieved in the mid-year results. Further work needed to promote benefits of membership and repeat visits beyond the peak season (Autumn), we hope the increase in FOWA membership staff presence on weekends at the Welcome Building will help convert more paying visitors to memberships.</p>
<p>Whether visitors feel there is plenty to do during their visit.</p> <p>ALVA survey q.9 'What is there to see'</p>	<p>85% Excellent</p>	<p>64% 'Excellent' (8.81) 2010-2011, ALVA survey</p>	<p>63% rated as 10 or 9 out of 10 in Spring/Summer/ Autumn 2017 ALVA survey</p>	<p>Ongoing/ Achieved. Improving score from drop in mid-year result of 60% but we have not yet achieved the level recorded pre-project. However, target has been exceeded with a score of 88%</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
			88% of individuals strongly agreed/agreed that there was plenty to see and do for all members of the group.	according to the results from the onsite Westonbirt FR 2017 survey. There has also been a significant increase in visitors' expectations since the baseline was taken, both nationally and specifically at the arboretum following the introduction of the STIHL Treetop Walkway.
Whether visitors feel it is worth visiting in Spring and Summer. Increase in visitors numbers in Spring and Summer	-Week of Bank Holiday in May, increase by 250 yr on yr. from Yr 2 (1,000 total/ 6,225) -Last week of July, increase by 200 yr on yr from Yr 2. (800 total/ 5,125)	-Week of Bank Holiday in May, 5,225 -Last week of July/ beg. August, 4,325 2010. Visitor numbers	For the first May Bank Holiday week 2017 there were 7,075 visitors. For the last week in July/ August there were 7,487 visitors.	Achieved. We have exceeded both targets. We have seen an increase in visitors throughout the year following the opening of the Welcome Building but also the opening of the STIHL Treetop Walkway in 2016.
Enjoyment of visit ALVA survey q. 'Enjoyment of visit overall'	85% 'Excellent'	54% 'Excellent' (8.48) 2010-2011 ALVA survey	57% (8.74) rated as 10 or 9 out of 10 in Spring/Summer/ Autumn 2017 ALVA survey	Improving. Achieved increase from baseline year, with a significant increase from mid-year results of 41%. However target not achieved. We will continue to monitor and develop the visitor offer.
Value for money of visit. ALVA survey q. 'Value for money of visit overall'	65% 'Excellent'	64% 'Excellent' 2010-2011 ALVA survey	67% rated 'Excellent' in Spring/Summer/ Autumn 2017 ALVA survey.	Achieved. Score has increased, with a significant rise following the opening of the STIHL Treetop Walkway.

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Whether we meet expectations for The National Arboretum. ALVA survey q. 'Visit expectations'	50%	40%	40% rated 'Better or much better than expected' in Spring/Summer/Autumn 2017 ALVA survey.	Ongoing. Score has remained static but has improved from mid-year result of 35%. More survey work needed to understand visitor expectations and reasoning for low score, which is contradicted by high scores for recommendations to family and friends and increase in memberships and visits.
Whether visitors are emotionally engaged with the Arboretum. ALVA survey q. 'How do you rate Westonbirt for engaging your emotions?'	75% 'Excellent'	45% 'Excellent' (8.10) 2010-2011 ALVA survey	40% (8.24) 'Excellent and 9 out of 10' Spring/Summer/Autumn 2017 ALVA survey	Ongoing. Score dropped in mid-year to 31% and has started to recover, mean score has improved.
Whether visitors are intellectually engaged with the Arboretum. ALVA survey q. 'How do you rate Westonbirt for engaging your mind?'	75% 'excellent'	51% 'Good/Excellent combined' (8.36) 2010-2011 ALVA survey	42% (8.40) Excellent and 9 out of 10' Spring/Summer/Autumn 2017 ALVA survey	Ongoing. Score dropped in mid-year to 28% and has started to recover.

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Whether Friends have joined because they wish to support the Arboretum.</p> <p>FOWA Membership survey q. 'Why did you choose to become a Friend?'</p>	<p>35% of answers for: 'Want to contribute to the upkeep and future of this beautiful place'</p>	<p>28% Friends Survey 2005</p>	<p>40% of Friends surveyed in 2016 joined as members to support the tree collection.</p>	<p>Achieved. Exceeded original target. FOWA have continued to promote the benefits of membership and where FOWA funds are spent and invested into the arboretum and tree collection.</p>

Project Aim 2 – Outcome: 2.1: To conserve the Grade 1 registered historic landscape to enable us to be good custodians of our landscape heritage

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Permanent car parking no longer takes place within the Grade 1 boundary.</p> <p>Baseline car numbers estimated from visitor numbers by Operations staff.</p> <p>Ongoing data provided by visual survey by project team.</p>	<p>Zero cars parked past the new ha-ha on 365 days of the year. (Excluding wedding party cars.)</p>	<p>Hard standing car park on Downs and overflow, cars parked past new ha-ha location, 365 days a year.</p> <p>2010. Autumn peak car use of downs from Operations Team.</p>	<p>Cars parked on the Downs (G1 landscape) only on 9 days during 2017 for four concert evenings and the Arb Show.</p> <p>Approximately 250 cars were parked past the new ha-ha; the majority were disabled concert visitors</p>	<p>Improving and Ongoing.</p> <p>Zero visitor cars parked beyond ha-ha for most of the year.</p> <p>The Downs is still used for car parking for events, four concerts and the Arb Show. Concerts have been reduced to four evenings, from six to reduce the impact on the arboretum and Downs, but in turn the concerts have a larger capacity so disabled cars are parked on the Downs. Only exhibitor cars are allowed on the Downs for the Arb Show. Cars are not allowed to park on the restored former car park habitat.</p> <p>Unfortunately due to heavy snow and poor weather, visitor cars have also been parked on the Downs for three nights for our Enchanted Christmas event in 2017 as the overflow car park was in a poor condition. Heavy snow fall meant we cancelled one night with a loss of £50k, the event would have made a significant loss if we had cancelled three further nights as well as causing reputational damage as it was the weekend before Christmas. The Recreation Team are developing contingency plans to reduce the risks of a winter event which include hiring temporary tracking for the overflow field, improving drainage and looking at alternatives including possible further expansion of the new car park outside of the Grade 1 landscape.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Downland planting meets Conservation Management Plan goals now included in Curatorial planning processes. Forest Design Plan - FDP (Statutory planning process for any wooded area.)</p>	<p>Downland areas continue to be incorporated in FDP and included in next FDP 2015 consultation</p>	<p>FDP 2011</p>	<p>416 new trees were planted on the Downs and car park areas & 178m of woodland hedging was also planted to screen the new car park. 223m of hedging, 103 trees and shrubs were removed from the Downs which were previously used to reduce the impact of the parking on the Downs.</p>	<p>Ongoing. All new planting on the Downs and surrounding areas has been in accordance with the Conservation Management Plan. The FDP will be revised in mid-2018, staff have prioritised the Sward Management Plan but continue to work in accordance with the current FDP. A Sward Management Plan was developed by the Tree Team, Flora volunteers and Matt Parratt in 2015. This plan now includes a detailed management and surveying plan for the Downs to ensure the area continues to be managed appropriately.</p>
<p>New ha-ha surmounted by strained wire fence provides a permanent barrier to unrestrained car parking. Visual survey by project team.</p>	<p>New ha-ha joins up to Welcome Building to form barrier</p>	<p>Incomplete boundary 2012 Visual survey</p>	<p>New ha-ha completed in 2013 prior to the construction of the Welcome Building</p>	<p>Achieved. 288m of new boundary created either side of the Welcome Building to separate visitor car parking and the arboretum. This provides biosecurity benefits as well, an issue which has become significantly higher profile in the light of Chalara dieback of ash and other tree diseases.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Expert opinion on Westonbirt's direction of travel as a historic landscape. English Heritage	Downs restoration as 'complete' (with ongoing maintenance).	2009 Conservation Management Plan Identifies Downs as area of landscape degradation	See supporting letter, Appendix B from Kim Auston from Historic England, 2017.	Achieved. Significant improvements have been made including completing a number of boundary restoration projects and fencing veteran trees using traditional metal estate fencing and gates. We are planning to continue the boundary restoration project when other boundaries require extensive repair and by individually protecting further Downs trees.

Project Aim 2 – Outcome: 2.2, The landscape sympathetically meets the needs of all modern visitors through appropriate provision of facilities, discretely located and styled.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Welcome Building facilities delivered in a discrete style appropriate for landscape. Visual survey by project team.	- 315sqm of space built. - 14 toilets - 8 urinals - 2 disabled/baby changes.	-	- 315sqm of space built. - 14 toilets - 8 urinals - 2 disabled/baby changes - 1 'Changing Places' space created	Achieved. Welcome Building awarded a CPRE Award for the Welcome Building and Downs Restoration and nominated for several awards including Regional RICS and RIBA Awards for design. See supporting letter in Appendix B from Kim Auston from Historic England, 2017.

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Number of disabled visitors.</p> <p>ALVA survey data on number of visitor parties including someone with a disability.</p>	<p>18% of parties</p>	<p>17% of parties Compared to average for heritage attractions 6%, all ALVA sites 5%</p> <p>2010-2011 ALVA survey</p>	<p>14% of parties from ALVA Survey 2017</p>	<p>Ongoing.</p> <p>Result has declined but the number of carer admission tickets has significantly increased during this period, 724 in 2012/13 to 2,255 in 2017.</p> <p>Scores for other ALVA questions relating to disability, access and enjoyment have all increased.</p>
<p>How well the site meets the needs of disabled visitors.</p> <p>ALVA survey 'How well site meets needs arising from disability'</p> <p>Additional Q, ALVA survey: Whether you have a Disability and 'Opportunities for you to actively participate in your visit?'</p> <p>Additional Q, ALVA survey: Whether you have a Disability and 'Rating for physically getting around the site?'</p>	<p>30% 'Excellent'</p> <p>At least a 5% increase.</p> <p>At least a 5% increase.</p>	<p>21% 'Excellent' 2010-2011 ALVA survey</p> <p>21% of disabled visitors recorded as Excellent</p> <p>2011 ALVA Survey</p> <p>23% of disabled visitors rated this as 'Excellent'</p>	<p>Original Q removed by ALVA in 2012.</p> <p>31% Disabled visitors rated 'Opportunities for you to actively participate' as Excellent.</p> <p>34% of disabled visitors rated the ability to physically get around the site as 'Excellent' in Spring/ Summer/ Autumn 2017 ALVA survey.</p>	<p>Achieved.</p> <p>Results for two additional questions using original baseline data have shown significant increases in satisfaction from disabled visitors' enjoyment of the arboretum following completion of the project. This may be in part due to the completion of the fully accessible Treetop Walkway which also provides access into Silk Wood.</p> <p>'We had an amazing time. As two disabled visitors, we were able to reserve a couple of mobility scooters. It would have been impossible for us to go here had it not been for that excellent, and free, service. Wonderful!' Visitor comment, 2016</p> <p>We have also received overwhelmingly positive comments from individuals and groups who have benefited and now access the arboretum due to the installation of the Changing Places space.</p> <p>'Well done Westonbirt Arboretum! There's a gap in our county for Changing Places so really pleased you've taken this step. Here's to many more- Jane, Visitor</p>

Project Aim 2 – Outcome: 2.3. The condition of landscape boundary structures is restored to their original condition

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Quality of restoration and reinstatement work.</p> <p>English Heritage and visual assessment</p>	<p>Quality of work meets heritage restoration standards agreed.</p> <p>-810 m of iron railings restored/ reinstated.</p> <p>-500m of ha-ha / dry stone wall restored and rebuilt.</p>	<p>Identifies Downs boundaries as areas of landscape degradation and at risk of loss.</p> <p>2009 Conservation Management Plan</p>	<p>See supporting letter in Appendix B from Kim Auston from Historic England, 2017 regarding the boundary restoration .</p> <p>-1,176m iron railings restored/ reinstated.</p> <p>-858m of ha-ha / dry stone wall restored and rebuilt.</p>	<p>Achieved.</p> <p>Achieved and exceeded. In total 3,534m boundaries have been restored and reinstated as part of the project.</p> <p>345m of railings restored plus 831m reinstated along field boundaries. An additional 650m of traditional metal estate fencing and gates used to protect veteran trees on the Downs.</p> <p>858m of dry stone walls repaired and restored. 850m of historic ha-ha dry stone walls with railings restored along the edge of the Old Arboretum. 100m of new ha-ha with strained wire created.</p>

Project Aim 2 – Outcome: 2.4. The Downland environment provides a habitat that contributes to the declining UK stock of BAP (Biodiversity Action Plan) grasslands.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Reduction in ground cover of undesirable species. (Found on restored areas)</p> <p>Forest Research Lead Scientist and Flora Survey Group annual surveys.</p>	<p>- Cover of undesirable species less than 5%.</p> <p>- 0 Invasive trees and shrubs managed and maintained at this level.</p>	<p>- Cover of undesirable species ranges from 1-15% cover.</p> <p>- 0 Invasive trees and shrubs recorded on Downs.</p> <p>2012 Downs Flora Survey</p>	<p>- From the 2016 survey, the calcareous grassland surveyed showed very few undesirable species recorded.</p> <p>- Invasive trees and shrubs managed and maintained</p>	<p>Achieved.</p> <p>There is scope for continued enhancement in future years. Surveying will continue every 2 and 5 years to continue monitoring impact of restoration and sward management changes.</p> <p>For the Mesotrophic (MG) grassland (top and bottom of the slopes of the Downs) there are some high numbers recorded of undesirable species including <i>Cirsium arvense</i> (38%, section 29 top), and for <i>Plantago major</i> (59%, section 29 bottom). <i>Plantago major</i> is a plant that benefits from trampling, so it's no surprise to see it dominating along the bottom of the valley which is heavily used by dog-walkers and others resulting in high levels of trampling.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Condition of Grassland Category – as per Joint Nature Conservation Committee (JNCC) Statutory Advisor to UK Government guidelines.</p> <p>Forest Research Lead Scientist and Flora Survey Group surveys.</p> <p>Achievement measured using comparative vegetation maps, including elimination of bare ground.</p>	<p>Meets JNCC condition of ‘Favourable’ (JNCC definition ‘land adequately conserved and is meeting ‘conservation objectives’ there is still scope for enhancement.)</p>	<p>JNCC condition of ‘Unfavourable recovering’ (JNCC definition ‘not yet fully conserved but all management measures are in place to achieve favourable condition in time</p> <p>2012 Downs Flora Survey</p>	<p>General downland areas of (Calcareous) CG3-5 grassland is rated as being in ‘favourable condition’ and the (Mesotrophic) MG5-6 grassland is rated as being in ‘un-favourable/declining’ condition overall, though there are patches which are improving.</p> <p>Very little bare ground remains.</p>	<p>Ongoing & Improving</p> <p>Achieved for the calcareous grassland, further work needed to improve the mesotrophic grassland with scope for enhancement in future years. Surveying will continue every 2 and 5 years to continue monitoring impact of restoration, sward management changes and changes following reintroduction of grazing in 2017.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Numbers and varieties of negative indicator species reduce, and numbers and varieties of positive indicator species increase in all CG quadrats.</p> <p>Forest Research Lead Scientist and Flora Survey Group annual surveys.</p>	<p>-8 Negative indicator species recorded</p> <p>-15 Positive indicator species recorded.</p>	<p>11 Negative indicator species, 13 Positive indicator species recorded.</p> <p>2012 Downs Flora Survey</p>	<p>Zero negative and 11 positive indicators of Calcareous Grassland found during Spring and Summer 2017 survey.</p>	<p>Improving.</p> <p>Almost achieved, we suspect the number of positive indicators are lower in 2017 as we have struggled to find a suitable farming tenant with a suitable breed of cattle. Following the reintroduction of cattle in Nov 2017 we hope to see signs of improvement in 2018.</p> <p>Volunteers will continue surveying every 2 and 5 years to continue monitoring impact of restoration and sward management changes</p> <p>Positive indicators include: <i>Brachypodium pinnatum</i> (Tor grass), <i>Bromopsis erecta</i> (Meadow brome), <i>Cirsium acaule</i> (Dwarf thistle), <i>Filipendula vulgaris</i> (Dropwort), <i>Galium verum</i> (Ladies Bedstraw), <i>Leontodon hispidus</i> (Rough hawkbit), <i>Lotus corniculatus</i> (Bird's foot trefoil), <i>Primula veris</i> (Cowslip), <i>Sanguisorba minor</i> (Salad burnet), <i>Scabiosa columbaria</i> (Small scabious) & <i>Succisa pratensis</i> (Devil's bit).</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Numbers and varieties of negative indicator species reduce, and numbers and varieties of positive indicator species increase across all MG quadrats.</p> <p>Forest Research Lead Scientist and Flora Survey Group annual surveys.</p>	<p>- 7 Negative indicator species recorded - 16 Positive indicator species recorded.</p>	<p>- 9 of 10 Negative indicator species recorded. - 11 (of 21) Positive indicator species recorded</p> <p>2012 Downs Flora Survey</p>	<p>6 negative and 11 positive indicators of MG Grasslands found during Spring and Summer 2017 survey.</p> <p>In addition 2 negative and 11 positive indicators of calcareous grassland were also recorded of a possible 8 negative and 22 positive indicators.</p>	<p>Achieved.</p> <p>Achieved both positive and negative indicator targets for Mesotrophic grassland (MG) species.</p> <p>Positive indicators include: <i>Carex flacca</i> (Blue sedge), <i>Centaurea nigra</i> (Lesser knapweed), <i>Galium verum</i> (Lady's bedstraw), <i>Lathyrus pratensis</i> (Meadow vetchling), <i>Leontodon hispidus</i> (Rough hawkbit), <i>Lotus corniculatus</i> (Birds foot trefoil), <i>Potentilla erecta</i> (Tormentil), <i>Primula veris</i> (Cowlip), <i>Stachys officinalis</i> (Betony), <i>Succisa pratensis</i> (Devil's bit scabious), <i>Tragopogon pratensis</i> (Goat's beard).</p> <p>Negative indicators: <i>Cirsium vulgare</i> (Spear thistle), <i>Galium aparine</i> (Cleavers), <i>Plantago major</i> (Broadleaf plantain), <i>Rumex crispus</i> (Curly dock), <i>Senecio jacobaea</i> (Stinking willie) & <i>Urtica dioica</i> (Common nettle).</p>
<p>Positive indicator species for MG5 and/or MG6 habitat recorded.</p> <p>Forest Research Lead Scientist and Flora Survey Group annual surveys.</p>	<p>- 8 Positive indicators found in quadrats 2Q28, 2Q29 & 2Q30.</p> <p>- Existing permanent Car Park area and other hard standing areas restored to MG5 and/or MG6 Habitat.</p>	<p>- 0 Positive indicators found in quadrats 2Q28, 2Q29 & 2Q30</p> <p>2012 Downs Flora Survey</p>	<p>10 positive indicators of MG and Calcareous Grasslands found during Spring and Summer 2017 survey.</p>	<p>Achieved.</p> <p>Achieved and exceeded the number of positive indicators.</p> <p>These include: <i>Bromopsis erecta</i> (Meadow brome), <i>Cirsium acaule</i> (Dwarf thistle), <i>Lathyrus pratensis</i> (Meadow vetchling), <i>Lotus corniculatus</i> (Bird's foot trefoil), <i>Leontodon hispidus</i> (Rough hawkbit), <i>Leucanthemum vulgare</i> (Ox-eye daisy), <i>Galium verum</i> (Ladies Bedstraw), <i>Potentilla erecta</i> (Tormentil), <i>Sanguisorba minor</i> (Salad burnet), <i>Tragopogon pratensis</i> (Goat's beard).</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Increase in percentage cover of wildflower and sedges recorded in quadrats located in existing car park.</p> <p>Forest Research Lead Scientist and Flora Survey Group annual surveys.</p>	<p>- Wildflower and sedge coverage increases to 30%</p>	<p>- Existing car park & events area 20% (herb species which is comparable as herb: grass ratio)</p> <p>2012 Downs Flora Survey</p>	<p>Wildflower coverage between 2 and 11%. No sedges have been recorded in the restored area as yet.</p> <p>Herb: grass ratio has varied between 18-22%.</p>	<p>Improving.</p> <p>Coverage is improving: this is a long term project we hope to continue see improvement over the next few years. Some positive grasses such as Hornwort and Yellow oat grass have been found.</p>
<p>Condition of Grassland Category – as per Joint Nature Conservation Committee (JNCC) Statutory Advisor to UK Government guidelines.</p> <p>Forest Research Lead Scientist and Flora Survey Group annual surveys.</p> <p>Achievement measured using comparative vegetation maps.</p>	<p>Meets JNCC condition of ‘unfavourable recovering’</p>	<p>- JNCC condition of ‘unfavourable not recovering</p> <p>2012 Downs Flora Survey</p>	<p>2017 results show the majority of vegetation is now a mixture of MG6a and MG6b with some OV23c.</p>	<p>Achieved.</p> <p>Achieved, with scope for further recovery. In 2012 dominated by MG7 (single community of perennial rye-grass) vegetation, with just 7 species recorded. Surveys have shown an increase of species each year.</p> <p>The restoration of this area is a long term process and we have started to see signs of recovery and variation after two years of restoration. We hope this will continue and improve following the reintroduction of cattle and by continuing appropriate grassland management</p>

Project Aim 2 – Outcome: 2.5. The Downland environment provides a habitat that supports diverse species, including indicator species of bees, and butterflies

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Increased variety of species of butterflies (base of food chain) recorded on the Downland. Fauna Annual Site Species Survey	- 16 Species found on the Downs during transect period.	- 14 Species noted on Downs in Sections 1 & 12 of transect. 2010 Butterfly Survey (Arion Environmental Consultancy).	23 Different species of Butterflies were recorded as part of the 2017 transect. See Fauna Report 2017 for details. 12 Species of day flying moths also recorded.	Achieved. Target exceeded. Species identified during the 2017 surveys in order of numbers found were; Meadow Brown, Marbled White, Common Blue, Ringlet, Gatekeeper, Green-veined White, Small/Essex Skipper, Speckled Wood, Small White, Large White, Brown Argus, Small Copper, Small Skipper, Orange Tip, Small Tortoiseshell, Brimstone, Silver-washed Fritillary, Large Skipper, Red Admiral, Peacock, Small Blue, Essex Skipper & Painted Lady. Additional species noted during the BioBlitz held July 2017.
Increased incidence of butterfly species (base of food chain) recorded. Fauna Annual Site Species Survey	- 275 butterflies recorded on the Downs.	- 211 butterflies recorded on the Downs 2010 Butterfly Survey	1,922 butterflies recorded in 2017. Fortnightly total of 967 of butterflies recorded	Achieved. Target exceeded.
Regional priority butterfly species seen on the Downland, including Small Blue butterflies. Fauna Annual Site Species Survey	- Regional high or medium priority species recorded, including Small Blue	- 0 High or Medium priority species found. 2010 Butterfly Survey	2 Priority species recorded in 2017 'Small Blue' and 'Brimstone'	Achieved. Achieved, two priority species recorded in 2017, 3 were recorded in 2014 (Small Blue, Brimstone, Adonis Blue). Additional priority species noted during the BioBlitz held July 2017.

