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Introduction

This report brings together the findings from an internal evaluation of the Family Action Friends of Swaffham Orchard Project – made possible by the Heritage Lottery Fund.

The project was designed to redevelop a disused orchard site, creating a community orchard run by trained volunteers. It also aimed to preserve local fruit varieties and encourage bioregional flora and fauna. Adjacent disused polytunnels were to be refurbished to preserve other heritage fruit and vegetables.

The key focus of the project was to recruit and train volunteers in traditional skills such as orchard management and protection, pruning, grafting, food growing and wildlife conservation - helping to redevelop the site and sustain ongoing maintenance once funding ended.



Grafting workshop for volunteers led by local enthusiast

Additionally the project delivered workshops around traditional skills such as beekeeping, willow weaving, green woodwork and conservation. Learning days about traditional fruit varieties, local wildlife and the history and importance of local orchards were also held.

The project is open to all members of the local community to get involved either as volunteers or through visiting the site to develop new skills and learn about local heritage.



Green Woodwork session in one of the polytunnels



Apple turned from apple wood

In particular the project focuses on older people, people with disabilities and those experiencing or recovering from mental health issues. Work is ongoing to engage younger people through schools.

The long-term objective is that once redeveloped, the orchard will be a community space accessible to, and to be enjoyed by, the public all year round.

This evaluation explores the project model - how it has been delivered and what its variety of activities has achieved. It explores the volunteers and members of the local community themselves - what the impact on them has been and it provides some selected case studies to highlight the experience of the project.

It concludes with project key learning and findings.

Data was collected for the evaluation using a mixed methods approach. A focus group was held with volunteers and members of the community in order to identify what the impact of the project has been. In addition, data was collected using a number of outcomes tools to capture distance travelled on wellbeing, self-esteem and to identify to what extent learning about orchard management, traditional skills and heritage and heirloom fruit and vegetable varieties has increased.

Background to the Project

The Swaffham Orchard Project has redeveloped a disused orchard and plot containing three large polytunnels. It lies close to the existing allotment site managed by Family Action. The project has focused on the saving and developing of the physical heritage of the orchard and allotment site, promoting growing heritage vegetable varieties and the heritage of 'non-physical' traditional skills.



Work begins to renovate the polytunnels

The orchard was created in February 2011, when 200 two-year-old trees were planted on the site by local people and a Community Payback team, with a small funding award from the Big Lottery Fund (Awards for All). Before the land became an orchard it was a stretch of redundant railway line running adjacent to the local recreation ground. Establishing the site as a community orchard was one of the key actions in Swaffham's widely consulted on ten-year Town Plan, published in 2009. Local people wanted a community orchard as a response to the decline of East Anglia's orchards.

The orchard is made-up of 56 heritage apples, 50 cider apples and a mix of cherry, plum, pear and quince. More than 30 East of England Heritage varieties, such as 'Five Crowned Pippin' circa 1500 and 'Norfolk Royal' North Walsham' 1908, were planted to help preserve them. Three large polytunnels were also erected.

However, after the orchard was set up, there was no funding to pay for ongoing management/maintenance and no plan was put in place to ensure the orchard was sustained. The lead person behind the initial development of the site also moved away.

As a result the orchard and polytunnels were largely disused and in danger of being lost. The site was overgrown and was not fulfilling its educational, productive or biodiversity potential. As a result, some of the trees also died.

There were no paths or signs and no information about the history of the orchard and the importance of preserving orchards to Norfolk's heritage. The work and effort put into establishing by the local community in 2011 was in danger of being wasted.

The heritage of the site is important because Norfolk was once a key area of the country for orchards and there are many local varieties of fruit. These varieties and their orchard habitat needed to be preserved for their local significance, genetic diversity, as local food sources and for their landscape and wildlife value. The East of England Apples and Orchards Project reports that orchards managed in traditional ways, with a diversity of trees offer the greatest biodiversity.

Maintaining the heritage of the site is important because in the last fifty years the county's orchard area has declined by more than 50%. This has had a dramatic effect on the appearance of the landscape, led to a decline in biodiversity including birds, butterflies and other insects. It has also led to a loss of knowledge amongst the public about their local heritage.

Consultation with volunteers and visitors from Family Action's existing allotment site highlighted local interest in the heritage of Norfolk's historical orchards. The consultation evidenced a lot of interest in redeveloping the orchard and a desire to see it used as a community space where volunteers and members of the public could learn new skills.



Allotment in summer

Project Delivery

This project is delivered by a part-time Project Coordinator who recruits, trains and supports a team of local volunteers to redevelop the orchard and maintain its heritage in the future.

The orchard and allotment is open year-round as a community space and offers workshops, activities and information days such as Garden Organic's Heritage Seed Library seed saving training, willow weaving, scything, beekeeping, surveying wildlife, orchard care, grafting, green woodwork and an annual Apple Day. On this open day members of the public can find out more about local apple varieties, the history of the site and traditional skills, including pressing apples using a press made by the project.



Orchard care workshop for volunteers and service users led by Bob Lever



Scythe Association of Britain and Ireland's stall at Apple Day 2015

The site is constantly evolving and there is a coordinated five-hour session three times a week, where people can get involved in maintaining the area, developing the project and learning new skills. As well as managing the orchard, volunteers have installed an irrigation system, restored 3 large polytunnels to productivity, built an outdoor kitchen, erected several sheds/stores, built a cloche, laid pathways, created living willow sculptures, planted a willow coppice, raised plants and produce for the project, manned stalls at local markets, and most recently have begun creating a forest garden on the area in front of the polytunnels.