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Increased variety of bee species recorded on the Downland. Fauna Annual Site Species Survey</p>	<p>-10 Species recorded on the Downs.</p>	<p>8 Species Recorded 2010 Survey</p>	<p>10 species of Bumblebee recorded on the Downs as part of 2017 Fauna Surveys. Fortnightly total of 138.</p>	<p>Achieved. Target achieved for 2017. In 2014 following the restoration numbers peaked at 14 species. Species identified during the 2017 surveys in order of numbers found were; Red-tailed, Common Carder, White-tailed, Buff or White-tailed, Early, Garden, Buff-tailed, Tree, Southern Cuckoo, Red-tailed Cuckoo & Unknown. Additional species noted during the BioBlitz held July 2017</p>
<p>Increased incidence of BAP priority species of bats recorded within Westonbirt's curtilage. Arboretum areas included in survey because Downs are a key feeding ground for bats recorded in adjacent wooded habitat.</p>	<p>- Increase incidence of bat recording by 10%.</p>	<p>30 bats recorded 22nd May 2012, Gloucestershire Bat Group</p>	<p>45 bats recorded in Westonbirt's 2016 Survey = 50% increase.</p>	<p>Achieved Target exceeded in 2016 surveys.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Variety of BAP priority species of bats recorded. Arboretum areas included because Downs are a key feeding ground for bats recorded in adjacent wooded habitat. Gloucestershire Bat Group Survey</p>	<p>- Maintain or increase number of species of bats recorded.</p>	<p>-13 of 18 species of bat found. 22nd May 2012, Gloucestershire Bat Group Survey</p>	<p>9 species found during Westonbirt's 2016 Survey.</p>	<p>Ongoing High levels maintained. Decline in 2016 may not be a true decline but as a result of the weather conditions on night of the survey.</p>

Project Aim 3 – Outcome: 3.1. An increased number of younger people volunteer or participate at Westonbirt.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>% of volunteers in younger age groups increases.</p> <p>Volunteer database.</p>	<p>10% 24 or under 12% 25-44 12% 45-55 10% 55-65 56% 65 plus</p>	<p>1.2% 24 or under 8.4% 25-44 8.4% 45-55 19.8% 55-65 62% 65 and over</p> <p>2012 Volunteer database.</p>	<p>1.49% : 24 or under 10.07% : 25- 44 6.34% : 45-54 22.39% : 55-65 56.34% : 65 and over</p> <p>3.36 % Not disclosed</p>	<p>Improving. Increase in under 24yrs, 25-44yrs and reduction in over 65yrs. Target not met but progress made since baseline in 2012.</p> <p>Average volunteer age is now 65yrs with ages ranging from 17 – 100yrs, before the project the average age was 66yrs. The average age for community volunteers is 54yrs and the project average age is 58yrs.</p>
<p>Levels of satisfaction from those young people participating.</p> <p>L&P team data (YP Post).</p>	<p>95% 'good or excellent'</p>	<p>-</p>	<p>95% (148 of 156 responses) rated the sessions as either 'Excellent or Very Good', from Survey Monkey Evaluation for both youth and adult groups</p>	<p>Achieved. Achieved and exceeded numbers of sessions and participant numbers.</p> <p>We have delivered 296 youth community sessions with 2,711 participants. The Youth Forum group meets regularly and has been attended by over 120 young people.</p>

Project Aim 3 – Outcome: 3.2. An increased number of older people at risk of exclusion have engaged with Westonbirt.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Levels of satisfaction from those older people participating in programmes.</p> <p>L&P team data (YP Post).</p>	<p>95% 'good or excellent'</p>	<p>-</p>	<p>95% (148 of 156 responses) rated the sessions as either 'Excellent or Very Good', from Survey Monkey Evaluation for both youth and adult groups</p>	<p>Achieved. Achieved and exceeded numbers of sessions and participant numbers.</p> <p>We have delivered 256 older adults community sessions with 2,202 participants and exceeded our target for outreach sessions.</p>

Project Aim 3 – Outcome: 3.3. Volunteers come from a wider background

Indicator and Source	Target in Year 5 of Project	Indicator Baseline, Source, Date and Data	Final Data 2016/17 (Incl. Date and Source)	Achieved?
<p>% of BME volunteers. Volunteer database.</p>	<p>1.5% (target set in relation to current 0% and Gloucs. pop. data of 2.8% BME)</p>	<p>0% BME volunteers 2012 Volunteer database</p>	<p>Of the 274 current volunteers, 112 have informed us of their BME with all selecting 'White/British/English/Welsh/Northern Irish', ie 0% BME volunteers.</p>	<p>Ongoing. Target not achieved, however 7% of community participants have been recorded as BME. Local population BME remains under 1%.</p>
<p>% of volunteers who are non-FOWA member when they become a volunteer. Volunteer database.</p>	<p>250% increase</p>	<p>4% of volunteers are FOWA members. 2010 Volunteer database</p>	<p>In 2017, 5% of volunteers were not FOWA members when they became a volunteer. In 2017 all volunteers notified us of their FOWA membership status</p>	<p>Ongoing. Target not achieved, many of our new volunteers are members of FOWA but this is no longer a requirement for individuals to become volunteers.</p>

Project Aim 3 – Outcome: 3.4 Volunteers are more highly skilled and professional in delivering their tasks.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Volunteer assessment of their skill level. Volunteer Co-ordinator.	A majority of trained volunteers feel they have learnt or improved skills important to their role.	-	111 of 113 volunteers surveyed in Westonbirt's 2017 Volunteers' Survey rated training either 'Good' (34%) or 'Very Good' (64%) = 98%.	Achieved. We have seen an increase in the results following the 2014 National FC Volunteer Survey Results of the training 'Good' (41 individuals) or 'Very Good' (36 individuals)

Project Aim 3 – Outcome: 3.5. Westonbirt is attracts more and new volunteers

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Volunteer numbers. Volunteer Co-ordinator.	300 active volunteers	240 active volunteers 2012 Volunteer Co-ordinator.	274 active volunteers (2017)	Improving. Volunteer numbers are continuing to rise.
Volunteer hours from Volunteer database	25,000 volunteer hours p.a.	21,000 hours p.a. 2012 Volunteer Co-ordinator.	24,333 Total volunteer hours for Jan – Dec 17.	Improving. Overall volunteer hours have increased. (NB. We have exceeded the project volunteer hour target of 15,552 achieving over 21,000 hours.)

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Volunteer assessment of volunteering at Westonbirt.</p> <p>Volunteer Survey <i>'How do you rate the way volunteering is organised, managed and delivered?'</i></p>	80% 'excellent'	41% 'Excellent' 2012 Volunteer Co-ordinator.	84.5% rated as 'Excellent and Good' Westonbirt's Volunteer Survey 2017.	Achieved. Target exceeded. In 2015 we achieved Investing in Volunteers (iV) accreditation

Project Aim 3 – Outcome: 3.6. Westonbirt's visitor profile is broader and more reflective of the wider population.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
% of Visitor respondents under 24. ALVA survey.	Achieve 2%	<1% 2010-2011. ALVA survey	5%	Achieved Target exceeded. Results have been increasing throughout the project with a score of 3% from the mid-year results.
% of visitors from C2DE increases. ALVA survey	30% C2- DE	17% C2 – DE (24% ALVA average) 2010-2011 ALVA survey	22%	Improving. Percentage increasing from baseline, we scored 19% from the mid-year results.

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Entry ticket sales for child (18 and under) Admissions data	Year 5 – 25,014, an increase of 10% each year.	15,532 2009/10, Admissions	29,315 paying children (under 5's free) in 2017. Total includes the number of children entering as part of the 'kids go free promotion' in August.	Achieved Target exceeded.
Number of partnership organisations. L&P team data (A&C and YP Post).	30 over 5 years	-	We have worked with over 156 (partner) organisations as part of the community programme.	Achieved Target exceeded.

Project Aim 3 – Outcome: 3.7. More people enjoy coming to Westonbirt.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Entry ticket sales for paying adults. Admissions	Year 5 – 136,053, increase of 9,990 each year.	135,461 2011-2012 Admissions	182,267 paying adults in 2017. Total excludes members and events	Achieved Target exceeded, visitor numbers have increased each year with a peak in 2016/17.

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Enjoyment of visit. ALVA survey q. 'Enjoyment of visit overall'</p>	<p>85% 'excellent'</p>	<p>54% 'Excellent' 2010-2011 ALVA survey</p>	<p>58% 'Excellent' in Spring /Summer & Autumn 2017 in ALVA survey</p>	<p>Improving. Score improving and we will continue to monitor the results. This result does seem contradicted by the high score of 96% of individuals strongly agreed/agreed that they would recommend Westonbirt to Family & Friends. Westonbirt combined FR survey 2017.</p>
<p>% of facilitated volunteering and visit participants who rate their experience positively. L&P team feedback forms (YP and A&C Post).</p>	<p>95% 'good/excellent'</p>	<p>-</p>	<p>18/21 (86%) Volunteers who completed Westonbirt's Volunteer Survey rated the Community Programme as 'Very Positive' From our combined Westonbirt's Online evaluation for both youth and adult groups participants, 95% (148 of 156 responses) rated the sessions as either Excellent or Very Good.</p>	<p>Ongoing/ Achieved. High score achieved for participants satisfaction and a high score achieved for volunteer satisfaction. The Community Officers have used a variety of methods for evaluating the participant satisfaction of the programme and the overall impact on participants has been evaluated through observations rather than questionnaires due to the complex needs of many of the community participants, some of whom cannot express themselves verbally.</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Volunteer satisfaction.</p> <p>Volunteer Survey</p> <p>'How much do you personally value volunteering at Westonbirt?'</p>	<p>80% 'Very highly'</p>	<p>56% 'Very highly'</p> <p>2012 Volunteer Co-ordinator.</p>	<p>69% Rated 'Very Highly' in 2017 Volunteer Survey</p>	<p>Improving.</p> <p>Result improving from baseline score from 2012. Volunteer surveys will take place every 5 years or more frequently on specific topics. Following the 2017 survey a number of recommendations are being taken forward which we hope will have a positive impact on our volunteers.</p>
<p>Disabled user enjoyment rating.</p> <p>Additional data source, ALVA survey: Whether you have a Disability and 'Enjoyment overall'</p>	<p>60% 'Excellent'</p>	<p>54% of Disabled visitors rated the site as 'Excellent' for enjoyment</p>	<p>60% of Disabled visitors rated the site as 'Excellent' for enjoyment</p>	<p>Achieved.</p> <p>Results will be continually monitored to assess the impact of other changes including the mobility shuttle trial.</p>

Project Management – Outcome: The Project has been efficiently and effectively managed and delivered.

Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
<p>Welcome Building complete and new site layout in operation by end of Yr 2.</p> <p>Project team.</p>	<p>No structural or fundamental issues with the new building.</p>	<p>-</p>	<p>Welcome Building opened June 2014 on time. No structural issues with the building since completion. Minor alterations made to the admission window and back office.</p>	<p>Achieved Parts of the entry barriers will need to be replaced in the near future. Following the results from the Westonbirt FR 2017 surveys we will also consider the use of the admissions area and the information centre to ensure any changes have a positive impact on the use of the interpretation and use of the Welcome Building overall.</p>
<p>Staff posts.</p> <p>FE Human Resources</p>	<p>Staff members recruited as per project timetable.</p>	<p>-</p>	<p>All posts appointed on time as planned.</p>	<p>Achieved As shown in the Project Milestones table (section 3.3), all project HLF funded posts were appointed on time.</p>
<p>Project reporting.</p> <p>Project team</p>	<p>Timely reporting to Project Steering Group, FOWA Board and HLF.</p>	<p>-</p>	<p>15 HLF Progress Reports submitted on time, plus regular updates to Project Steering Group</p>	<p>Achieved</p>
<p>Project budget.</p> <p>Project team</p>	<p>Expenditure recorded and reported to HLF in accordance with their procedures.</p>	<p>-</p>	<p>Most budgets on target or underspent which enabled additional activities to take place including the BioBlitz as well as additional purchases.</p>	<p>Achieved</p>

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Indicator and Source	Target in Year 5 of Project	Indicator Baseline	Final Data	Achieved?
Business Plan projections. Project team	Visitor numbers, income etc.	-	Visitor number now over 500,000 per year.	Achieved Visitor numbers and income, higher than planned in Business Plan. This may be in part due to the completion of the STIHL treetop Walkway.
Best Practice and Project Learning Shared. Project team	20 other organisations / projects have been able to share learning.	-	Over 27 other organisations and projects have met SN, Project Manager and other staff.	Achieved Exceeded. We have met with a variety of organisations, discussions ranged from materials used, fundraising, App development and creating a community programme.

5. The Difference Our Project Made For Heritage

5.1. Restoration of the Downs (Aim 2)

As a Grade 1 Registered park and garden, the arboretum is in the top 10% of designed culturally important landscapes in England. The Grade 1 landscape includes the Downs as one of three key distinctive elements of the arboretum and is 40ha in size. It provides an open space between Silk Wood and the Old Arboretum and was purposefully left as grassland by the Holford family. It provides a key component of the picturesque by providing open space and views from and into the tree collection.

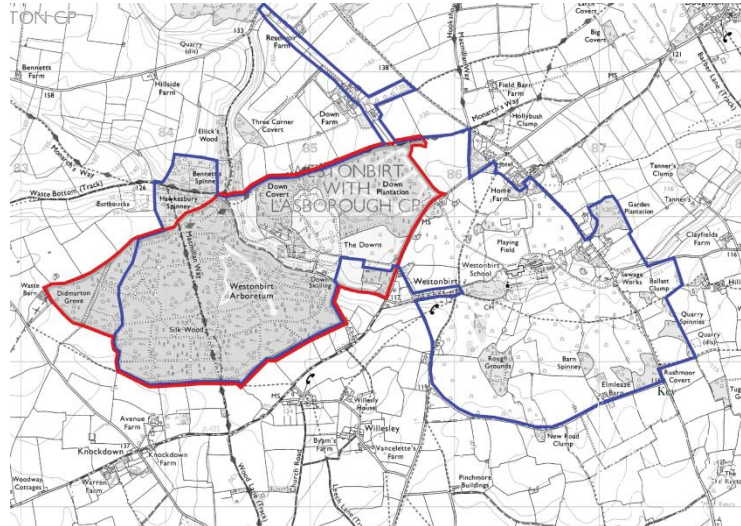


Image – Wider Westonbirt Estate and Grade 1 landscape, in blue. The red line indicates the FC and arboretum boundary and shows the new car park location outside of the G1 area.

As the arboretum has grown in popularity, the original small car park on the Downs was outgrown resulting in visitors' parking on the Downs grassland throughout the year leading to deterioration of the Downs landscape. This was not only having a negative impact on an important habitat but also on our visitors experience and appreciation of the wider historic landscape. The restoration of the Downs is intrinsically linked to both the relocation of the visitor car park but also the creation of the Welcome Building.

5.2. Downs & Boundary Restoration Outputs

The outputs for Aim 2 can be broadly categorised as Downs Restoration (Flora, Fauna and Landscape Restoration) and Boundary Restoration. New staff and volunteer roles and opportunities were created in order to deliver these outputs.

The following table shows the original project outputs and the final outputs. Some of the outputs have been combined.

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Original Output	Final Output
Downs Restoration	Downs Restoration
Existing permanent tarmac and stone Car Park area and other hard standing areas removed and 6,000sqm restored to grassland (Lowland Calcareous & Lowland Meadow) MG5 and/or MG6 Habitat.	All removed and over 15,000sqm has been restored to grassland habitat, a mix of Lowland Meadow and Lowland Calcareous grassland.
20 shrubs, 20 trees, and 140m of hedge removed from Downs.	223m of hedging, 103 trees and shrubs were removed from the Downs which were previously used to reduce the impact of the parking on the Downs.
120 appropriate trees planted, 1,000 appropriate shrubs planted	416 new trees were planted on the Downs and car park areas & 178m of woodland hedging was also planted to screen the new car park.
Lowland Calcareous & Lowland Meadow areas meet favourable standards for a BAP habitat.	Complete, work ongoing to ensure long term status and improving condition
6,000sqm of Downland restored as habitat for fauna.	Over 15,000sqm has been restored to grassland habitat.
Existing admission kiosk and portaloos removed from the Downs.	Existing admission kiosk and portaloos removed from the Downs, early 2014
Improved Access	
New Welcome Building (pre-requisite to restoration of Downs) constructed and discrete in landscape & new disabled scooter storage for 18 additional scooters	Welcome Building complete in June 2014 and provides storage for 10 mobility scooters and 4 wheelchairs. Two disabled toilets, accessible information desk
New adult changing room provided	Completed October 2015
Number of disabled bays in the car park increased to 22 (from 10) & new bicycle storage for 15 bikes built.	22 spaces provided plus 10 wide spaces which are reserved for busy days for disabled visitors'. 18 bikes racks installed in visitor car park
10,000sqm of new DDA compliant paths / routes are installed that are accessible for all.	All new paths are DDA compliant. The main route to the restaurant is lit, with LED timber bollards with benches every 100m. New picnic benches for wheelchair users.
Boundary Restoration	
810 m of iron railings restored/ reinstated.	In total 3,534m boundaries have been restored and reinstated. 345m of railings restored plus 831m reinstated along field boundaries. 858m of dry stone walls repaired and restored. 850m of historic ha-ha dry stone walls with railings restored along the edge of the Old Arboretum.
500m of ha-ha / dry stone wall restored and rebuilt.	
Historic vernacular boundary styles are used to delineate the 'out of bounds to cars' area in the centre of the Downs.	
100m of new ha-ha with strained wire and ha-ha used to create a new boundary. An additional 650m of traditional metal estate fencing and gates used to protect veteran trees on the Downs.	
Staff & Volunteers	
Volunteer Estate Supervisor (FTA)	Started Sept 13, recruited and managed the landscaping volunteers.
Student Arborists (x2, 1 year FTA)	Two students appointed and completed years placements.
Landscaping Volunteers (including dry stone walling)	Contributed 2,513 hours towards the project. They carried out tasks including tree planting and boundary clearance.
Flora Volunteers	Contributed 1,091 hours towards the project. They worked alongside Matt Parratt surveying the Flora species
Fauna Volunteers	965 hours towards the project surveying Bees & Butterflies
-	BioBlitz (440 hours and over 1,000 biological records)
Specialist Flora/Fauna Training	502 hours of specialist training

Table 4 – Aim 2 Outputs

5.3. How we Restored the Downs

In order to complete this aim we created two new volunteer groups; the Landscape/Estate Group and the Fauna Group, and we expanded the role of the Wildflower Volunteers to become the Flora Group to survey wildflowers, sedges and grasses. Further information about each volunteer group including training undertaken is included in Section 7.2. This work was supported by Matt Parratt, Research Biologist from FR.

The following steps were taken to restore the area back to grassland; some actions were completed as part of the HLF Development Phase;

1. Baseline surveys undertaken of the soil, flora and fauna on the Downs,
2. Soil and seed removed from the new car park location and stored on site for distribution over the restored areas,
3. The old car park and numerous footpaths, associated car parking furniture and screening trees and hedges were removed,
4. Soil and seed from the new car park location were spread over the old car park site and over areas where other stone or bitmac surfaces were removed,
5. Volunteers used scythes to cut green-hay from existing meadows (donor sites) at the arboretum and strewed the seed over the restored areas. The restored areas are scarified to loosen the soil immediately prior to strewing. The scything and strewing process has been repeated twice a year in early and late summer since 2014. See The following is a comment from one of the volunteers who has scythed and strewn the Downs since 2014, *'the old car park was sort of bare ground really. Nobody had appreciation, probably quite cynical, that this strewing was going to give us back a Downs, in effect! And we've been proved wrong, we really have, the same it's sort of come up... Even though the experts that were there were saying yeah it will work, it will work, just give it time. And we've been proved wrong! From the point of view in that yes it HAS worked. It's looking very successful.'* Landscaping and Estate Volunteer
6. Regular surveying of the restored areas and wider Downs has taken place by the flora and fauna volunteers.



Images – Left: Volunteer Scything. Right: Volunteers strewing green hay across former car park

Evaluation Report, Phase One of The Westonbirt Project



Images – Top photo - Aerial photo pre project. Bottom photo - Aerial photo post project.
The blue line indicates the edge of the Grade 1 boundary; therefore the new car park is outside of the Grade 1 landscape.

The restoration of the Downs and completion of the masterplan, including the creation of the STIHL Treetop Walkway, has significantly changed how visitors, volunteers and staff now use and enjoy the arboretum. A Visitor Services Staff member commented *'the site now feels connected, more together, it now makes sense as a whole'*. As shown in the 2017 visitor surveys, 54% of visitors are now exploring both Silk Wood and the Old Arboretum. The central area which was once parked on is now a car free zone.

'When visitors now arrive through the main entry point, the Welcome Building, they are no longer faced with a sea of sprawling cars.'

Kim Auston, Historic England

We will continue to ensure the Grade 1 landscape especially the former car park area and the Downs remains car free for the vast majority of the time so that this important part of the historic landscape remains in good condition and continues to have a positive impact on the aesthetics and visitor appreciation of the wider landscape. We occasionally use this area for one off commercial events including the Arb Show, four concerts and our Christmas event.

5.4. Increasing our Understanding of the Arboretum's Biodiversity

Restoring the Downs has benefitted the wider historic landscape and visitor experience but it has also had a positive impact to the arboretum's biodiversity and increase awareness and knowledge of the arboretum's biodiversity. It is planned that surveys by both the Flora and Fauna groups will continue for at least another year. We are also considering the next steps proposed by Matt Parratt see Appendix D. Both volunteer groups are also expected to continue to support the wider arboretum and will be moving on to a new project to monitor the impact of the management of Silk Wood.

Flora

Following the survey in 2012, the area of the former car park and other areas highlighted for potential restoration were classified as amenity turf but showed potential to become part of the wider grassland habitat. The wider downs were classed as two types of Biodiversity Action Plan (BAP) habitats, lowland calcareous grassland (CG) or lowland meadow/ mesotrophic grassland (MG). As described in the 2012 Downs Restoration Plan it was hoped these car parking areas could be restored and eventually classified as either BAP habitat type. Steps 5 and 6 detailed in the section 5.3 have been repeated by our volunteers since 2014 and the areas have been surveyed by carrying out a rapid assessment survey every two years and more detailed quadrat survey every 5 years to monitor the changes to the Downs. Over 5 years a total of 239 plant species were recorded on Downs representing 8.1% of the total UK flora.

The species recorded in the former car park have now increased in each quadrat from 7 to maximum of 19. Positive indicator grasses including hornwort and yellow oat grass have been identified as well as positive indicators including ox-eye daisy, bird's foot trefoil and ladies bedstraw. The restored areas including the former car park, can now be classed as BAP habitat and contributes to the national and local conservation as 18% of lowland meadow in SSSIs in Gloucestershire and 2% of lowland calcareous grassland are declining in condition.

However, some areas of calcareous grassland have shown signs of decline in 2016 and 2017 with a reduction in positive indicator species; see Appendix D. This is in part, due to an increase in sward height and reduction in the frequency of some species which is largely attributed to the lack of grazing over the last 2.5 years due to challenges of finding a suitable grazer.

In order to continue to improve the condition of the habitat and the species diversity of the former car park site we will continue to survey and manage of the Downs in accordance with the restoration approach which is included in the revised Sward Management Plan.

Fauna

The Fauna volunteer group was created in 2012 to monitor the impact of the restoration on two key indicator species; butterflies and bumblebees. Each year from April to October, volunteers have walked a set transect (route) of 2.6km across the Downs including the events area and former car park. The group have also supported the scything and strewing on the Downs. As a new specialist group we have regularly organised specialist training particularly in bumblebee identification, see Appendix E for more details, which have been well received by the volunteers.

The volunteers have recorded a significant increase in abundance of bumblebees and butterflies in the former car park area (140m of the transect route) with a peak in 2015, one year following the restoration. This bumper year for both species may be in part due to the number of flowering weeds and thistles, and although numbers have lowered they remain much higher than the 2012 and 2013 results. See the table below for the numbers recorded in the former car park area.

Species	2013	2014	2015	2016	2017
Butterflies	5	8	11	3	33
Bumblebees	2	1	45	20	13

Table 5 – Survey results for the former car park area, restoration started in late spring 2014.

In 2017, 23 different species of butterfly were identified; the top two types recorded were Meadow Brown and Marbled White. The volunteers also recorded two priority species, Small Blue and Brimstone butterflies. Overall the butterflies have been steadily increasing in number with a peak in 2017. The numbers of bumblebees have however have been more variable although we have achieved our overall target. For the results for 2017 and previous years, see Appendix E.



Image Left: Brimstone Butterfly (Credit. FC). Right: Male Buff and White tailed bumblebees (Credit. Cathy Booth)

We have regularly promoted the benefits of the restoration of the Downs landscape particularly the flora species and numbers of butterflies and bumblebees recorded each year through social media posts and the FOWA magazine, see image below. Each year the data collected is submitted to the local record centres to feed into the national results. The Fauna Group will continue surveying the Downs in 2018 to monitor the impact of the winter grazing in 2017. We are also considering involving the volunteers in surveying the impact of the woodland management of Silk Wood.



Image – Example of communication tools used including the FOWA members magazine.

Grazing

Prior to the project the western field and central part of the Downs had been grazed since 1839 by sheep or cattle. The fields which make up the Downs were all grazed by cattle and managed by a local farming tenant. However we terminated this contract in late 2015 due to over grazing and in order to meet our new requirements post restoration.

Following a fallow year in 2016 to allow the grassland to recover from the intensive grazing we tried to find a new local grazier with a small number and suitable breed of cattle to graze the Downs. Due to bovine tuberculosis in the area it took longer than expected to find someone suitable. However, in November 2017 Gloucester cattle a native rare breed, known for grazing this type of grassland, arrived from the Highgrove Estate. They have grazed the main Downs field of both lowland calcareous and lowland meadow grassland and we hope they will return in the late summer. With grazing recommencing we hope to see an increase biodiversity and further grassland improvements including the reduction in sward height and an increased in variety of species.



Image – Gloucester cattle grazing on the Downs, November 2017. (Credit B.Starkings)

BioBlitz

In July 2017 as part of the celebrations of the HLF Project a volunteer suggested holding our first BioBlitz event. Working in partnership with the Gloucestershire Butterfly Conservation (moth recorders) and with the Bristol Naturalist Society, we held a two day BioBlitz with a focus on the Downs. To promote the event we created marketing materials and produced magazine articles in the FOWA magazine, took part in a BBC Gloucestershire radio interview and created regular posts via our social media channels. The event enabled us to highlight the importance of the Downs Restoration project and provided volunteers and staff with an opportunity to work alongside specialist recorders to identify a wide range of species from moths to lichen.

Over the two days 826 species were recorded and 1,720 records collected and subsequently submitted to the Gloucestershire and Wiltshire Biological Record Centres. A number of rare and unusual species were recorded including the Four-spotted footman moth, Clouded yellow butterfly and 75 different lichen. 286 moth species were also recorded in one night, a county record for Gloucestershire. See Appendix D for further information.

Following the first day of recording we encouraged visitors to join us for a wide range of walks and talks and help us to carry out additional surveys. Nine types of walk were provided with 102

visitors joining in, including 19 children, the most popular walks were; wildflowers, invertebrates and small mammals. In addition to this 78 took part in the learning activities which included sweep netting. 26 visitors' completed feedback forms with the majority stating they had learnt something new and had a better understanding about conservation and wildlife, all rated the walks as 'very enjoyable' and all said they would come to another BioBlitz.

'she had a great time...I had to literally drag her away!! I thought you guys did really well, all the kids seemed to have a brilliant time, Gemma loved the moths too'

Visitor comment

Following the success of the event we plan to hold more biodiversity and wildlife focused events in the near future.

Trees, Shrubs and Hedges

Removal of inappropriate trees, shrubs and hedges and the planting appropriate parkland replacements was part of the Downs Restoration project. This forms a small element of the Downs project as the management of the tree collection including the Downs and new car park are incorporated into the Forest Design Plan. As a result of the project a number of tree, shrub and hedges were removed by volunteers under supervision of the Tree Team. In total 103 trees and shrubs and 223m of hedging was removed, exceeding our original target. Only those that were inappropriate to the parkland landscape were removed many of which were screen plantings around the former car park. In addition to this, old car park furniture including knee rails, signs and lighting bollards were also removed.

Over 416 trees have now been planted by volunteers and Tree Team staff across the Downs and around the new car park and coach park. There is now a new ribbon of planting from the Welcome Building to Silk Wood. Additional clump and single specimen plantings on the Downs now include a group of Cedar of Lebanon and single plants including a Silver Lime, Oak, London Plane, Sycamore and Common Beech. A number of smaller shrubs were also planted to the front and sides of the Welcome Building to soften its impact on the landscape. The trees in the car park and around the Welcome Building were selected for successional planting, attributes and links to the historic landscape and original plantings by the Holfords. The new plantings also add height, variety of colour and shade to this part of the landscape. Some of these trees have been adopted by arboretum supporters and many also have interpretative labels. A new 180m woodland hedge of Common Hazel, Hawthorn and Field Maple was also planted to the area below the car park to reduce its impact on the landscape. Future planting of parkland appropriate trees now forms part of the Forest Design Plan.

5.5. Restoration & Reinstatement of Historic Boundaries

There are multiple different styles of historic boundary which can be found on the wider Westonbirt estate. These include; dry stone walls, strained wire fences, iron railings and ha-ha walls with mounted iron railings many of which were in poor condition with overgrown ha-ha ditches. As stated in the Historic Landscape Plan *'parts of the iron railings have been replaced by sawn timber railings and agricultural fences, and these are now visually dominant*

boundaries on the Downs.' The restoration of the arboretum boundaries began in 2011 using some initial project funds and a Natural England Higher Level Stewardship grant and has continued through to 2017.

The works carried out were prioritised based on condition and prominence within the landscape. Where possible we have involved volunteers including helping with the ongoing maintenance of the ha-ha ditches and walls. One of the longest sections of boundary of over 600m involved volunteers with supervision and training led by professional dry stone wallers. We limited the volunteers to three per day to ensure they were adequately supervised to carry out the work to ensure we achieved a high standard of work. The short term practical volunteering role involved twelve volunteers, half of which were new volunteers to the arboretum. The supervision and involvement of volunteers was included within the selection requirements for the contractor which reduced the number of tender submissions received for this work.



Image – Dry stone walling volunteer.

'It was always something I fancied having a go at. I do a lot of walking so I'm used to seeing dry stone walls and thought I'd love to have a go at that'

Boundary Restoration Volunteer

The replacement of the timber fencing along the internal field boundaries with a traditional metal estate fence and gates has had a significant impact on the overall aesthetics of the landscape. This style of fencing has also been used to provide a tree protection to some of our Downland trees located in the overflow car park to protect them from compaction from visitors and their vehicles. It has also been installed around a veteran oak tree on the Downs which is located near one of the main footpaths. We plan to extend the use of the solid fencing to protect more trees where required. There are some historic photos and some remnants of the historic iron railings used as tree guards from the Holford era.



Image – Heritage style fencing around veteran oak tree.

We recently received this supportive comment from the President of the Ancient Tree Forum:

'Recently at Westonbirt an ageing oak has been fenced in the age old traditional way with Railings with the prime reason to protect this important oak... Iron railings around trees, roundels and boundaries were a feature of most of the UK's historic parks and gardens but were removed during World War Two to provide iron for the War effort... We in the Ancient Tree Forum and no doubt other organisations concerned with the conservation and protection of our Nations trees and Historic Landscapes fully endorse and support efforts by FC... it is an example to others'

Ted Green M.B.E Founder and President of the Ancient Tree Forum.

In total 3,534m of boundaries and fencing have been restored or reinstated, exceeding our original target. This was partly achieved due to a reduction in some costs, prioritising estate metal fencing and reallocation of budgets from underspends. For a further breakdown see the outputs table Section 5.2. Although the restoration work has been extensive staff, volunteers and visitors have commented on the difference which the work has made to the arboretum:

'...the work has been subtle but completed to a high standard. We now have elite boundaries to match the tree collection'

Recreation Staff Member

5.6. Future Plans & Ongoing Maintenance of our Historic Boundaries

Twice a year the estate volunteers check the restored walls and clear them of brambles and other plants. The tree team also carry out maintenance of the ha-ha ditches and have to ensure the restored elements stay in good condition. Some sections of the metal fencing have been damaged by tree boughs brought down in recent winter storms and some sections have been pulled down by badgers, so the ongoing maintenance of the boundaries has now become a routine, regular task.

There are more boundaries to restore including the boundary edge between Silk Wood and the Downs, completing the edge of the Old Arboretum boundary with the Downs and improving our perimeter boundaries. Some of the boundaries will be prioritised to ensure existing boundaries are stock proof to ensure the continuation of the grazing of the Downs. Some need further consideration in terms of their restoration due to the potential to create a more robust boundary to keep out pests including wild boar in order to protect the landscape and tree collection. We need to develop a rolling programme of work and consider grant applications or fundraising through other means in order to continue this work.

6. The Difference Our Project Made For Visitors

6.1. Improving the Welcome and Visitor Experience: Outputs (Aim 1)

Achieving Aim 1 has been the most challenging of all three aims of the project. It involved both the creation of a new Welcome Building at the centre of the site whilst the arboretum remained opened to visitors, but most significantly changing how staff, volunteers and visitors used, experienced and accessed the arboretum. The building required input and engagement from a number of teams; admissions, admin, learning and FOWA, it brought together admission staff and welcome volunteers and involved trying new things; entry barriers, an App, new databases and our largest interpretation project to date.

The outputs for Aim 1 can be broadly categorised as the New Arrival & Welcome and Interpretation & Signage. New staff and volunteer roles and opportunities were created in order to deliver these outputs. The following table shows the original project outputs and the final outputs. Some of the outputs have been combined.

Original Output	Final Output
New Arrival & Welcome Building	New Arrival & Welcome Building
New site arrival layout.	Completed, including new car park and Welcome Building
New 'pay on foot' system.	New Welcome Building and entry barriers installed
New Welcome Building in Summer 2014	Completed, opened on time June 2014.
Staff /volunteers more visible / accessible to visitors in new Welcome Building location and provide information.	Completed, although more work needed to increase visibility and engagement with visitors
Mobility scooter loan (from new Welcome Building) more easily identified and accessed by visitors.	Mobility scooters all located in the Welcome Building
Interpretation & Signage	
New tree interpretation in car park	Interpretation added to car park tree labels
New orientation signage before Welcome Building and around plaza	Completed as part of new orientation signage project
New orientation signage at gateways to the Arboretum / Downs.	Completed, six gateway signs installed
New interpretative elements in all signage.	Completed, added three hot spots and interpretation to all new gateway signs
Guided walk meeting point.	Two new meeting locations and signs created
New Welcome Building 4 Interpretation 'Pods', virtual information area	4 Pods created, virtual info area created in Welcome Building
New Specialist trail leaflets and benchboxes	4 trails created. Bench boxes replaced with bench panels and picture perfect trail
New App.	New TreeQuest App and TeamQuest created
Improvements to website information e.g. for visually impaired users	Some improvements made, national website is being updated and is launching May 2018. Visual impairment testing has taken place.
Staff & Volunteers	
Interpretation Support Officer (FTA)	Appointed April 2013, delivered all interpretation projects and supported WB exhibit interpretation project.
100 better trained visitor services volunteers.	161 Guides & Welcome Volunteers have been attended both internal and external training courses.
-	New M&E Survey volunteers, contributed 435 hours.

Table 6 – Aim 1 Outputs

6.1.1. A Relaxed Arrival Experience

The relocation of the visitor car park allowed us to change the arrival experience for all our visitors and is one of the main outputs towards achieving Aim 1. The new car park now provides; car parking spaces for over 400 cars, double the number of disabled parking spaces, space for over 20 coaches and 20 cycle racks for visitors' use.

With growing visitor numbers we have made some changes to the new car park. The lower section was originally created with a stone road and grass parking spaces, partly as an original planning requirement. To provide better parking and reduce damage to the grassland an amendment was sought in early 2016 to change to a bitmac road and stone bays to enable this area to be parked on more frequently to reduce reliance on the overflow field to provide more spaces for everyday use.

6.1.2. The New Welcome Building

The timber framed, curved Welcome Building was opened by HRH the Duchess of Cornwall in June 2014. The building is designed to be aesthetically appropriate for the landscape to ensure focus remains on the tree collection and to a high quality to meet the aspirations and needs of our visitors. The building was a significant change from the previous entrance, a small timber shed. The building is constructed from UK timber and a number of other local materials and is split into three main sections; the central entry/exit point, an interpretation and information centre and visitor toilets and store for the mobility scooters and wheelchairs.



Image – Admission kiosk and entrance in 2012.



Image – The new Welcome Building opened in June 2014

6.2. Understanding our Heritage: Outputs

We planned for the Interpretation Support Officer and Learning Manager to deliver a number of new interpretation and signage projects to enable visitors to learn something new about the arboretum and improve their understanding. All of the original planned outputs have been delivered, although the planned timescales for delivery changed.

Orientation Signage, Gateways & Hotspots

New orientation signage was developed and delivered in two main phases to coincide with the completion of the new car park and the Welcome Building. The signs have all been designed within the arboretum’s branding guidelines. The signage suite also included two new guided walk meeting points.



Image – One of the gateway signs into Old Arboretum.

Six new gateway signs and two introduction signs were also developed and delivered. The gateway signs are located at the entrances to the Old Arboretum and Silk Wood and provide visitors with some information about the particular location and a location map. Some of the gateway signs are double sided and on the reverse provide information about the Downs area

and the restoration project. The two introduction signs have been created for Silk Wood and the Old Arboretum.

As part of the orientation signage suite, three 'hotspot' interpretation signs were produced. These provide an introduction to the Propagation area, the 2050 glade and the Woodchip Sterilisation Unit. The signage is placed carefully, and graphically designed to fit into the overall signage suite, and the landscape around it.

Tree labels are fixed to some of the trees located in the new car park and around the Welcome Building and were produced which are similar in look to the botanic tree name labels. They are bigger and include some interpretation information:

'Acer pseudoplatanus. A species of maple from Europe that has naturalised in the UK. Grows well on shallow alkaline soils and drops 'helicopter' fruits in autumn'

Welcome Building Plaza

A 3D map was created for the plaza area just outside of the Welcome Building. It's positioned with the same orientation of the site itself, to help people locate themselves more easily. We merged the planned 'all weather display system' with the map. Eight photo cards of species which look good are housed next to the map, including a grid reference in relation to the map so visitors can find them. There are two changeable seasonal highlight panels, which explain the best areas to head towards for that particular season. A screen with the Welcome Building interpretation also shows rolling images of a number of species looking their best that week, and a projector behind the admissions desk also shows rolling images of what a visitor might see during their visit.



Image – The '3D' Map with 'WOW' images

Welcome Building 'Pods' & Information Area

A large part of the Welcome Building was created to house the new interpretation 'pods', information area and volunteer information desk. All of these elements were completed ready of the opening of the Welcome Building in June 2014.



Image –All three 'pods' inside the Welcome Building

The visitor information desk was originally located in the Great Oak Hall, a location which was separate to staff, and not at a point which every visitor would walk past. A new desk was created within the Welcome Building Information Centre, with the idea being that all visitors would walk past and have an opportunity to be engaged with by volunteers. The intention for the interpretation space was for volunteers to engage with the public by talking to them about the exhibits, increasing the visitors understanding of how it works, and the message they are trying to get across. This would help the visitor have a better introduction to their visit.

A computer is located on the other side of the information desk for visitors to use and access the 'Interactive Map'.

We created 'pods' each one relating to one of our key learning themes, each one is a standalone interpretation display, allowing for different room configurations. The exhibits are aimed at our regular visitors/ members as it was felt that we wanted to engage the members more with what the arboretum is, it's history, global importance and indeed how important trees are in general. The aim was to increase their understanding and a deeper connection with the site, rather than just viewing it as an economic decision.

We also deliberately avoided putting too many children's activities in, because at that time we knew that the Treetop Walkway interpretation (a separate project due for the year after) was going to focus on a family audience.

Pod 1 – Westonbirt's heritage and evolving landscape

- Touchscreen map with captioned photos, enabling the visitor to interrogate the how the arboretum has evolved
- Large mosaic map showing each photo within the touchscreen
- Morph films, showing different species fruit/leaves morphing into one another
- Two short films telling the history of the arboretum
- 'Window on Westonbirt' – an extension of the WoW 3D map showing what's looking good at the arboretum 'right now'
- Visitor sightings – screen showing photos which visitors have taken and sent in
- Landscape videos – audio films with relevant experts talking about specific aspects of the landscape

Pod 2 – Trees are essential to life

- Cabinet of curiosities showing how trees have been used for a variety of everyday things from piano keys to the surface of a velodrome
- Whispers in the woods – an audio exhibit with poetry related to different trees

Pod 3 – Westonbirt is an internationally important tree collection

- A spinning globe – an audio exhibit explaining how different tree species that we have here came from different areas of the world
- A spinning rolodex representing our extensive tree database, and showing the different information that we hold on our trees
- Artefacts showing what the team need during a seed collecting trip

Pod 4 – How we care for the tree collection

- Cycle of life: models of certain objects that the team use to care for the tree collection, with tags in them to trigger short films on a particular part of the life cycle of a tree
- Touchscreen exhibit where the visitor is asked how they would answer key issues that we find ourselves considering when managing an arboretum
- 4 x updateable booklets with news stories



Image – Pod 1, mosaic map, morph videos, landscape stories and touchscreen.



Image – Close-up of Pod 4 inside the Welcome Building

Four New Specialist Trails

Four specialist self-guide trails around the arboretum were developed, each focussing on one of the interpretation themes. These built on the general introduction provided by each of the Interpretation Pods in the Welcome Building, providing more detailed information to those with a specific interest in each area, or focussed on a particular target audience. Each of these new trails is available for free from inside the Welcome Building Information Centre.

- We developed an I-Spy activity booklet for families and children aged 3-6 years and use one of our tree management machines as the key character. 'Birt' the Wood chipper takes families on a journey to spot things around the arboretum which are used to help

us manage the tree collection. Each spot is accompanied by a separate activity. The i-Spy booklet launched in 2016 with an initial order of 3,000 booklets; to date 12,000 have been produced and 9,500 have been used to date. Stickers of 'Birt the Woodchipper' were also produced after launch. Feedback forms were produced to go inside every booklet, for parents and children to complete, 147 have been completed to date.

- The Picture Perfect trail encourages visitors to explore and interact with our picturesque heritage landscape through mindful photography. We used the ideas of improving nature to grow 'the perfect picture' and applying landscaping. A trail map was produced and includes a die-cut rectangle, for visitors to 'frame views' as they walk around the Old Arboretum. Bench boxes were changed to 8 bench interpretive panels as part of this trail.
- We developed and launched a booklet and supporting trail which encourages visitors to seek out 40 of our threatened trees within the arboretum, discover why they are endangered and how we support their conservation. The booklet holds introductory information on threatened trees, our role as a botanic collection, and how the public can help.
- We developed 'Creativitree', an interactive interpretation that asks visitors to share their own artistic creations. A suite of 20 postcards, which each give a fact on how trees have inspired a particular piece of art or culture. The visitor is invited to use the back of the postcard to respond to a particular activity or to take a photo of something they have created. Visitors were encouraged to share their creations on a large, colourful display. We encourage visitors to share any photos or films taken on Westonbirt's social media channels.

A New App

We developed a new mobile App on iOS and Android platforms to create a new way for visitors to learn and engaging with the arboretum. The team created a game-based experience that challenges families and young people to explore the site. The App consists of 50 trees, each with an iBeacon to alert the user when they are near that particular tree when the user's 'bluetooth' is turned on. There are 4 sections to the app:

- **TRAILQUEST:**
Visitors create their own trail but customise the duration, whether they have a dog with them and if they want to stay on path. The app will then selects trees which fit the criteria. Visitors are given clues to search for the tree, and an icon is shown on the map. Once discovered, a medal is awarded. The user can 'Go For Gold' by taking a challenge associated with that tree or area.
- **TEAMQUEST:**
A facilitated game based on the same 50 trees, designed for use by our Community Youth Groups.
- **EXPLORE:**
Visitors can see all 50 trees that there are to 'collect', they can walk to any tree. Within this mode they can only gain 'silver medals'.

- **MY ARBORETUM:**

Once a tree is 'discovered' it will appear in this section. They can be displayed as a list, or as a map which shows where they were located.

6.2.1. Welcome Building 'Pods' & Information Area

Front end consultation before development of the exhibits, took place with key stakeholders and visitors to understand what our key activity plan themes should be and to understand how visitors use the site and view interpretation.

During the development process in 2013, we undertook formative evaluation, by way of externally facilitated focus groups and exhibit prototyping, and consultation via a 'voting' system. These helped us to develop the exhibits, and in some cases changed how we did things. For example, the 'Visitor Sightings' photo exhibit was produced as a direct result of the Visitor Focus Groups.

Specific digital prototypes were developed with the public including the mosaic touchscreen, and the 'what would you do' exhibits. Several amends were made following these sessions, which were undertaken by our interpretation contractors. Content prototyping was undertaken by FC staff in order to understand topics, based on those themes, most interest an adult visitor audience.

6.3. Improving Site Accessibility: Outputs

Some of the outputs from Aim 2 relating to accessibility are also connected to Aim 1 due to the creation of the Welcome Building.

The creation of a new Welcome Building created a number of opportunities to enhance accessibility, the following some of these additional outputs;

- The new Welcome desk is used as an admission point and information desk and has two different heights; one suitable for wheelchair users but one also for those that need to stand. The space behind the desk and within the information centre is large enough for wheelchairs to easily manoeuvre around the space.
- Two disabled toilets created, one left sided, one right sided and one with a radar key, double the minimum required for a building of this size. Both have Dyson taps so users can wash and dry their hands without moving to a dryer.
- Baby changing cubicles in both the mens and ladies toilets, rather than combining this facility with a disabled toilet
- A new changing place facility created with a ceiling hoist, movable bed and equipment in order to meet the requirements to be classed as a Changing Place.
- Creation of a large store for mobility scooters and wheelchairs, free to hire for our visitors. The building enabled us to increase the numbers to 8 mobility scooters, three wheelchairs and one power assisted wheelchair, in addition to two mobility scooters located near the Great Oak Hall. In peak periods including autumn we hire in additional mobility scooters. In both 2016 and 2017 over 2,500 visitors and members have hired a mobility scooter or wheelchair



Image – The Changing Place space

6.4. Visitor Experience: Outcomes

6.4.1.Changes in Visitor Numbers

Since 2012 visit numbers have increased each year from just over 300,000 to over 500,000. Accuracy of recording has significantly improved following the completion of the Welcome Building and the installation of the new entrance barriers. The STIHL Treetop Walkway opened in spring 2016 and subsequently visitor numbers significantly increased following its first year.

Since 2012 membership numbers have also increased from 28,000 to almost 32,000. In 2017 FOWA members visits have been higher than paying visits each month except in October. This shows the change from paying one-off visits to repeat visits which could be attributed to the increase in the visitor offer and improvements to the arboretum. The increase in members has improved the financial stability of the arboretum which has enabled us to convert two project posts to permanent positions and make a number of capital improvements to the arboretum. The following bar charts below show the growth in our visits.

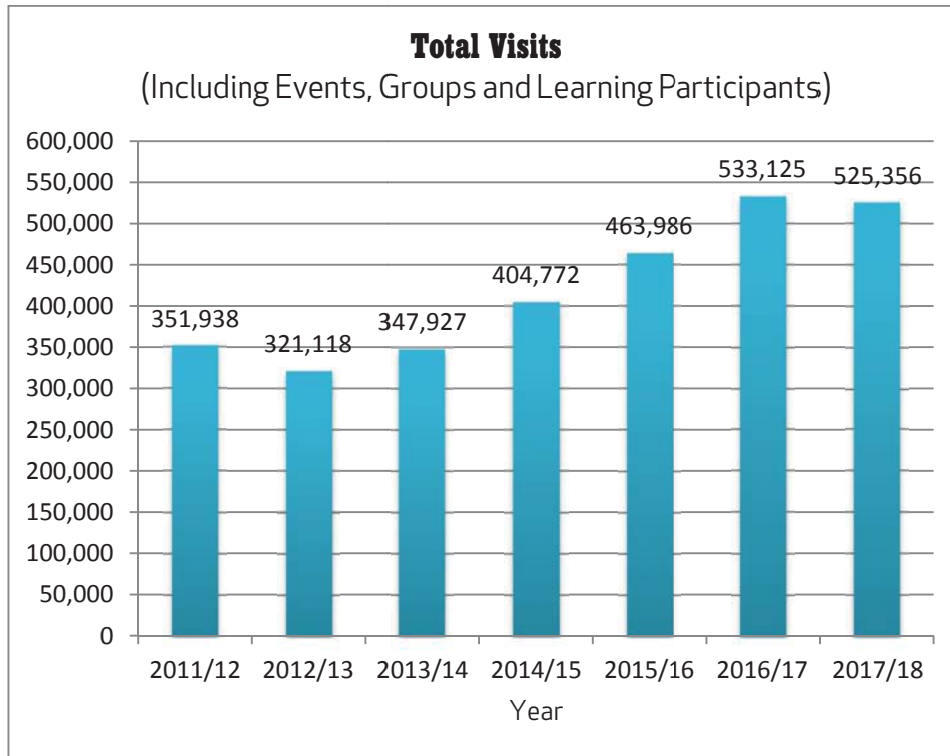


Figure 1 – Total visits per financial year, paying and non-paying. NB. 2017/18 total up to 01/03/18, STHIL Treetop Walkway opened in late April 2016, which is reflected in the 2016/17 total.

6.4.2. Changes in Visitor Demographics

The type of visitor and member has also changed since 2012, we now have a more even spread of visitor ages with more younger visitors. From our onsite survey 2017, 45% of our first time visitors were younger visitors 16-24years, see Appendix F for more information on our visitor profiles.

More families are now visiting as evidenced from our onsite and online survey in 2017 and the increase in child tickets purchased. There has been a significant increase in children visiting between the ages of 6-15years. The increase in families may also partly account for the increase in memberships as one of the top three reasons FOWA members give for joining the charity's membership scheme is free entry for children up to 19years of age.

The following table shows the main differences in audience from pre-project to post.

Description	Pre-Project 2012/13	Post- Project 2017/18
Carer tickets purchased	724	2,255
C2DE visitors	17%	22%
Visitors under 24yrs	Less than 1%	5% *
Groups with children	31%	37% *
Children: 0-5 years	24%	(6% & 17%)*
Children: 6-10years	13%	20% *
Children: 11-15years	4%	10% *

Table 7 – Summary of changes. * Data from combined onsite and online 2017 survey.

6.4.3. Improving the Visitor Arrival Experience

The visitor journey was planned as part of the creation of a new site wide masterplan. A key aim was to change the order of arrival from pay then park to park then pay on foot. This has completely changed the arrival experience for our visitors resulting in a significant improvement in the results of 'speed of paying and parking' from 73% to 92%, ALVA survey. It has also changed visitor behaviours.

'Whilst the shed was there, many demonstrated road rage/aggression. The Welcome Building allows people to 'finish their journey', park and re-orientate in a more relaxed, slower way, enabling a safer welcome process. People arriving in the Car Park, know where to go now. Road rage has gone.'

Admission staff

It has also had a positive impact on the restaurant as visitors no longer look out on to a car park and instead enjoy views over the open grassland.

6.4.4. Improving the Visitor Welcome

Through the creation of the new Welcome Building we aimed to improve the visitor welcome and arrival experience and to also provide an introduction to the arboretum and additional space for our visitors and members to learn about the arboretum. Creating a sustainable building was important to the FC team. The building was awarded an 'Excellent' rating from Building Research Establishment Environmental Assessment Method (BREEAM).

The building has also received a number of awards including; Campaign to Protect Rural England (CPRE) 2014 Award for the Welcome Building and Downs Restoration and a Green Apple Award. It was also shortlisted for; a 'Sustainability Award' from the South West Built Environment Awards, Institute of Structural Engineers (ISE) Structural Award, Royal Institute of Chartered Surveyors (RICS) South West Tourism & Leisure Award and a Royal Institute of British Architects (RIBA) South West Award. See Appendix O for the BREEAM certificate and award certificates.

'A new welcome building was constructed that gave the arboretum the sense of arrival that it had previously lacked. The curved shape is reminiscent of outstretched arms welcoming the visitor in, with the centrally positioned, open portal linking the landscape on either side. It serves as an orientation point, with sensitively aligned paths leading out to key visitor destinations'

Kim Auston, Historic England, 2017

'I waited my entire life for a new building. I was in the shed in 1980 and it was promised then but now it has been built'

Kathleen, ex-FC arboretum Staff Member, 2014

The Welcome Building has created a new focused arrival and exit point for all visitors and members. It created an opportunity to engage and welcome all of our visitors and members and

a challenge to ensure consistency of welcome and introduction with 500,000 visits per year. The following chart and results are taken from the FR 2017 visitor survey results and shows a significant difference between the welcome & arrival and introduction & visitor understanding. This is an area we know we can keep improving see Section 9, 10 and 11 for the various steps we are taking to address the inconsistency of the welcome experience and improve visitor and members introduction to the arboretum.

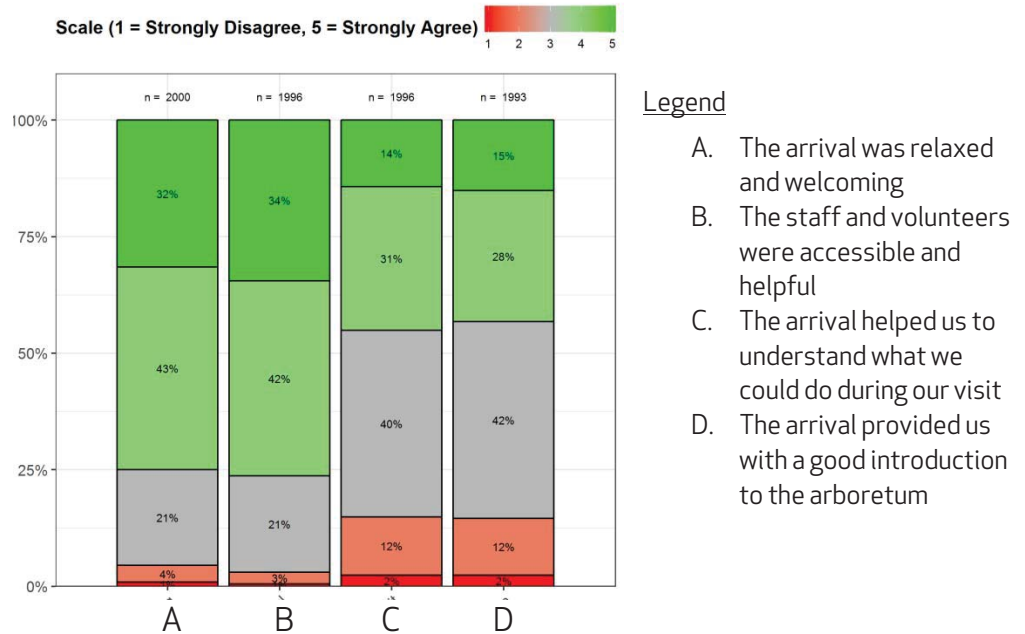


Figure 2 – Combined results from the 2017 FR surveys, see Appendix F for more information.

In both the ALVA surveys and the FR onsite and online 2017 surveys, the results for the welcome from staff and volunteers in the Welcome Building differ. From the ALVA 2017 results, 57% of visitors rated 'the arrival relaxed and welcoming' compared to 75% from the visitor onsite and online 2017 surveys. From the online survey younger visitors were more likely to report the arrival was relaxed and welcoming versus older people.

The results for 'staff and volunteers are accessible and helpful' from ALVA and the FR onsite and online 2017 surveys are also significantly different. With ALVA scores between 32-37% for 'Excellent' compared to the FR 2017 survey score of 76% for 'Strongly Agreed/Agreed'.

The chart below shows the differences between members and paying visitors and a clear difference between the onsite (purple) and online results from non-members and members (green and blue).

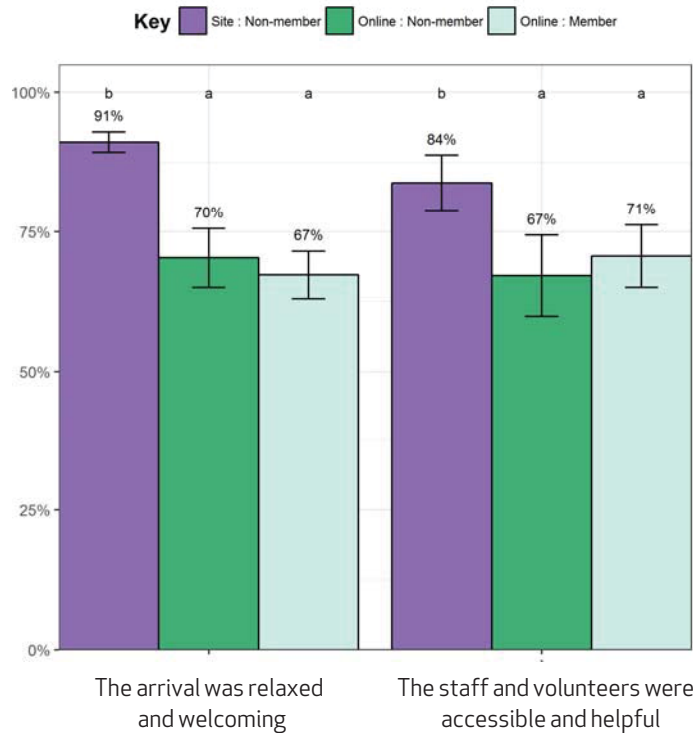


Figure 3 – Combined results from the 2017 FR surveys, see Appendix F for more information.

6.4.5. Introducing the Arboretum

As part of the planning of the Welcome Building and in particular the interpretation space, we planned that there would be active engagement between staff, volunteers and visitors with the interpretation and promotion of the activities such as the App and new specialist trails. We have however struggled to ensure a consistency of customer service and are considering if customer service training attendance in the future may need to be mandatory for all front facing staff and volunteers. We have however now developed a customer service promise which all staff, volunteers and franchisees are expected to follow.

Although the welcome and arrival experience is well received results show that the introduction to the arboretum and the options and activities on site are explained less than 50% of the time, as shown in the chart in section 6.3.3.

As shown in the following chart from Appendix F, the FR 2017 onsite and online surveys, only 31% - 45% of visitors and members had options explained to them. Families were significantly more likely to have the various options explained to them. The chart also shows that directions and orientation of the site is the next most likely activity to be explained. The results from the onsite survey shows that the other top five activities are explained between 2-3% of the time.

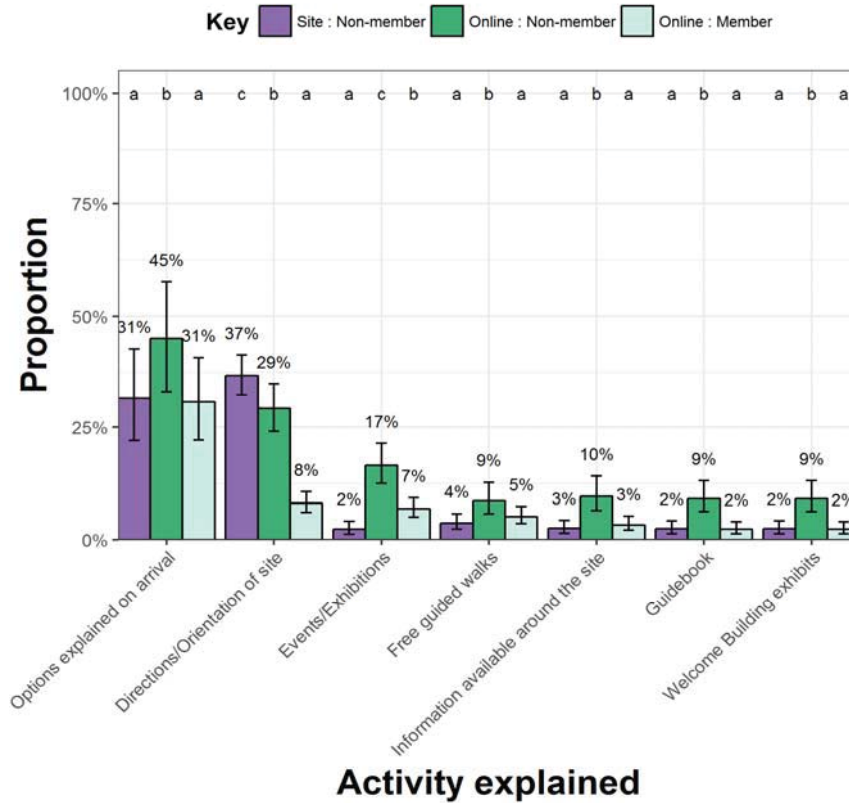


Figure 4 – Combined results from the 2017 FR surveys, see Appendix F for more information.

The following table shows the reasons given by visitors and members for using or not using the Welcome Building from the FR 2017 surveys. Although the main reason given for not entering the Welcome Building information centre was to go straight out to the arboretum, a similar percentage didn't realise it was an information centre and therefore are also possibly not aware about the exhibits and other important information and visitor activities located inside. The following extract from Appendix F also demonstrates a lack of awareness: *'Of the 1,998 individuals who responded, 27% indicated that they have been into the Welcome Building. Infrequent visitors, families, older individuals and those without dogs were significantly more likely to use the Welcome Centre'*

Reason for using the Welcome Building	%	Reasons given for not using the Welcome Building	%
Looked at exhibits (interpretation)	27	I wanted to go straight out to the arboretum	19
Picked up information/ a trail leaflet	26	Didn't realise it was an information centre	14
Asked a question/talked to volunteers	23	Had a dog with me (dogs are not allowed inside)	9
Joined/ asked about the Friends membership	11	Didn't realise it was open	3
Looked at interactive map	10	Wasn't interested	3
Hired a mobility scooter/ wheelchair	5	Limited time	2
Downloaded the TreeQuest App	2	-	-

Table 8 – Reasoning for using or not using the Welcome Building. Results from the FR 2017 survey.

The following visitor and member quotes were noted during the FR 2017 Focus Group sessions.

'I've never had that (seasonal map) actually and it would be really useful for somebody to say 'Here's a map', because, as far as I know, I've never received a map.'

Visitor, Focus Group

'Today was the first time in a long time that I've actually had somebody approach me as I walked through. That was the first time in a long time that I've actually seen any staff at the entranceway as you come through the gates'

Visitor, Family Focus Group

'if you're buying a ticket you might say 'Visit the Welcome centre, the Welcome centre is there' or something, 'And if you have any questions', so kind of pre-empt that so you can offer the people who don't know their way around, but people who come through with a card, kind of stand back a bit, there might be a compromise.'

Visitor, Focus Group

'The only time that I recall somebody intercepting me was when we came during a school holiday or something and I had the boys with me, she said, 'oh are you here for the craft activity?' and I hadn't done my research before I came and I didn't know it was happening...It was great because otherwise we would have gone off and had a walk and we wouldn't have known that was happening'

Visitor, Family Focus Group

6.4.6. Making the Arboretum More Accessible

We wanted to ensure the developments had a positive impact on the accessibility of the arboretum. Through the development and delivery phase we consulted with a local group, the Cirencester Access Group, who have a range of different access and mobility needs. We also used our own experiences to ensure we made subtle changes which would benefit a wider range of people and go beyond the minimum requirements, especially for a new building.

'My fellow members of Cirencester and South Cotswold Access Group, who came to view your new Welcome Building where very impressed with your account to detail, also how you had taken our advice on a number of issues regarding access for all'

Chair of the Cirencester Access Group, 2015

Following the introduction of these various changes, we have seen a 6% increase in disabled visitor's enjoyment of the arboretum (ALVA surveys) and a 12% increase from disabled visitors rating 'physically getting around the site' as 'Excellent'. We think the increase may be in part due to the changes made through the project but also following the completion of the STIHL Treetop Walkway which is fully accessible and enables all visitors to now access Silk Wood. However we are aware that the distance between the Welcome Building and the restaurant and other visitor facilities is an issue for some with limited mobility, see Section 9.

'We had an amazing time. As two disabled visitors, we were able to reserve a couple of mobility scooters. It would have been impossible for us to go here had it not been for that excellent, and free, service. Wonderful!'

Visitor comment, 2016

We are planning to continue to develop and improve the accessibility of the arboretum. Following overwhelmingly positive feedback to the Inclusion Awareness training we have now ensured all FC and FOWA staff and 47 volunteers have attended this training to date.

6.4.7. The New Changing Place Facility

The new Changing Place facility has been one of the most positively received aspects of the project, see quotes below.

We used an existing disabled toilet, relocated some baby changing tables and foyers in the existing toilet block to create the new facility. The space includes a hoist, movable and height-adjustable changing bed, disabled toilet and sink and other necessary equipment and accessories, to achieve the Changing Place standard. The cost for the new facility was very low, £22k as we utilised some existing space.

'The changing places room build was an eye opener. I didn't realise how much such a basic thing is so important to somebody'

Recreation Staff Member

More community and school groups have been able to visit and participate in our community programme and formal learning:

'On Tuesday...young people from Allsorts young carer siblings groups participated in a community youth programme at Westonbirt. Their visit was partly an opportunity for the group leaders to determine the suitability of bringing their disabled youth club members (the siblings of the young carers) to the arboretum. They will be bringing them in August as the availability of an adult changing room with hoist is ideal.'

Allsorts, Community Group

'From a staff point of view a large factor in our attendance is the superb changing facility with hoist and changing bed for our young people and young adults'

YP Community Group

We have also promoted the creation of the facility on our website, social media channels and FOWA magazine and have received a large number of positive comments:

'Can I say how brilliant your changing place is? I have lobbied many organisations about the need for the facilities I note you have installed. Fab for all who come to Westonbirt and a relief for carers.'

Margaret, Disabled Visitor

'Well done Westonbirt Arboretum! There's a gap in our county for Changing Places so really pleased you've taken this step. Here's to many more-
Jane, Visitor

'Thank you so much for the installation of a hoisted changing facility. It makes such a huge difference to our visit. We have now taken out membership. A fantastic place, now made so much more disabled friendly'
Philippa, Visitor

6.4.8. Improving the Visitor Experience

The changes undertaken as part of the project have had a positive impact on the visitor experience. The new interpretation gate signs are rated in the top three most popular activities on site, see Appendix F for details. The mobile interpretation has received positive comments from visitors. The increased visitor offer has resulted in over 80% of visitors saying there was something for their entire group to do, see Appendix F for additional breakdowns and further information. Between 93 – 99% of visitors said they would recommended the arboretum to friends and family in our 2017 surveys.

'Always enjoy coming here and the experience has improved every time. The investment being made is working and taking the Arboretum to the next level.'
Visitor Comment, Facebook, 2016

'What I love about Westonbirt Arboretum is that each walk is a new walk, new pathways, new sights, new scents for the dogs. Every season gives you new views and there are walks of different sizes depending on how much time and energy you have. Love stopping at the restaurant halfway through the day or at the end of a walk, makes it all the more satisfying. Really glad we became members'
Visitor Comment, Facebook, 2017

6.4.9. Improving Visitor Understanding & Engagement Gateway Signs & Hotspots

According to our visitor experience survey, the gate way signs and hotspots were rated in the top three activities undertaken by visitors. From the FR onsite survey, 60% said they looked at the gateway signs, 84% said it was 'easy to find their way around' although this was cited by mainly more frequent visitors. As the hotspots signs have been so well received we are planning to develop additional hotspot locations including the 2,000 Lime Tree.

Although the gateway and hotspot interpretation signage has been well received we know some of our visitors and members struggle to orientate themselves. The project focused on the initial orientation signage, we know we now need to progress with updating and refreshing our site wide signage in both Silk Wood and the Old Arboretum. The following comments have been received through the project evaluation and other surveys recently undertaken.

'It's quite good when you don't know where you are'

Visitor Comment, Focus Group

'Improve the correlation between map/leaflet and the signage. It's surprisingly hard to find your way around'

FOWA Member, Membership Survey 2016

'Participants felt it was important that interpretation and signs were not too intrusive'

Focus Group 2017

Welcome Building 'Pods' & Information Area

As part of the FR Visitor Experience surveys we have evaluated the impact of the interpretative work. We also undertook a specific focus group based on the interpretation, see Appendix H, as we found from the Visitor Experience research that the flow of people into the building has not been as expected. From the FR Visitor Experience surveys 2017, only 27% of visitors have been inside the Welcome Building, which has also been evidence through initial visitor tracking surveys. From the FOWA member survey, 14% said they had looked at the exhibits. As such we were not able to fully understand how people use the interpretation.

Some key themes and recommendations came out of this particular focus group. However, as it was such a small sample, these themes will help us to focus more evaluation in future when we look at developing the interpretation.

When the Welcome Building opened, we found that many members simply wanted to go for a walk; it was hard to engage them with certain information at the beginning of their visit. As our demographics have changed and more families are visiting on an ad hoc basis, more children are trying to use the interactives but the content is not right for them. This came out as a strong theme during our interpretation focus group. We will be looking into developing some of the 'changeable' exhibits to have more child-friendly content on them.

'Because I sent in a photograph once and that was fun because we would wait for our photograph to come up'

Visitor Comment, FR Focus Group 2017

'I spend quite a lot of time just standing waiting for the children to stop playing with the telephones and spinning the globe around. They love it and it's the same thing but they don't understand. My parents go on holiday to Madeira and they happened to pick up the phone today when they were talking about a tree in Madeira, so they were like, 'oh Madeira, Madeira!' So I had a little listen but I was surprised at how complex what's on the other end of the telephone is. The content on the phone is probably more aimed at adults than the children but it's the children that want to play.'

Visitor Comment, FR Focus Group 2017

From the interpretation focus group it was also felt, and from other anecdotal evidence, that we need to make certain messaging more obvious and less in-depth, as dwell time is less than was originally envisaged. We are now looking at ways to sign post the exhibits better, to make the interpretative layering more obvious, and less focussed on 'self-initiated discovery'. From the evaluation we also know that Volunteers and Staff are also not engaging with visitors when they are looking at the exhibits, as originally planned. Only 2% had the exhibits explained to them.

In light of some themes that came out of this and our other focus groups, we may look at how we can change certain exhibits; in particular the Rolodex and the What Would You Do exhibits.

6.4.10. Specialist Trails: Outcomes

Birts I-Spy Adventure



Image - Front cover and example of page spread within booklet.

- 1) The age range of children using the booklet varied between 1 and 13, although the majority were between 3 and 9. This could have been due to an oversight in the advertising which didn't give a targeted age range. However in some cases feedback from children outside of the target range said they enjoyed using the booklet.
- 2) There were 14 things to spot around the arboretum, all of which were found by different visitors, at different times. Some visitor comments said a more seasonal approach might be better in future; wild flowers, for example, are hard to find in winter.
- 3) Of the **statements** provided in the feedback form:
 - 99% either agreed or strongly agreed that **their children enjoyed using the booklet**
 - 89% either agreed or strongly agreed that **the booklet enabled them to talk about how the trees are cared for with their children**
 - 90% either agreed or strongly agreed that **the style and content was right for the age of their children**

When asked **how this booklet could be improved**, the responses were positive and/or gave constructive ways to how we could develop it in future. Some examples below:

'This is the best trail booklet we've ever had and we're National trust members so complete a trail everywhere we visit.'

'Nothing, love it and my daughter engaged a lot more than usual'

'I think the booklet was fab. It helped keep interest up and we walked much further than previous trips here. Thanks!'

'A great little booklet to encourage children to learn more about nature and Westonbirt is maintained. We also learnt a thing or two as well! Thank you ☺'

'I think the book is brilliantly put together for wide range of children's ages. We've been members for a few years but this book made a brilliant change to our visit and allowed us to talk about different things.'

'Another one for older children eg more detail'

'Have a page of facts'

'Better ID page for wildlife/birds'

'More space to write answers, colouring pages and space for tally to tick how many they spot?!'

Picture Perfect

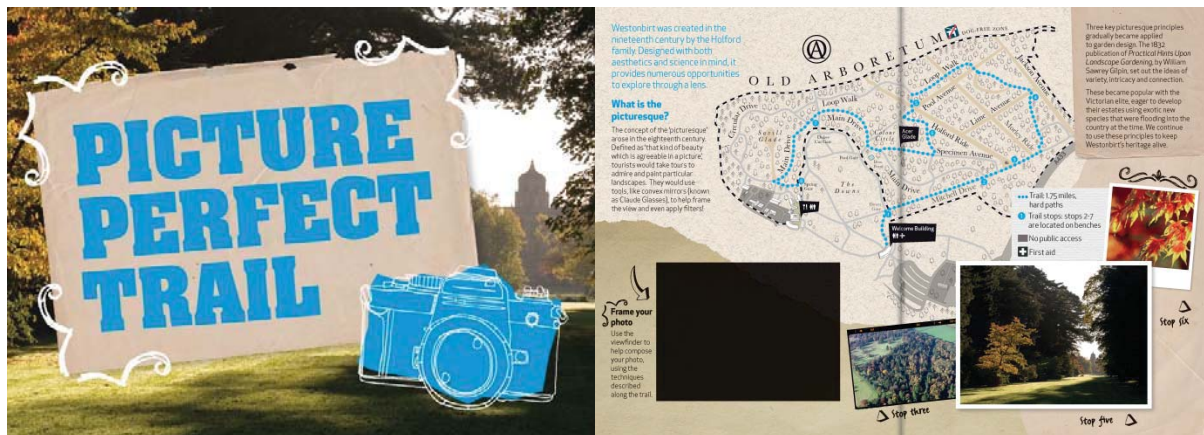


Image 2 – Website branding and inside of accompanying trail leaflet.

Direct evaluation methods are hard to achieve on a more trail based project. We produced stickers with a hashtag and icons showing the different ways to share photos to monitor visitor engagement. We also have anecdotal evidence of stories from our Welcome Volunteers:

'During my last Sunday at the Welcome building I spoke with a mother and daughter who came in to see what we had to offer, the daughter (about 10yrs ish) had already completed the Family Trail and wanted thing else to do, as she had her phone with her I suggested the Photography Trail, they came back later in the afternoon to say how much they had enjoyed doing it.'

'Later the same day an elderly gentleman who visits Westonbirt quite often, came in also looking for inspiration, he had previously completed the Seasonal Trail on an earlier visit, I again recommended the Photography Trail, (even though he didn't have a camera) he too came back later to say that he had enjoyed looking at the Arboretum in a different way.'

The Little Book of Disappearing Trees



Image – Front cover and example of page spread within booklet.

Learning from the previous HLF trails that we needed to include an attached feedback form, the book was designed to have a perforated form inside the back cover and included a freepost envelope. We also ran a competition stating that any completed forms sent back before a deadline would be entered into a prize draw to win a tree identification book that was recently published by an arboretum employee to encourage more visitors to submit their feedback.

So far we have had 57 responses to the feedback form. 53 people said they would use this booklet at home.

Of the **statements** provided in the feedback form:

- 57 people either agreed or strongly agreed that **they understand more about threatened trees and the threats they face**
- 55 people either agreed or strongly agreed that **they understand more about the role of botanic gardens within conservation**
- 55 people either agreed or strongly agreed that **they understand Westonbirt's international botanic links**
- 50 people either agreed or disagreed they the booklet **provoked conversation on how humans can help**

Regarding more about threatened trees and the threats they face (Objective 3)

A common theme for these comments was that they didn't realise so many trees that are widely seen in parks and gardens were endangered:

'How apparently common trees (eg horse chestnut) are threatened in their native habitats'
'Some 'common' park and garden trees are actually threatened in their native habitats'
'Hard to believe so many trees I know are now endangered – ones I thought were common'
'Trees such as Ginkgo and monkey puzzle that I thought common, as frequently seen in cultivation in UK, are endangered in their native habitat'
'How species I assumed to be ok are in fact endangered ie magnolia stellate / horse chestnut'
'I think the Rare Trees little booklet, that's brilliant and last weekend when we came to see the little new signs that have gone up saying, this is a really rare tree and this is where it's from, that was brilliant, and actually I even told my husband when we got home last week that I had no idea of some of trees. A tree is a tree and when you come to the arboretum, there are hundreds but actually you could be looking at one and you think, crumbs, there are only a couple of those in the whole world, and the boys think that's amazing. This is really special that I'm here touching this bark or looking at this tree that nobody else in the world might be able to do. That for them is huge. That's brilliant; I really like that little book.'

Other comments regarding tree species included:

'Pinus radiata likes to grow better outside its native range – plants eh!'
'Was not aware some trees were rare at all'
'I had no idea just how many rare trees there were!'
'The fact that Bishop Pine has been cleared because it protects against fire'

The arboretum's international botanic links (Objective 2)

'That Westonbirt helped collect seeds for the Millennium Seed Bank'
'Variety of trees in the arboretum and efforts of staff and volunteers'
'Range of international collaboration in conservation activities'
'The work, world-wide, of rescuing endangered trees'

The role of botanic gardens within conservation (Objective 1 & 4)

'The various categories of risk on the Red List. I marvel at how much exploration has been done to know which category to put a tree into!'
'That working with ex-situ trees can help learn how pests and diseases attack some species yet some varieties are resistant to attack'

Provoked conversation on how humans can help (Objective 3)

'That 40,000 tree species still have not been assessed! Crazy!'
'What we carry diseases'
'The impact of the human race on trees- more of this type of book will change culture – one should be sent to all MPs!'

This project offered the opportunity to engage with other institutions further. Thanks to our Dendrologist at Westonbirt who is a key contact for our worldwide botanic links, we were able to use High Resolution scanned images from Arboretum Wespelaar. They are available to use, but as we were using so many, we felt it was important to ask their permission, and to make them aware of what we were doing. In return they asked for their logo to be in the back of the book which we were more than happy to accommodate. We were also able to ask for photos from other eminent botanists to include within the booklet.

The book has been very widely, positively received amongst well respected plant professionals, some of the comments are included below:

'The size of this guide by no means represents the value of the information that it contains or the importance of the work behind it. This book provides a thorough synopsis of Westonbirt Arboretum's role in global tree conservation and the importance of living collections in conserving threatened species. This is a useful and informative guide for anyone interested in trees, and an especially approachable introduction for the general public. This "little book" should serve as a model for all arboreta interested in communicating their role in plant conservation.'

Anthony S. Aiello, *The Gayle E. Maloney Director of Horticulture and Curator
Morris Arboretum of the University of Pennsylvania*

'The little book of disappearing trees is a brilliant guide communicating the conservation value of Westonbirt's collections and what we can all do to help prevent tree extinctions. It is exactly the sort of resource that should be available in all botanic gardens!'

Sarah Oldfield *Chairperson
IUCN Species Survival Commission Global Tree Specialist Group*

Creativitree



Image – Front and back of one of twenty postcards

As a visitor engagement activity rather than a fixed trail or booklet we have monitored visitor engagement through the numbers of postcards shared on the display at the Welcome Building.

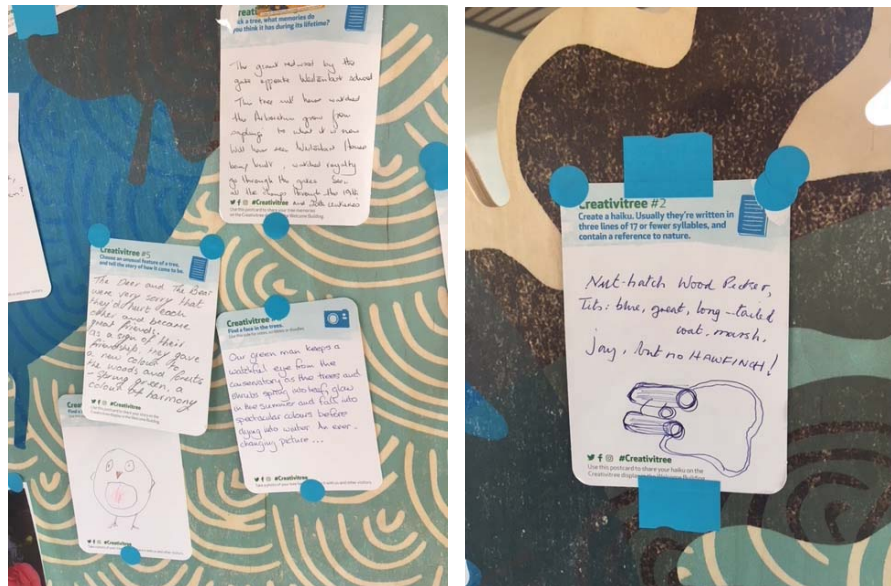


Image – Examples of some of the completed postcards on the Welcome Building display.

We have also monitored social media activity. Visitors have been encouraged to share any photos or films taken by sharing using our social media pages. The following are the engagements to date:

- Facebook; 4,808 views & 30 engagements,
- Twitter; 15,597 views & 226 engagements, 199 views on website page.

6.4.11. TreeQuest App: Outcomes



Image – App poster and screenshots of the arboretum map and tree information.

We have used Google Analytics to monitor the use of the App. To date the App has been downloaded on to 6,870 devices, with approximately half on iOS and half on Android. The App has been downloaded in the UK, USA, Germany, Canada, Australia, China, France, Japan and the Netherlands. Over 33% of users have returned to the App.

The average session duration using the App are;

- 973 sessions at an average 58 mins;
- 1,700 sessions at average 17 mins;
- 2,858 sessions at average 5 mins.

To date 3,821 trees have been found and 2,121 tree challenges have been completed.

We have also received comments from visitors during the prototyping stage and from comments received from visitors via social media:

'It really did encourage us to discover more about the trees and notice ones we hadn't really looked at before'

Visitor Comment

'Very good way to explore Westonbirt, Keeps you entertained as you explore the place'

Visitor Comment from the App Play Store (Rated 4/5)

'I never knew rhododendrons were furry underneath the leaves!'

Visitor Comment

'Treequest app is great. Keep developing it'

FOWA Member, FOWA Survey 2016

7. The Difference Our Project Made For Our Community

7.1. Reaching Out to New Audiences: Community Engagement Programme: Outputs (Aim 3)

Original Output	Final Output
-	A new Community Shelter was created in Silk Wood with a compost toilet and cob oven for the groups.
Community Programme - Youth	
New Community Youth Officer	Started in Jan 2014.
140 young people participate in Youth Forum.	121 participants, 20 sessions, up from the 8 planned.
1,300 young people participate in facilitated volunteering.	532 participants. The sessions were merged with the explorer challenge as requested by participants.
130 group visits from young people at risk of exclusion	64 groups
50 groups use Youth Explorer Challenge packs	212 groups, much higher than planned as noted above
950 young people use Youth Explorer Challenge packs	2,058 participants, much higher than planned as noted above
Community Programme - Older Adults	
New Community Inclusion Officer	Started in Jan 2014, however the role has been carried out by four individuals.
1,700 older people at risk of exclusion participate in 3 programmes of facilitated visits.	1,170 participants, fewer than planned due to smaller group sizes due to participants with more complex needs
130 group visits from older people at risk of exclusion.	154 group sessions
70 outreach sessions are delivered to those unable to visit Westonbirt	102 sessions, 1,032 participants (compared to 600 planned)

Table 10 – Aim 3 Community Outputs. All Volunteer outputs are included in Section 7.2

The programme set out to increase the number of people and the range of people who take an active part in the Arboretum’s heritage, Aim 3. This was to be achieved through two main strands - Widening Audiences and Expanding Volunteering (see Section 7.2 for volunteering).

Widening Audiences aimed to increase the diversity of people who participate in our supported learning activities to include those, young and old, at risk of social exclusion, and to widen those who help us to make decisions about our heritage. We planned to engage two new audiences:

- **New audience 1: (OA) Older people at risk of exclusion:** Those at risk of exclusion from society through social isolation, income level, illness, culture, health or disability, and
- **New audience 2: (YP) Young people at risk of exclusion:** This includes those at risk of exclusion from society, economically, culturally, through disability and who are aged 14-25 years.

Two new staff roles were created, a Community Youth Officer and a Community Inclusion Officer to work with these new audiences. As the programme developed the older people at risk of exclusion audience was extended to include all adults at risk of exclusion over the age of 25. This enabled us to be more inclusive and work with groups including those with drug and alcohol addiction, cancer support and befriending groups.

7.1.1. The Programmes Developed

After consultation with local groups and organisations from both the youth and adult sectors, a suite of activity programmes were developed that aimed to meet the needs and interests of these groups. For adult groups these were; Westonbirt Wellbeing – a therapeutic nature based programme of day activities for mental health and wellbeing; Branching Out – a multisensory outreach activity programme suitable for care homes, memory cafes, cancer support groups; Nurtured by Nature – multi-visit programme of practical conservation and creative woodland activities. For youth groups; Wild Westonbirt – bushcraft and survival themed activities based on the exploits of past and present plant hunters; Can You Cut It? – Practical conservation including coppice restoration, green woodworking and traditional crafts; and Team WB – a youth forum to engage young people in the management and development of activities at the arboretum.

Some of the programmes were altered from the original descriptions in the Activity Plan following consultation with group leaders and participants including the Youth Explorer and Woodlands Skills programmes. This has resulted in a change to some of the output targets, but the overall targets for groups and participants have been exceeded.

The community groups could choose either a one off visit or a programme of multiple visits, and dependant on the needs of the group.

7.1.2. Creating a Base: The Community Shelter



Image – The area originally used for the community groups and the community shelter, created in 2015.

As the programme developed and groups with more complex needs wanted to participate, we needed a more suitable space to use; one where the participants could feel safe and created a space they felt was theirs. The team needed space, storage, close proximity to work areas and flexibility to run a wide range of creative, sensory and personal development activities. An old timber craft barn was relocated to the central coppice restoration area and turned into the community base. The area was cleared of scrub and brambles by visiting youth groups. Participants later spread a wood chip floor, cleared overnight camp areas, created wood stores and built a cob oven and campfire site. A compost toilet was also erected to enable more groups to spend the whole day in the woods.

Groups saw a base, even a temporary one as their home, a place that was theirs and where they felt emotionally safe. By having an established base, this sent out a message to participants and organisations, that they were valued and welcome on site. The need for a familiar, safe place has been demonstrated to have been an important part of the community programme.

7.1.3. Promoting the New Programmes and Making Connections

The creation of the community programme and activities were all new to our local community and something which had only been tried on a small scale during our initial consultation and development of the project. Raising awareness of the new activities on offer was a priority for the community officers in their first year but also throughout the four year programme to continue to connect with new groups.

The community officers worked alongside our marketing team to develop a suite of promotional materials including posters and postcards to promote the various types of community activity. We also promoted the community programme through the FOWA magazine, blogs and social media channels, See Appendix N for some examples.



Images – Two of the community posters.

7.2. Community Engagement Programme: Outcomes

The Community programme has been one of the most successful elements of our HLF project both in terms of exceeding our targets but also exceeding our expectations in relation to the impact this programme has had on the wellbeing of the community participants, volunteers and staff. It's also helped the wider staff team and volunteers engage with community groups and participants most of us would not normally meet on a day-to-day basis.

Arboretum managers have regularly joined in with the community groups to present John Muir Award certificates and badges. This has provided several with new positive experiences and engagement with the wider community with one staff member commenting:

'I attended a Silk Wood Barn Drugs rehabilitation session and one participant said it was the first day that he had not used drugs in 20 years. It was so powerful and built emotional understanding for me of the impact of the community project.'

Arboretum Manager

7.2.1. Numbers of Participants and Groups

Following consultation with group leaders and discussions with our HLF grants officer the number of participants for each session was reduced from 10-20 participants in order for us to deliver high quality engagement and meet group requirements. The average number of participants per session ranged from two to over twenty; 20% of sessions involved five or fewer participants. Numbers attended varied from those planned from the original booking for a range of reasons. Group sizes were reduced from the planned 10-20 to 3- 10 due to the complex needs of many of the participants. Despite smaller groups we exceeded our overall original targets for both group sessions and participants, achieving our target nine months before the end of the project.

The following table shows the original targets from the Activity Plan and the number of sessions and participants who engaged with the community programme over its duration.

Community Groups	Target from Activity Plan (Groups(Sessions)/ Participants)	Achieved (Groups(Sessions)/ Participants)
Youth (YP) Groups		
Explorer Challenge (Plant Hunters and Working Woodlands)	50 / 950	212 / 2,058
Woodland Skills (Can You Cut It)	130 / 1,325	64 / 532
Youth Forum (Team WB)	8 / 140	20 / 121
Youth - Total	188 / 2,415	296 / 2,711
Older Adults (OA) Groups		
Facilitated Visits (Westonbirt Wellbeing)	130 / 1,140	65 / 644
Multi-Visits (Nurtured by Nature)	Included in above	89 / 526
Outreach (Branching Out)	70 / 600	102 / 1,032
Older Adults - Total	200 / 1,740	256 / 2,202
Community Group Leader Conference and CPD	-	2 / 31
Totals Combined	330 / 4,155	554 / 4,944

Table 11 – Community Programme targets and results 2014 – 2017

7.2.2. Improving Wellbeing

Over the duration of the project, group needs and take up saw a move away from one off, guided walks and conservation activities, aimed at increasing participant numbers, into more in-depth repeat visits that enabled participants to feel a part of Westonbirt, make a difference to the site and set their own journeys of discovery, creating a more qualitative experience.

The multi visits had a more positive impact on the wellbeing of participants and participants were more likely to show behavioural change, this has been evidenced in the FR Community Evaluation, see Appendix I.

As the programme has adapted to develop longer term multi-visit engagement with groups and participants, we were aware we needed to evaluate more than quantitative data and assess the wider impact of the programme. As part of our evaluation plan we worked with FR to evaluate the impact of the community programme, using the 'five ways of wellbeing framework' (see Appendix I for the full report). The report concludes that both young people and adults gained wellbeing benefits from participating in our community programme including building self-confidence and reducing stress. The community participants also benefited from being physically active through a range of activities including taking part in sensory walks and especially whilst carrying out tasks as part of the coppice management; clearing brambles, cutting back hazel stools, lighting fires, and splitting fire wood.

'I feel new confidence about myself. I have always harboured a fear about failure, really stupid or just not good enough. Through treatment and my precious time at Westonbirt. I have been able to recognise my own abilities, some of which I would love to continue with as I move on in my journey'

Drug and Alcohol Rehabilitation Participant

'I feel more at ease with my peers – I feel more confident in myself – this experience has been almost impossible to explain in writing how much of a difference it has made to my mental health – I can leave all my problems behind'

Community Participant

The FR community evaluation identified these key reasons why the community programme was so successful:

- The setting was non-clinical or residential, it was a large beautiful woodland and an important national tree collection (therefore seen as a special place) and nature was used as part of a targeted intervention
- A combination of activities and holistic approach (mental, physical, social), meaningful practical hands on activities, and a community shelter area that participants felt a sense of ownership towards
- A non-judgemental and supportive environment with a focus on positives and what participants could achieve as well as the development of trust and respect.

The following quotes demonstrate the benefits of creating a defined shelter and facilities for the community groups and participants:

'Overall the young autistic participants needed a lot of support and sometimes reassurance about what they were doing or how they were doing it. Familiarity was important: becoming more familiar with the site, the community shelter and / or the learning area and the different types of activities'

FR Community Evaluation Report

'Staff and clients feel the facilities are excellent and give a real feel for the arboretum being out in the woods and in shelters which are made rather than buildings.'

Community Group Leader, Survey Monkey Comment

Survey Monkey Data

Throughout the last four years the Community Officers have also used survey monkey to gather feedback from participants and group leaders. A summary of the two main surveys are included and summarised in Appendix M. The following information was gathered from these surveys:

- 95% (148 of 156 responses) of both YP and OA groups rated the sessions as either Excellent or Very Good
- 61% strongly agreed/agreed 'participants had learnt about sustainable woodland management and practical skills'
- 96% had 'learnt new things about trees and woodlands'
- 7% of participants classed themselves as BME, a high figure considering the local area is 98.8% white. This wasn't a target we actively pursued.

We also know that the community programme has inspired some of the participants especially those involved in the YP programmes to build on the gained interest in trees and woodland. One young person who did work experience at the arboretum and as part of this he did a day with the Community Officer, working with the Community Programme. After this, he joined the Youth group, Wild Westonbirt. This was the early stages and he continued to come to the sessions for two years. He did a placement with one of our resident coppice workers, one day a week for two years, as part of his forestry college course.

From the survey, 12 groups stated that participants had expressed an interest in volunteering. We also know that several community participants have volunteered at the arboretum or volunteering at other similar organisations.

7.2.3. Community Programme: Increasing Understanding of our Heritage

Coppicing in Silk Wood has been used as a traditional method of woodland management for centuries. Today some areas are still managed through a coppice-with-standards rotation which are split into 'coups' which are rotated on a 6-8 year cycle.



Images – Left: Youth group, coppicing in Silk Wood. Right: Older Adult group learning how to make hurdles from coppice materials.

A large part of the community engagement project aim was to engage participants in the care, conservation and heritage of the arboretum. It has been a long-term desire to re-establish more areas of coppice; an ideal opportunity for people to learn about woodland conservation, develop tool use skills and have an impact on the future of the arboretum and its wildlife. Restoring some of the historic coppice coups and learning about the traditional skill has been a successful part of the project. From the survey monkey group leader questionnaires, 61% strongly agreed/agreed that 'participants had learnt about sustainable woodland management and practical skills' and 96% had 'learnt new things about trees and woodlands', for more information see Appendix M.

'I find it's very interesting to learn the different tools you can use to cut down the trees and the way they've got to cut them to make them fall correctly. Yeah I think my favourite activity would be coppicing or mallet making because they are very energetic in a kind of way, so they keep you busy for a while and yeah it's interesting'
Josh, YP Community Participant.

'It was a welcoming, educational and therapeutic project. It gave the service users confidence to try something they had not done and every session saw them grow in self-esteem. It was a great opportunity for them to be in such an amazing space and to work together making a difference to the coppice and Westonbirt.'
Community Group Leader

7.2.4. John Muir Awards

A number of groups, staff and volunteers have taken part and completed the John Muir Award scheme. This involved participants carrying out a series of tasks; discovering a wild place, exploring, conserving and sharing their experiences. The awards provided many with an additional sense of achievement and they have been awarded certificates and badges in

recognition of their work. A total of 221 Discovery awards, 43 Explorer awards and 2 Conserver awards have been awarded.

'We are delighted that the team at Westonbirt Arboretum chose to use the John Muir Award to help underpin activities as part of this project. The quality of Award delivery was consistently high and the breadth of creativity within each proposal was always a pleasure to read. Claire, Rachel, Chris and especially Karen (Community Officers) used the framework of the John Muir Award to add value to programmes ranging from mental health and recovery to engaging young people in education, recognising personal growth and achievement in each case. The resources developed by Karen (YP Community Officer) and the team to record activity and participants' interactions with their natural surroundings were also exemplars and I often refer to these when guiding new Award providers in the development of their plans. Westonbirt have been a brilliant partner organisation in support of the goals of the John Muir Trust and the promotion of everyday stewardship of the natural world. Attending the November 2017 conference and meeting groups who had been involved was a valuable experience. It has since led to some groups registering their own Award activity, taking forward exploration of their local natural spaces independently, the perfect legacy for the project'

Coralie Hopwood, John Muir Award England Inclusion Manager

7.2.5. Impact on the Coppice Worker's

The coppice workers have also benefited from engagement with the Community Officers and wider arboretum community groups; sharing their knowledge and skills and passion for coppicing and working in the woodland. We have paid for a number of training sessions which has provided them with an additional income source to help ensure their work is more financially sustainable. The lead coppice worker commented:

'the work they were doing two winters ago has worked really well, with the stool protection largely keeping the deer at bay and the layering throwing up strong regrowth. This winter's work is looking even better, with a lot of layering going in and with the likelihood that the fencing that they will be putting round the coppice will protect the regrowth completely (as it has elsewhere). It seems that we have found a system that is working to the benefit of both sides. We can cut the derelict coppice... layer it and fence it, then seven years later have it re-cut and layered again by the various community groups. The third time around, us professionals, would be dealing with some nicely workable hazel.'

Brian Williamson, Arboretum Coppice Worker

As the community programme continues we are planning to continue to integrate the coppicing and conservation into the programme.

8. Reaching Out to New Audiences: Expanding Volunteering

8.1. Expanding Volunteering: Outputs (Aim 3)

Original Output	Final Output
Volunteers	
15,000 hours of new volunteer time is contributed.	21,139 hours contributed towards the project.
100 new volunteers are involved.	228 volunteers involved in the 9 new Project roles, some individuals were existing arboretum volunteers and some carry out multiple roles.
404-500 individuals volunteer as part of the project	403 individuals have volunteered
800 attendees at volunteer training sessions.	1,150 volunteer attendees at training sessions, 273 individuals trained.
5 new volunteer roles introduced, enabling different patterns of volunteering.	9 new roles were created. Fauna, M&E surveys, interpretation, landscaping, dry stone walling, 3 community roles and BioBlitz volunteers.

Table 12 – Aim 3 Volunteer Outputs

Expanding Volunteering, aimed to increase the range and scope of volunteering opportunities available to appeal to a wider range of ages, abilities and backgrounds to enable a broader audience to participate in our heritage and appropriately supporting this through training, this is described in more detail in Section 8.1.4. We have almost achieved our volunteer targets and have improved in nearly every area.

8.1.1. New Project Volunteer Activities and Roles

Nine new volunteer roles and groups were created to support the delivery of the HLF Project as well as altering existing volunteer groups to widen and redefine their roles including the 'Wow Team' and Welcome Volunteers. The new roles included; three Community volunteer roles, Fauna & Flora volunteers, Landscaping volunteers and Interpretation volunteers. We also created a new group of volunteers; the Monitoring & evaluation team, who have observed community participants as part of the community programme evaluation as well as surveying visitors as part of our Visitor Experience evaluation.

The following table shows the new roles and other volunteer roles which were adapted or existing roles which supported the project. The number of hours for each activity and the number of volunteers for the entire project is shown below.

Volunteer Activity	Hours	Volunteers
General volunteer training (ext. & internal)	5,751	289
YP Community Volunteers	4,197	46
OA Community Volunteers	2,155	42
Community Volunteers – Training	832	166
Guides and Welcome Volunteers (excluding welcome desk hours)	1,889	150
Interpretation Volunteers	569	43
Evaluation Volunteers	435	12
Landscaping (including arrival area and Dry Stone Walling)	2,513	53
Fauna	965	26
Flora	1,091	39
Flora & Fauna, Specialist Training	502	23
BioBlitz (Fauna & Flora)	440	52
Steering Group	171	5
Fundraising Campaign Board	119	7
Other Project Support	50	1
Total	21,679	954 (403 individuals)

Table 13 – Project Volunteer Roles, Hours and Numbers

Community Volunteers

To support the delivery of the community programme three new community volunteer roles were created. The community programme was a key element in the expansion and engagement of a wider range of people to volunteer at the arboretum. The flexibility and variety has appealed to a wider range of volunteers including those that are studying at university, in employment and those who have retired. This has been demonstrated by the wide age range of the community volunteers ranging from 17 – 86years, with an average age of 54years. 70 individuals have volunteered as part of the community team, of which 52 were new volunteers to the arboretum.

Interpretation Volunteers

Short term volunteers were recruited to help with the content production for the exhibits and other interpretation development. A core team of nine volunteers carried out tasks including; editing and creating films, providing information for content creation, leaf collecting and scanning to create the leaf morph videos, photography for the ‘WOW’ board and caption and proof reading.

Monitoring and Evaluation Volunteers

A new group of volunteers were recruited and trained to help conduct the 767 visitor onsite surveys as part of the FR Visitor Experience Evaluation and to carry out observations as part of the FR Community Evaluation. Two thirds of this group were new volunteers to the arboretum.

Landscaping and Arrival Area Volunteers

The HLF Volunteer Supervisor recruited volunteers to help landscape the new car park, the area around the Welcome Building and supported the Downs Restoration.

The team of 53, two thirds of which were new volunteers, contributed over 2,500 hours to the project. The overall total number of volunteers was lower than originally planned partly as the work completed took less time as the majority of the group became experienced regular volunteers some coming on a weekly basis.

Flora Volunteers

The 'Wildflower Group' was an existing group but their role was changed in 2012 when they became involved in the Downs Restoration project. They carried out the baseline Flora survey alongside Matt Parratt from FR. They have become a key part of the Downs Restoration Project completing quadrat and site surveys and supporting the scything and strewing of the former visitor car park. Half of the group were new volunteers.

Fauna Volunteers

The Fauna Group was setup in 2012, since then they have carried out Bumblebee and Butterfly transects from March to October each year, walking across the Downs to monitor the impact of the restoration. See Appendix E for the 2017 Fauna Report.

Welcome Volunteers

The role of the information volunteers significantly changed when they moved from the Great Oak Hall to the Welcome Building. We also recruited a number of new volunteers to increase the cover needed at the Welcome Building. Despite such a significant change only three of the original 70 volunteers decided to retire as a result of the change.

8.1.2. Volunteer Training

Responding to the 2012 volunteer survey and the need to create new specialist roles we implemented a significant volunteer training programme. We spent £19k to fund a number of external courses which in turn provided specialist expertise in areas which we had limited knowledge, for example Bee Identification. In total, 38 external training sessions were held; the following table shows the external training courses funded by the HLF grant.

Volunteer Training	Attendees	Sessions	
Fauna Group			
Bee Identification	40	8	Including one 3 day course
Butterfly Identification	3	1	
Flora Group			
Grasses Identification	29	5	
Downs Restoration			
Scythe Training	9	1	For scything and strewing the Downs
Outdoor First Aid	3	1	
Community Volunteers			
Outdoor First Aid	19	2	
Understanding Group Behaviour	8	1	Working with challenging groups
Cob Oven Cookery	9	1	
Community Volunteers, Staff & other volunteers	113	7	Autism Awareness, Dementia Awareness, NHS Early Intervention, NHS Mental Health Awareness & Inclusion
Welcome Volunteers			
Customer Service & Engagement	51	6	
Story Telling - Guides	11	1	
M&E Volunteers			
Survey Tools and Methods	5	2	
Other			
Train the Trainer	5	2	Guide & Welcome Volunteer leaders have attended

Table 14 – External Training Courses.

8.2. Expanding Volunteering: Outcomes (Aim 3)

8.2.1. Volunteer Numbers & Demographics

Overall a total of 403 individuals volunteered as part of the project; one volunteer short of the original target of 404-550. Total volunteers have increased from 240 in 2012 to 274 by the end of 2017. Although we have not reached the target of 300 volunteers, numbers have continued to rise.

We have also seen a change in the age ranges of our volunteers which reflects the changes to our visitor demographics with a more even spread with an increase in volunteers under 24 years and an increase in the 25-44 years age bracket. Our volunteers now range in age from 20– 86 years, with an average age of 65 years. Some 17 year olds have volunteered as part of the community programme during university and college holidays.

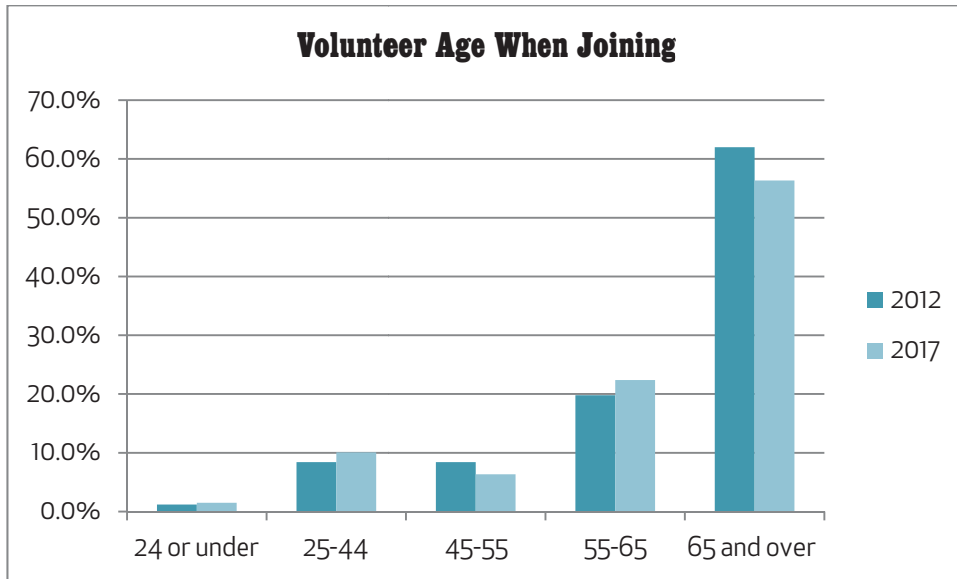


Figure 7 – Volunteer ages before the project and at the end of the project.

However the percentage of volunteers from BME groups has not changed and therefore the target has not been achieved however we have achieved 7% BME from the community participants so we hope to continue to explore ways of achieving an increase in the BME representation within our volunteers.

8.2.2. Volunteer Hours

Volunteers contributed over 21,100 hours of their time to the project which significantly exceed our original target of 15,500 hours. The following chart shows the project volunteer hours by financial year up to the end of December 2017 when the project ended. The community programme started in early 2014, which is one of the main reasons for the increase in hours from that point.

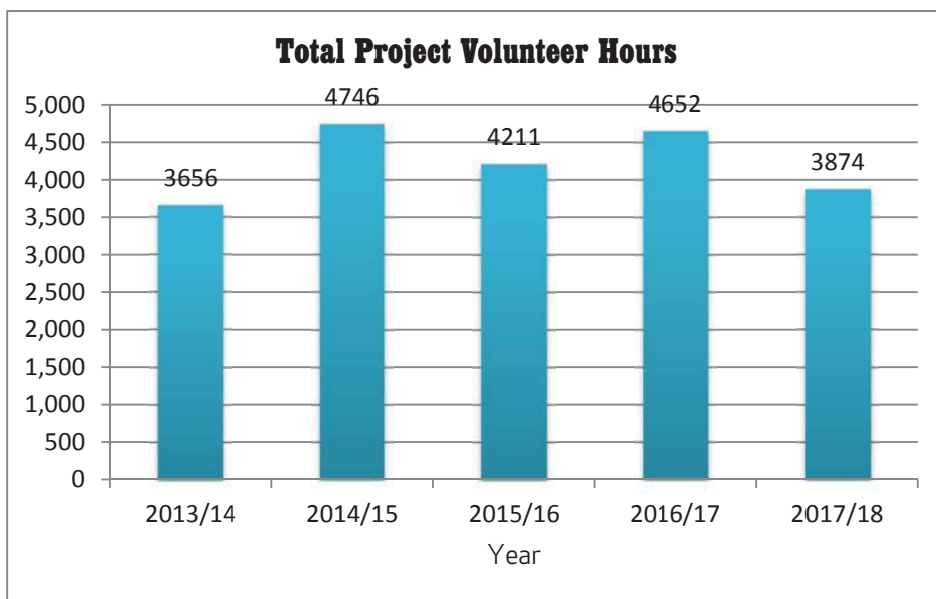


Figure 5 – Volunteer ‘Project’ hours per year.

The overall number of hours volunteers have been contributed to the arboretum has grown from 18,405 hours in 2012/13 to 21,797 hours in 2017/18 (excluding March 2018). In 2014/15 we were eleven hours short of our overall target of 25,000 hours; the higher level achieved in 2015 may have been due to the construction of the Wolfson Tree Management Centre which was supported by volunteers on a weekly basis for eight months.

The chart below shows the change in volunteer hours over the duration of the project.

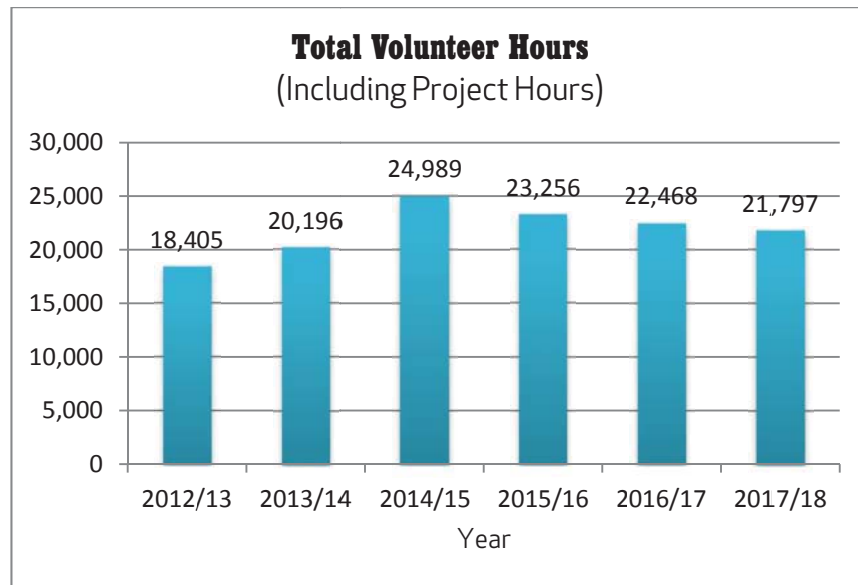


Figure 6 – Volunteer hours per financial year. NB 2017/18 total does not include hours for March 2018.

8.2.3. Increased Volunteer Satisfaction

In 2012 and 2017 all volunteers were asked to complete the volunteer survey to feedback to staff their views and satisfaction regarding a range of topics including volunteer benefits, management, day-to-day supervision and training opportunities. In 2017 more volunteers responded to the survey, and 69% confirmed they were very happy to be volunteering with us versus 56% in 2012. In the 2017 survey we also asked volunteers specific project questions. Of those that volunteered as part of the project, the majority scored the impact on them personally as 'very positive'.

Impact of the New Roles

All of the new volunteer roles and activities will continue beyond the end of the HLF project, see Section 11 for details for the groups and tasks planned for the volunteers. As part of the evaluation of the project we have carried out evaluation on the impact of the project on our volunteers.

We have interviewed two project volunteers; one who originally became involved in the dry stone walling, landscaping project and now volunteers weekly as a member of the 'Estate team' and a community volunteer who was and still is also a member of the Learning team volunteers. Both interviews are including in Appendix L. Some of their comments are include below:

'I think it's been all positive. I have been doing it for over 2 years, and often with the same people so I have got to know them quite well and they have become friendsI suppose it extended my knowledge of outdoors work. I had been a sporty person and not a keen gardener. I had not done much of the work here. Some of the craft work I never thought I'd be able to do and I surprised myself!

Community Volunteer

'I got the opportunity to do some dry stone walling a couple of years ago....I put my name forward then for practical work as a volunteer. When they did the first part of the Ha-Ha with Andrew Fraser and his team, I did a few days a week with taking holidays from work, I worked with the team. When I retired in December 2012 and the new project kicked off with the new car park I got involved planting trees, and it's gone from there.'

Landscaping / Estate Volunteer



Image – Landscaping/ Estate Volunteers clearing the ha-ha ditches

Have you learnt anything new when you volunteered as part of the project?

'Digging square holes instead of round holes, so that the roots don't wrap around, they go into the corners. Just general sort of tree management I guess. Something I didn't really appreciate until we did it here, when you're putting bark chippings around the trees you don't want them against the trunk at the bottom because that moisture gets trapped and they start to rot, so you want to pull away from the trees.'

Landscaping / Estate Volunteer

As part of the FR Community Evaluation we have also interviewed and observed staff and volunteers who support the programme. The report concludes that the community programme has had positive impact on the wellbeing of this group of volunteers, see Appendix I. The

following quotes have been sourced from feedback from community volunteers and from the FR evaluation.



Image – Community Volunteer helping support a facilitated visit craft activity

'A wonderful rewarding and inspiring voluntary role with the elderly here and in care homes. I have learnt so much'

OA Community Volunteer

'It's therapeutic working in this environment it allows you to work with people and other volunteers as well as participants. Covering a huge cross section of ages and different abilities and different backgrounds. The whole diversity of it and it's quite rewarding to actually work with people who are enjoying it. And working with volunteers who hopefully I can also learn from meeting people with different interests and skills.'

Community Volunteer

'It's been wonderful learning new skills alongside the young people and see them develop in their confidence and abilities'

YP Community Volunteer

8.2.4. Developing Volunteers' Skills

From the results of the 2017 volunteer survey, 65% of volunteers rated training as being 'important' to them and made them 'feel valued'. Of those that attended the HLF funded training, 64% rated the training as 'Very Good'.

In addition to the funded external courses volunteers have also been trained in-house and by other means. This has included; dry stone walling, tree planting, flora identification, manual handling, coppicing, guide training, mobility scooter use and issuing and green woodworking. There have been over 65 internally managed training sessions excluding informal training.

Volunteers have given over 6,800 hours of their time to internal and external training as part of the project.

The following are quotes received from volunteers who have attended the training:
'I really enjoyed the Bee ID training yesterday. Richard did a great job, a nice combination of expertise and good presentation.'

Fauna Group Volunteer, Bee ID with Dr Richard Comont, Bumblebee Conservation Trust



Image – Bee identification training with Dr Richard Comont and the Fauna Group

'A very pleasant and enthusiastic teacher who made sure we knew which parts of a grass were which before taking us out in the field where we found various grasses which she made us key out with a couple of different keys. We were in woods and near ponds so we saw several different grasses to ones we see on the downs at Westonbirt. So I feel generally more confident about grass idents, especially using only vegetative characters.'

Flora Group Volunteer, Field Guide to Grass Identification Course, Field Studies Council

'Excellent programme, thought provoking and energising. I gained a number of ideas for improving my interaction with visitors and getting outside of the constraints of the Welcome Building will be top of my agenda'

Welcome Building Volunteer, Interaction and Engagement with Visitors

'Thought today was excellent and a must for anyone interested in engaging with visitors.'

Volunteer, Inclusion Awareness

'..the Inclusion Training course was excellent for my learning needs. I was so impressed with the presentation itself, and the content was so relevant and interesting and challenging. Certainly I felt privileged to be allowed to attend! Thank you!'

Volunteer, Inclusion Awareness

'The inclusion training must rate as one of the best of any training courses I have ever attended'

Volunteer, Inclusion Awareness, 2017 Survey comment



Images – Left: Community Volunteers learning how to maintain coppice tools. Right: Community Volunteers, Cob Oven Cookery Training.

'You may not have noticed but I'm very cautious (old fashioned my wife says) with what I eat. Today I put in my mouth, and thoroughly enjoyed, the sorts of foods I never would have contemplated touching before. And it was great for me to have an opportunity to prepare these different types of food, I'm not normally known for any culinary skills. I was also unaware how versatile the clay oven was. We have a steel outside oven at home I'm going to experiment'

Community Volunteer, Cob Oven Cookery

'Over the years I have been on a number of similar courses, but this was the best by some way. My thanks to Sophie and her HLF budget for sponsoring the day. It will be of real benefit to everyone involved with training at Westonbirt'

Lead Volunteer Guide, Train the Trainer

9. Things That Haven't Gone As Well As We'd Hoped & What It Taught Us

The project has been very successful and we have achieved the majority of our original targets and exceeded others. There are however a few elements of the project which haven't gone as well as we would have liked or hoped.

9.1. Downs Restoration and Welcome Building: Distance

Relocating the visitor car park and entrance further away from the central facilities to enable the restoration of the Downs and Grade 1 landscape has created a distance issue for some of our visitors and FOWA members, particularly our longer serving members. The former car park including disabled parking bays was previously located next to the restaurant and close to the Old Arboretum's Spring Gate entrance and was moved 300metres to outside of the Grade 1 boundary.

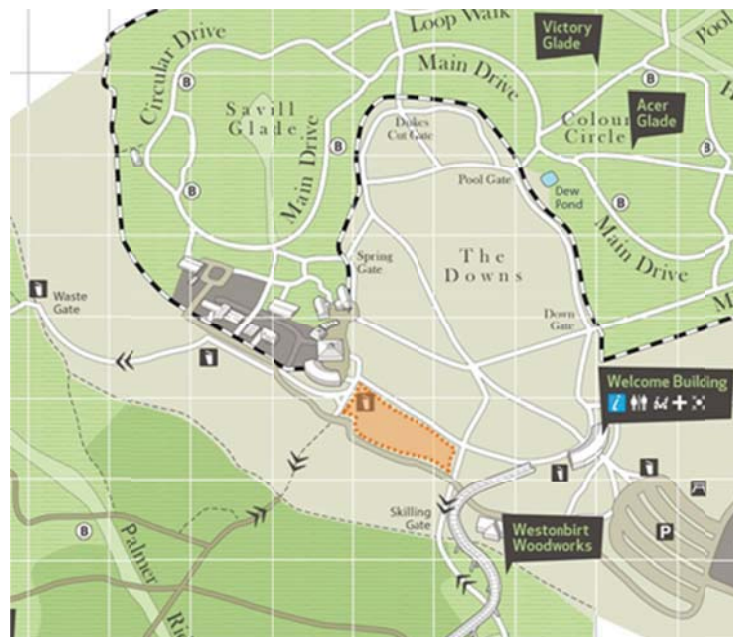


Image – Map showing new site layout, highlighted section show location of former car park.

Although we tried to mitigate the issue by providing a flat 300m resin path between the Welcome Building to the restaurant for some this change has been significant and the distance too great. This has impacted on how some of our members view the project. Although some communications and surveys took place we should have done more to improve awareness and highlighted that visitors are now closer to both the Old Arboretum and Silk Wood.

'Parking nearer to the actual arboretum. It may not seem far for someone fit and able to walk easily but it is a long way for someone who finds walking painful'

FOWA Member, 2016 Membership Survey

Following opening of the Welcome Building we have received approximately 150 comments from visitors and members who find the distance too great and they are frustrated they can no longer park outside the restaurant. Some of the comments were also focused on visitors frustration they could no longer easily access the restaurant before starting their walk. We

trials a drinks and snack shepherd hut but very few visitors used this service. We therefore believe that the issue is not solely due to the distance to the restaurant but how visitors access the site facilities and wider tree collection.

Since the building opened we have monitored the number of comments made by visitors, encouraged more to hire our free mobility scooters as well as trialling a powered assisted wheelchair for those unable to use a mobility scooter. We also wanted to assess what impact the new STIHL Treetop Walkway would have on the number of comments received as it was designed as part of the original masterplan of the site and is purposefully located in close proximity to the Welcome Building and provides an accessible route into Silk Wood. Since it opened the number of comments relating to the distance and location of the car park has dropped.

We want to encourage as many people to visit the arboretum as possible so we are considering creating shorter seasonal trails as well as trialling a volunteer driven Mobility Shuttle (golf buggy) for those with mobility needs. We will be evaluating the number of users of this service and its impact. So far initial evaluation suggests that the majority of users are non-members with 95% 'agree' or 'strongly agree' it made their visit easier and more enjoyable, with 23% 'agree' or 'strongly agree' they wanted to just get to the restaurant. We will also use the development of our new website which is due to launch early summer 2018 and the new digital sign, to ensure the provision of free mobility scooters and the mobility is more actively promoted.



Image – The mobility shuttle trial.

9.2. Welcome Building: Entry Barriers, the New 'Pay on Foot' System

The Welcome Building presented an opportunity to improve the way the arboretum monitors member access as well as responding to members requests to provide them with 'quick entry' to avoid queuing with day visitors. However developing a system that can enable the admission team to control access, cope with off peak and peak times, and allow out of hours access in the summer months for FOWA members has proved challenging.

In order to achieve a seamless entry system, both the FC and FOWA procured new Customer Relationship Management (CRM) systems which connect to the entry barriers. Although scanning entry barriers are used widely many visitors and members have struggled to use the barriers for a range of reasons.

The system has created some challenges for the admission team requiring staff and volunteers to help visitors and members with the barcode readers. This has had an impact on the welcome experience and reduced the amount of time staff and volunteers have to give to introduce the arboretum and the various activities and options for visitors and members. There have also been some issues with the membership cards which do not scan as quickly as the day tickets or volunteer cards, this is being reviewed to see if a more robust plastic membership card may improve the accuracy and speed of scanning and entry.

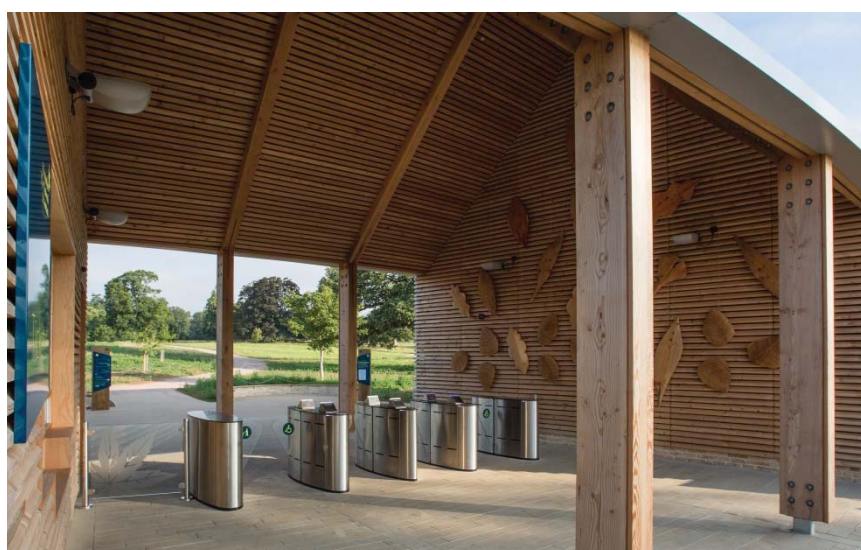


Image – The Welcome Building entrance and entry barriers.

The barriers and associated CRM databases have now been in place for almost four years, so we are considering the remaining life expectancy of the hardware and therefore the layout of this space. Even using the descriptor 'barrier' as opposed to 'gate' has perhaps had some psychological impact on the way the system is regarded by staff, volunteers and visitors. We hope any changes will have a positive impact on the visitor arrival experience and hopefully will also increase the use of the Welcome Building information centre as well.

9.3. Providing a Consistent Welcome

The Welcome Building is a challenging, complex space which provides multiple visitor functions. Moving the information volunteers to a front of house, welcome role alongside the admission staff has been a significant change. The expectation and standard of customer service was not originally set so has developed and changed through the implementation of the project.

We know from visitor and members comments that our welcome and customer service is variable and not consistent throughout the year, not just at peak times. As shown in the FR 2017

surveys 32% of visitors strongly agreed that 'welcome was relaxed and welcoming' and 57% of visitors scored the arrival as either 9 or 10 out of 10 for 'friendly and welcoming' as part of the ALVA survey in 2017.

As part of the project both staff and volunteers based at the Welcome Building were invited to customer service training courses, however not all volunteers have attended. We are considering a variety of options to how we can address this. The Recreation team who manage the volunteers and staff are planning on holding refresher courses for existing welcome volunteers which are focused on the Welcome Building, rather than customer service best practise. The staff team have also now created a 'Customer Promise' as a set standard for customer service. All staff and volunteers are expected to adhere to the promise. Ongoing training and creating a standard and expectation will be key to improving our visitor welcome.

9.4. Welcome Building: Introducing the Arboretum

The layout and visitor flow through the Welcome Building and information centre was changed prior to construction. It was changed following detailed consultation with staff who were concerned that all visitors and members would be funnelled through one set of double doors and small space, which would not be practical given the number of visitors. Therefore this fundamentally changed how visitors would use the information centre, requiring them to be proactive in entering the space. From the FR Visitor Experience surveys 2017 and anecdotally we know only a small number of visitors and members go into the Welcome Building information centre.

'Of the 1,998 individuals who responded, 27% indicated that they have been into the Welcome Building. Infrequent visitors, families, older individuals and those without dogs were significantly more likely to use the Welcome Centre'

FR Visitor Experience Surveys 2017

The information centre houses all the leaflets including the specialist trails, the interpretation exhibits and membership and information desk. As only 31% - 45% of visitors and members had options explained to them many don't realise the purpose of the information centre and therefore miss it entirely. The Welcome Building was originally planned for all visitors to enter the information centre to pay before entering the arboretum; this was changed when it became clear that funnelling all visitors through the Welcome Building would create a significant bottle neck.

As shown in section 6, the following table shows the reasons given by visitors and members for using or not using the Welcome Building from the FR 2017 surveys. Although the main reason given for not entering the Welcome Building information centre was to go straight out to the arboretum, a similar percentage didn't realise it was an information centre and therefore are also possibly not aware about the exhibits and other important information and visitor activities located inside.

Reason for using the Welcome Building	%	Reasons given for not using the Welcome Building	%
Looked at exhibits (interpretation)	27	I wanted to go straight out to the arboretum	19
Picked up information/ a trail leaflet	26	Didn't realise it was an information centre	14
Asked a question/talked to volunteers	23	Had a dog with me (dogs are not allowed inside)	9
Joined/ asked about the Friends membership	11	Didn't realise it was open	3
Looked at interactive map	10	Wasn't interested	3
Hired a mobility scooter/ wheelchair	5	Limited time	2
Downloaded the TreeQuest App	2	-	-

Table 15 – Reasoning for using or not using the Welcome Building. Results from the FR 2017 survey.

The majority of the interpretation exhibits were designed to include some volunteer and staff engagement with visitors to explain and bring the exhibits to life. However only 2% of visitors and members have experienced this, according to the results from the FR 2017 surveys. We know from the response from volunteers as part of our internal training that some find the technology aspects of the exhibits challenging; staff provide regular refresher training and support to address these concerns. The use and engagement with the exhibits may improve following the changes proposed to the existing welcome volunteer training, particularly improving the customer service and engagement training.

9.5. Staffing

Following the creation of the Welcome Building and the increase in visitor numbers the existing Recreation team struggled to provide adequate staff and management cover 364 days of the year. To address this, an additional Recreation Manager was appointed in 2017 and recruitment of two new staff into these positions has provided a new opportunity to provide consistency in weekend cover and expertise rather than relying on managers from outside the recreation team to manage the site on our busiest days. New recreation staff now work across seven days a week to match the increase in visitor numbers and to reflect our peak days of Friday to Monday. We have now seen a 60% increase to the Recreation team with the addition of staff at all levels to reflect the increase in visitors.

FOWA have also seen a significant change to their staffing and governance during the implementation of the Project. The staff numbers have grown from seven in 2012 to 9 staff in 2017, including the addition of a Chief Executive and a new Membership Manager in 2016. We hope with expansion and new direction for the membership team we can continue to grow the FOWA membership and promote the benefit of supporting the arboretum.

10. Key Lessons Learnt

10.1. Project Management

Phase One of the HLF Project was the largest capital project the FC has ever delivered at the arboretum and is one of the largest national projects. Project Management and using Project Managers to deliver projects is not common place within the FC. This created a number of benefits but also some challenges throughout the development and delivery of the project.

Project Planning

Having very clear aims, justifications and a fairly set masterplan was incredibly useful in the delivery of the project especially in relation to the capital elements. It was also useful to have a break between initial development and planning of the project and time to review and make changes before they became costly. This clear reasoning and justification for projects has been beneficial and has been implemented on other large scale projects since the completion of Phase One. It has been helpful when the reasoning for the project has been questioned or when some have questioned why we have carried out such significant changes.

Project Staffing

A key success and area for future development and consideration has been the staffing of the project and those that have been involved in the day-to-day management. The Project Manager who led the delivery of the project had experience in construction and had a number of qualifications in project management. Her role was also solely focussed on the Project, for most FC projects of this scale the client/project manager has rarely had project management or construction experience and normally delivers the project alongside their day job. This adds potential risks to the costs, quality and timescales of the project.

Despite having a dedicated full time Project Manager it was clear early on that additional admin support was needed to help manage the volume of enquires, finance inputting and additional support required. The Project Manager was also supported by the Director, the Learning Manager and other HLF funded project staff. For future projects we are considering additional finance resources as Phase One of the project required complex financial management of the various donors, audit and reporting requirements which was completed by the Project Manager. We have also realised having such a small delivery team can ensure swift decision making and greater understanding of the project it can also pose additional risks particularly if any unplanned absence occurs including sick leave which happened during the delivery of the Welcome Building and required the Director and Learning Manager to backfill the Project Manager for a month.

All of the main project staff were located within the same office which benefited the communication between team members. However the project team including some of the fundraising team and the HLF funded positions have felt isolated at times during the delivery of the project and separate from the other staff. We hope the development of a new combined office will limit this in the future and will try and integrate new project staff into the wider staff team to improve collaboration and integration of the project into day-to-day operations.

Working Together

The project provided a great opportunity for staff from both the FC and FOWA to work together and alongside volunteers. The project had an impact on almost every team so all staff and volunteers had a vested interest in achieving success and the clear aims of the project helped to provide focus and motivation to work together. At times despite the immense pressure of a project of this scale the teams worked well together but there were also times when this didn't happen as effectively as it could.

The project created more opportunities to work together to deliver project including the new entry barriers, development of the community programme alongside the Tree Team and also involvement from other team members within tender panels and project development. Team work was also demonstrated during the changeover to the visitor car parking arrangements, when car parking moved from the former car park temporarily to the events field before the new car park was opened. This required clear communication from the project team and team spirit and resilience from the visitor services team who managed the transition.

'I remember when access to actual (former) car park stopped. Knowing how fragile the ground was and needing to keep moving the parking spaces and temporary signage was a daily challenge but as a team building exercise was excellent'

Visitor Services Team Member

Engagement with the project team and with other teams has been challenging at times. In the early planning of the stages not all teams were involved as much as they could have been due to a number of different reasons including an element of doubt that the project may never happen. Unfortunately this caused issues throughout the delivery phase of the project, including alterations to the specification and ultimately impacted on the initial handover period. It can be particularly challenging to ensure visitor service teams who are rostered over a 7 day week and are under pressure to ensure the arboretum is open to the public 364 days per year, have adequate opportunity to engage.

With future projects we will ensure representatives from each team attend initial planning meetings and more staff have engagement with projects. If the project impacts on their direct working area adequate time is allocated within their role to input into a project. We have already implemented this change with the construction of the Wolfson Tree Management Centre, which provides new facilities for the Tree team. They described their involvement in the Tree Management Centre project as *'We were over it like a rash.'*

Communication Between Teams

Communication levels and quality between teams is variable. As part of the evaluation of the project we held a staff workshop in 2017 to share our views on each of the HLF Project aims and to discuss the impact of the project on staff, volunteers and visitors. The following are FC and FOWA staff comments on the following topic *'Do you now feel more integrated as a site?'*

'What I have learnt from the Project is to engage with people with whom I had not had experience before.'

'There's a way to go but we've seen impact on each team and it's helped us understand more the need to be more collaborative'

'We are less siloed than we were'

'There are more opportunities to feedback as staff to others. We are more appreciative of each other.'

'Westonbirt is a far better place to work'

However with four main offices on one site and at times poor communication within and between teams we know this is an area we need to continue to work on. This has been evidenced from our FE staff surveys with a 40% drop from 2013 on sharing best practise between teams and a 22% drop in co-operation between teams. Following the completion of the project we have held a number of staff workshops and meetings to plan and create a new arboretum strategy to try and address some of these issues. We know that there is still more work to be done to ensure as staff change and teams evolve and grow that we continue to work in collaboration.

Shared Learning

The capital project and change to the visitor experience has been significant and many organisations have asked us how we completed different aspects of our project. Since the Welcome Building opened we have shared our lessons learnt from the development of the project with a range of organisations.

- Over 20 different sites and organisations have asked us about the project including a number of FC sites. This included; National Trust – Estates Team, Dyffryn Arboretum, Kew Gardens, English Heritage, Cotswold Wildlife Park, RHS Hyde Hall, Natural Resources Wales, Kielder Water Park, Tortworth Arboretum, Oxford Botanic Gardens, Cotswold Attraction Group, RICS Gloucestershire Surveyors, Royal Agricultural College, Monmouth Housing Association and many more. We have also shared the learning from the App development and community programme at the Botanic Gardens Education Network conference which was held at the arboretum in 2015.
- The FC is currently reviewing how it delivers large projects of a similar scale and nature. During the delivery of the project the Project Manager has regularly shared information and supported other individuals delivering projects including specifications, tenders, project plans and costings to help other FC colleagues to feed into plans for the development of other FC projects. This has included FC sites; Delamere, Chilterns/Wendover, High Lodge, Alice Holt, the Arts Programme and Grizedale. This information has been shared on our project intranet page.
- We plan to share the findings from the FR Visitor Experience Evaluation with arboretum managers before sharing more widely with other staff and FC colleagues.

We will take forward a set of action points to continue to develop the visitor experience.

- We also plan to share this HLF evaluation and completion report with other FC colleagues and more publicly.

10.2. Consultation and Stakeholder Engagement & Communication

We have a vast number of stakeholders ranging from volunteers and staff, to our local neighbours, statutory organisations and bodies, over 138 donors, visitors and members. Ensuring each of the key stakeholders were engaged and communicated with throughout the project has been a significant challenge whilst trying to balance such a large number of interests and views was a challenge and ultimately some suggestions were not taken forward.

Throughout the project we engaged with various groups using our website, social media, blogs, donor newsletters and regular update meetings as part of our communication plan. As part of the development of the project we also carried out various surveys including surveying our community group leaders and participants, consulted with our youth forum when developing new things including the App as well as surveying and creating prototypes of the new Welcome Building interpretation. Despite this some elements of the project haven't worked out quite as expected or haven't been used as we had envisaged or as visitors or members originally suggested.

Communication

Although communication with various stakeholders took place throughout the planning phase and increased during the delivery phase we know from visitor and members comments that perhaps we could have done more to improve visitor understanding. Many visitors and members have struggled to understand our reasoning for some aspects of the project which caused frustration including; the entry barriers and the distance between the carpark, Welcome Building and restaurant.

Although we used temporary signage to explain the benefits of the Downs Restoration project during the first year of restoration many visitors still ask why they are not allowed to park there and back on the Grade 1 landscape. One of the aims of the BioBlitz event was to highlight the importance of this habitat and the restoration work and promotion of this aspect of the project on social media. We need to keep promoting the benefits of this area and look at ways to encourage longer standing visitors to use and explore the arboretum using different entrances and paths.

10.3. Interpretation

Many aspects of the new interpretation projects were new to staff, volunteers and our visitors. The options and activities for visitors have significantly increased and we have developed interpretation including the App and touchscreens which use technology, something which hadn't been done before at the arboretum.

TreeQuest App

The App was a significant interpretation project. We faced challenges of limited mobile signal and an outdoor site. Since its launch we have made a number of changes. We had had some difficulties with the iBeacons which are used to locate trees within the arboretum itself. We had purchased what were advertised as outdoor beacons, but these were not weathertight and suffered large amounts of water ingress. As such, they failed so we purchased a new version of 'outdoor beacons' and watertight housing as an extra precaution, which has resolved the issue.

Since the launch we have also changed the algorithm to better suit a logistic trail between each tree. When the app creates a trail from your selected criteria, it will also take into account the distance between each tree in a better way, in order to select the 'next tree on your trail' to be more logical. Five new tree icons have been designed, so that we can update the app with different trees should we so wish.

Marketing & Promotion

We allocated a portion of each development budget to marketing materials and promotion. As you can see from the following table we have used and tried a variety of different methods to promote these new HLF funded trails and the App with varying success rates. We know from the feedback form for the Threatened Tree Trail, moving the posters into the Welcome Building toilets has increased take up of the booklet. We know onsite promotion has the biggest impact so we will be looking into developing onsite promotion of the Picture Perfect trail.

Marketing and promotion methods	Birt's I-Spy	Picture Perfect	Threatened Trees	Creativitree	TreeQuest App
Onsite posters	✓	-	✓	✓	✓
Pedestrian banners	✓	-	-	-	✓ (inside the Welcome Building)
Roadside banner	-	-	-	✓	-
Website & Social Media channels	✓	✓	✓	✓	✓
FOWA magazine	✓	-	✓	✓	✓

Table 16 – Promotion methods used to date for each trail and App.

Both the staff and the Welcome Volunteers based at the Welcome Building have been asked to verbally promote these new visitor offers. This has also impacted on the promotion of the App as many of our volunteers are not confident in the use of Apps or smartphones. The Interpretation Support Officer has provided regular training sessions which have helped increase confidence in promotion of the App for some of our volunteers. Relying on verbal promotion has had varying degrees of success depending on other information being promoted at the same time, e.g Gruffalo trails. We hope the installation of the new digital sign will help increase awareness so we don't need to rely on the verbal promotion as much.

10.4. Community Programme

The programme was one of the most successful elements of the project, although we did face a number of challenges, most of which we overcame in order to deliver and exceed many of our original targets. We have also shared our experiences in order to build on what we have learnt as we now look forward to continuing the community programme beyond the HLF funding.

Staffing

We created two new staff posts a 'Community Youth Officer' and a 'Community Inclusion Officer' both were recruited on a four year fixed term contract. The Youth Officer has been in post for all four years however four individuals have carried out the Community Inclusion Officer role. Two of the post holders were temporary replacements, one of which is a member of the Learning Team, who provided cover when the Community Officers were sick but also when we faced gaps between post holders. This ensured we kept as many bookings as possible but also highlighted that it's important to ensure there is a wider understanding of each job role, particularly specialist roles. Going forward a new 'Active Forest' coordinator will work alongside the Community Coordinator and we will also ensure the other members of the learning and recreation team can also provide support when needed.

Flexibility & Change in Culture

Some of our original targets were very ambitious and some of the programmes were initially planned and developed as part of the Activity Plan by staff who had limited experience of working with community groups. Therefore the two new post holders were encouraged to question and test our original assumptions. We allowed them the freedom adapt the plans to gain maximum benefit for the community groups and ensure we still met our overarching aim to develop a new community programme working with two new audiences. Some of their suggestions were challenging for existing staff and required a new way of working.

Unplanned Changes

We planned for the Youth Officer to mainly work with existing local youth clubs and centres who had expressed an interest in taking part in the programme. Following extensive cuts to local government funding a large number of youth clubs and centres disappeared. The Youth Officer therefore has spent more of her time on working with local schools and colleges with young people who are at risk of exclusion whilst trying to make contact with and find other interested youth groups. We have regularly led onsite and outreach sessions with Tetbury Youth Club.

Shared Learning

We have shared our experiences and lessons learnt throughout the development of the programme especially within the final HLF funded year:

- We have created a 'How to Hygge a Tree' resource booklet, See Appendix J. This stemmed from our desire to capture what we had achieved and developed over the last four years and to create a shared resource for others who would like to set up a similar project. We have shared the booklet with a number of organisations across the country and have also sent it to interested community officers in Portugal and Ireland. We have

also created a PDF version of the booklet which can be downloaded. This has been shared with FC colleagues based at other FC sites.

- We will share the FR Community Evaluation Report with others including other FC colleagues and other organisations.
- We have met with community officers from English Heritage and Gloucestershire Wildlife Trust to share our experiences
- As part of planning the future of the community programme we held our first community conference. Various group leaders from care homes, schools, youth clubs and other community groups we have worked with over the last four years attended the conference. This enabled us to help build confidence in some of the group leaders in the use of tools and taking part in activities, but also allowed various groups to meet each other and share their experiences and contact information to continue to build and expand the local community network.

11. Where Next...The Project's Legacy

11.1. Landscape: Restoration and Ecology

Restoration of a grassland habitat is a long-term project. We are aware with new visitors and changing staff members we need to ensure we remain exemplary custodians of this important habitat and part of the arboretum landscape. To do this we hold and will continue to hold regular Downs management meetings with various team members, regularly update our Sward Management Plan and will continue to survey the restored area to monitor changes. Using the skilled and experienced Flora and Fauna volunteers we will continue to survey the Downs. The Flora group will be carrying out site walks every 2 years (2018, 2020 onwards) and NVC quadrat surveys every five years (2022). The Fauna group will continue transect surveying bees and butterflies across this area in 2018.

Following the success of the BioBlitz event we are planning to hold regular events every other year. We are also considering extending the number of Key Management Species beyond flora including butterflies and fungus. We want to do more to promote ecology and capture more ecology data. We will build on the existing partnerships with Gloucestershire Butterfly Conservation and Moth group and other local groups to do this.

We have increased our understanding and appreciation of the arboretum's biodiversity. Biodiversity now features as part of the new arboretum strategy.

11.2. Embedding the Community programme into our Everyday Works

We have now created a permanent Community Co-ordinator position. The role will focus on *'Supporting people to live better using the therapeutic benefits of Westonbirt, the National Arboretum – focusing on delivering mental health and wellbeing objectives'*.

With one community post rather than two we have decided to focus on working with community groups from a 10 mile radius of the arboretum to ensure we continue to work with groups from our local community, and be known as a community asset for wellbeing and engagement in the local area. The Community Coordinator will continue to develop the programme around mental health, wellbeing and developing theory of change.

We know a number of groups we have worked with are based further afield so we are planning to develop a community access scheme to encourage those groups to still visit the arboretum at an affordable cost. We also want to ensure groups can continue to visit beyond following working with us to continue to experience and enjoy the arboretum. In the coming years the community programme will continue to grow and develop and build on what we have learnt from the HLF programme.

We are looking to develop initial contacts with Pets for Therapy, becoming a dementia champion, exploring possibility of volunteers leading tailored guided walks for specific needs groups such as those with dementia or visual impairment in development, and working alongside the new Active Forest co-ordinator to consider health and wellbeing throughout the arboretum, for all our visitors. We also hope to continue to develop working relationship with

the NHS as part of the local social prescribing network. The new Active Forest Coordinator is one of several throughout the FC although the arboretum post holder will be unique in that the role will also have a specific focus on supporting the community programme and promotion of health and wellbeing at the arboretum.

In the final year of the programme we asked group leaders for their views and suggestions for the future of the programme. All those who completed the survey expressed a desire for the community programme to focus on mental health and wellbeing. The following list describes the areas of the community programme we plan to adapt and take forward following the group leaders' feedback, feedback received through the FR Community Evaluation as well as informal discussions with group leaders.

Travel Bursary & Community Access Scheme

Following consultation and discussion with community groups many expressed a concern regarding the costs of travel. Therefore we created a significant travel bursary budget within the original Activity Plan. Despite promotion from both Community Officers only 11 groups used the bursary. Several groups struggled to find local travel providers or had difficulty finding staff resources to support the group. Many also felt that with free entry and free staff and volunteer support from the arboretum team that they could cover the cost of travel. As some groups have expressed an interest to visit the arboretum in their own time as self-led or independent visits they have expressed concern regarding the admission costs. We are currently developing a Community Access Scheme to provide a reduced rate for those who have worked with us as part of the community programme; we hope this scheme will be available from late spring 2018.

New Approach to Care Home Outreach

Delivering outreach to care homes has been positively received, demonstrated by the number of group sessions and participants. We know that demand is high but engagement and impact is limited as care homes normally require sessions to be a maximum of one to two hours. We therefore have trialled an activity box scheme in 2017, loaning boxes with four week/sessions of activities to groups. The programme starts with a Community Officer led activity session the activity box is left at the care home for the group to use and carry out four tree related sessions, followed by a final session led by the Community Officer.

'This week they have been learning about the Silver Birch Tree and its many properties. They felt and talked about the bark and the textures of the tree and smelt what the sap from the tree is like ... others made some lovely leaves and wrote on them what their favourite trees are and why – such a lovely time reminiscing and all whilst learning more about each other'
Activity Coordinator, Local Care Home

Following the pilot scheme we have created four timber boxes which will be loaned to interested groups. One of the initial groups who tested now has another box on loan as they were so impressed with the activities.

11.3. Volunteers: Continuation of the Project Roles

All of the new volunteer project roles will continue in some form.

Flora & Fauna Groups

We are planning to utilise the skills of both flora and fauna volunteers on new projects at the arboretum including surveying Silk Wood and possibly also monitoring the impact of Chalara (Ash dieback) in this area and the management impact on flora and fauna.

Landscaping/ Estate Volunteers

Following the completion of the Downs Restoration, a new weekly 'Estate team' of eight volunteers started and has continued to date. This team of volunteers now carries out a variety of tasks including woodchip spreading, maintenance tasks including painting, ha-ha ditch clearance and continued support of the downs restoration project.

Interpretation Volunteers

Volunteers regularly check the TreeQuest App beacons and walk the App trail. A core group of volunteers continue to monitor and change the 'Wow' images in the 3D map housing and Welcome Building screens.

M&E/ Survey Volunteers

With a trained and enthusiastic group of volunteers the group have now gone on to conduct surveys for the national FC team for the Highway Rat trail. We will continue to use the skills of this group to carry out visitor surveys.

Community Volunteers

The community volunteer roles will continue to support the Community Coordinator and the development of the community programme.

11.4. Volunteers: Ongoing Improvements

There are some areas which we will continue to develop. These include; dealing and responding to feedback, improving communications and considering more in-house training between teams to broaden knowledge in all volunteer groups even if some of the volunteers are not actively volunteering as part of those activities, a number of other recommendations are included within the 2017 Volunteer Survey. From the survey and learning from the changes to volunteering over the last five years as part of the project these learning points will be incorporated within the revised volunteer strategy planned for late 2018.

We are planning to continue to deliver a wider range of volunteer training including continuing Inclusion Awareness training for all volunteers as well as holding walks and talks to share knowledge between volunteer groups. We are also aware that when staff participate in the same training this has benefited both staff and volunteers from a social perspective but has also helped to ensure staff feel invested in and they have a shared experience, something we want to continue.

11.5. Interpretation and Arts Development

As well as creating a permanent Community Coordinator position, the Interpretation Support Officer was also made permanent and incorporated into the main staff structure within the Recreation team. The Interpretation Support Officer is now planning future work and how elements of the Phase One project can be developed and improved.

Following the success of the two key new interpretation trails, Birt's i-spy adventure for 3-6 year olds and the 'Little book of disappearing trees' which is aimed at an adult audience we are keen to ensure we continue to offer interpretation and engagement opportunities for a wide range of our visitor audience. We are considering how we can build on the success and popularity of these two trails.

We know some visitors and members struggle to engage with all of the exhibits in the Welcome Building. Following from some of the recommendations from the Heritage Insider report and focus groups we are considering holding further focus groups to plan where we can make changes. We are considering introducing more child focused interpretation within the Welcome Building which was originally developed for an adult, member audience. We are also planning to update some of the information within the exhibits including the touchscreen interactive to ensure the interpretation remains current.

'What I think is really difficult for you is you have the whole spectrum of people coming and interests. We're mainly parents here but there are so many other people that just come to walk their dogs, or they just come for running, and then there are people that they want to get information and look around and find all those special varieties'

Visitor Focus Group

Following on from the completion of the arts based activity 'Creativitiree' we are creating an arboretum arts strategy to build on our existing work with arts including workshops, exhibitions and sculptures.

11.6. Staffing: Project Roles and Fundraising

The Project Manager is now a permanent member of the arboretum staff team and we have now created a fixed term Project Officer role to support the delivery of projects at the arboretum. Learning from the success of the project other large scale FC project's now have dedicated project managers with specialist skills and experience in order to try and replicate the success of Phase One. By creating project management positions we aim to improve the resilience of the team and improve the delivery and planning of projects at the arboretum as well as supporting national projects and promotion of project management within the wider organisation.

Ongoing revenue fundraising and trust applications are now a core income stream for FOWA and the arboretum. A permanent fundraising position has been created in the FOWA team to continue to raise funds so we can deliver more projects, including those described below.

11.7. New Facilities

Following the completion of the Welcome Building, Wolfson Tree Management Centre (the tree team's new facilities), and the STIHL Treetop Walkway (both funded outside of the HLF project) it has highlighted that a number of existing facilities now need to be improved to meet the higher standards and expectations of staff, volunteer and visitors.

FC and FOWA Combined Office

We are increasingly aware that our offices are not fit for purpose and we have very little space for meetings. Currently office based staff are located within four buildings at the arboretum, which creates additional communication challenges and reduces potential informal collaboration, discussion and awareness of other teams priorities and activity. We are therefore planning to bring teams together in a new office, which will in turn free up existing buildings within the central area for other purposes.

Activity (Learning) Centre

The Learning Centre which was part of the arboretum's original 2009/2010 HLF bid has long been part of the site which has required improvement in order to reach its full potential and provide an inspiring centre which reflects its location and surroundings. We are planning to develop our learning facilities as a new Activity Centre to create a space which can be used for existing formal learning for schools but also build on our existing relationships with specialist colleges and universities as a site for research opportunities and lectures.

Science Facilities

We aspire to develop facilities to build on our relationship with FR and highlight the scientific work and research carried out at the arboretum and encourage visitors to learn more about the arboretum and tree collection. There is an opportunity to establish deeper links with other research and academic institutions and to make the arboretum's tree collection more accessible for research by others. Currently the arboretum is being used as a research site to monitor the impact of Chalara (Ash Dieback), is one of 79 Reinforce trial plots monitoring the impact of climate change as well as the important identification work being carried out by our Dendrologist. As part of the master planning for new facilities we are also considering creation of a field laboratory which will be used by our Dendrologist and tree team staff and potentially be opened to visitors for behind the scenes tours and for formal shared learning with students. Currently researchers bring their own mobile labs to the arboretum when carrying out research.

'I don't think we always appreciate the research type activities that go on here, certainly they're not obvious and brought to your attention but nonetheless they are important and need to be done. It's not unlike Kew in some respects like that, is it?'

Family Focus Group 2017

'But you obviously are doing something equally important, but it's not really being pushed in the same way. But there's a lot of permanent building at Kew, isn't there, there's a lot of exhibition areas that you can go in and you see all of these things.'

Focus Group 2017

By creating new facilities we hope to enable more visitor and member engagement. Following the success of 'the little book of disappearing trees' and the number of positive response and comments received through the visitor experience Focus Groups we know there is a desire to explain the research work we currently undertake.

12. Appendices

- Appendix A - 'Project Photos'
- Appendix B - 'Letter from Kim Auston, Heritage at Risk and Parks & Landscapes Specialist, Landscape Architect, Historic England'
- Appendix C - 'The Team & HLF Funded Roles'
- Appendix D - 'A Five Year Assessment of the Grassland Habitats and their Restoration' Forest Research
- Appendix E - '2017 Fauna Report, Volunteer Fauna Group'
- Appendix F - 'Visitor Experience Report, Forest Research
- Appendix G - 'Photos of the Interpretation, the TreeQuest App & Specialist Trails'
- Appendix H - 'Welcome Building Interpretation, Focus Group, Heritage Insider'
- Appendix I - 'A Calm, Peaceful and Beautiful Place' Community Programme Evaluation Report, Forest Research
- Appendix J - 'How to Hygge a Tree', Community Programme Resource
- Appendix K - 'Volunteer Survey Report, 2017'
- Appendix L - 'Project Volunteers and Community Participant Interviews'
- Appendix M - 'Summary of Survey Monkey Responses: Community Group Leaders'
- Appendix N - 'Communication Examples & Articles, including the FOWA Magazine'
- Appendix O - 'Awards and Case Studies'