Visitors pressing apples with Norfolk Master Gardener volunteer Bob Bradby at Apple Day



Live willow dome created by volunteers in front of the polytunnels

More time is spent on the allotment than in the orchard, due to the fact that it requires more day-to-day maintenance and there is covered space where activities can take place during cold or wet weather. The project encourages people to use knowledge gained at the project in their own gardens - for example planting a heritage fruit tree, vegetables or wildflowers. Project volunteers undertake outreach work locally to support this, such as at the Grange, where a willow coppice containing 300 saplings was established in March 2015.

The project protects the 'non-physical' heritage of traditional knowledge and skills around husbandry, utilising locally produced resources, Norfolk's orchards and heritage varieties, as well as raising awareness of how to preserve them.



Previously grassy area on allotment recently transformed into a demonstration forest garden



Willow planted between tunnels to make maximum use of water and space

Project Outcomes

Since January 2014, the project has met the following outcomes:

1 and 7: Heritage will be in better condition and Environmental impacts will be reduced

Many of the fruit trees were in danger of being lost, as they were disappearing under other vegetation and some did not have tree guards, mulch mats or stakes, so providing these was the first improvement made to the condition of the orchard. The trees had not been properly pruned since planting either, so in February 2014 an orchard care workshop was delivered to the first volunteers. All of the apple and pear trees were formatively pruned and an orchard management plan (See Appendix 1) was devised with local expert Bob Lever (affiliated with the East of England Apples and Orchards Project). They have since been pruned again, and a third workshop was undertaken in January 2016. All of the cherries and plums have also been annually pruned, and espalier heritage apple trees have been established and maintained around the edge of the polytunnel site.



Volunteers learning to prune an apple tree

The sward in the orchard was largely nettles and brambles, and some parts of it were beginning to revert to scrub. Woody growth was taken back to ground level and, since then, the orchard has been managed using scythes and mown in rotation so that there is always vegetation at different heights for wildlife. Volunteers have been trained to mow and rake off nettles to encourage a grassland sward to develop. This is a continual process, but much of the orchard is now an improved grassland habitat. Wildflowers are mown around, encouraging them to spread, and new species such as foxgloves and comfrey have been introduced to increase biodiversity further. Areas of nettle and bramble are deliberately left in parts of the orchard to provide a habitat for wildlife such as butterflies and birds, thus improving heritage by conserving local wildlife. Paths through the orchard and around the benches have also been created and maintained by close mowing, to make it more accessible to local people.



Pollinator-friendly bedding plants being raised for Swaffham Town Council

Additional native plants have been introduced to the orchard and the allotment site and management techniques are enabling a wider range of plant and animal species to flourish. A wildlife survey (Appendix 2) was completed by C R Stevenson, a professional surveyor, who visited the orchard for a day in order to conduct it with project volunteers. The survey found that the biodiversity of the site is complex and that the allotment and orchard provide habitats for a rich variety of flora and fauna (see actual survey for details). The baseline survey was completed in 2015 and a follow-up survey is due to take place in 2016. Once the follow up survey has been completed, any changes in wildlife during this time period will be evidenced.

In addition to the heritage apple varieties, a wide variety of heritage and heirloom vegetable varieties including Purple Ukraine tomatoes, Yings lablab and Rosa di Rotunda aubergines have been grown on the site, in the renovated polytunnels and outdoor beds. Three colonies of honeybees have also been established on the allotment, one of them from a swarm collected from the hedge beside the old railway line. The bees are kept in as natural a way as possible and help to support ecosystems on the allotments and orchard as well as further afield.

Improvements to the site were noted by Anglia in Bloom judges, who awarded the project the 'Grow Your Own' Award in 2014. The project will also be applying for the Green Flag Community Award.



Queen bee emerging from her cell. Photograph taken at a beekeeping workshop on the allotment

2. Heritage will be better interpreted and explained and people will have learnt about heritage:

Data from Outcomes Booklets¹:

Only 1 out of 15 survey respondents had had any previous involvement with heritage before participating in the orchard. Following involvement with the project:

- 93% of survey respondents increased their knowledge about orchard heritage.
- 93% of survey respondents increased their knowledge about heritage and heirloom fruit and vegetable varieties
- 80% of survey respondents improved their knowledge of heritage
- 80% of survey respondents increased their knowledge about local wildlife

¹ Analysis of Outcome booklets completed by 15 participants W:\Evaluations\Evaluations\Swaffham Orchard Project

Service User comments about their learning around wildlife and heritage:

- *“By maintaining heritage varieties. If something happened to a widely used commercial variety, e.g. a pest developed that it wasn’t resistant to - we have other varieties to use.”*
- *“I’ve learned to look for pests and diseases, use a scythe, about different varieties of apple and traditional orchard management.”*
- *“[I] didn’t know there were so many different types of apples”*
- *“[I have learnt] about trees and how to treat/protect them, about bees, different vegetables/plants”*
- *“I’ve learnt a lot about bees and their behaviour thanks to the onsite hives.”*
- *“Have learnt the names of different birds. Learnt about bees and lots more.”*
- *“I took part in a wildlife survey of the site. I now look out for different birds, insects, mammals and plants.”*
- *“I have learned about making habitats for insects. I would still like to learn more.”*



3 and 8: People will have developed skills and more people and a wider range of people will have engaged with heritage:

In total, **145 individuals developed at least 29 different skills** through attendance at workshops and learning embedded in the project's normal sessions or other activities, e.g. retail skills were learnt as part of helping with markets, and information about keeping chickens was learnt by caring for poultry on site.



Building a cob oven next to the polytunnels



The finished oven with sculpted dragon



Chickens at the project



Volunteer helping at plant sale

The project held a wide range of activities and workshops which were well attended.

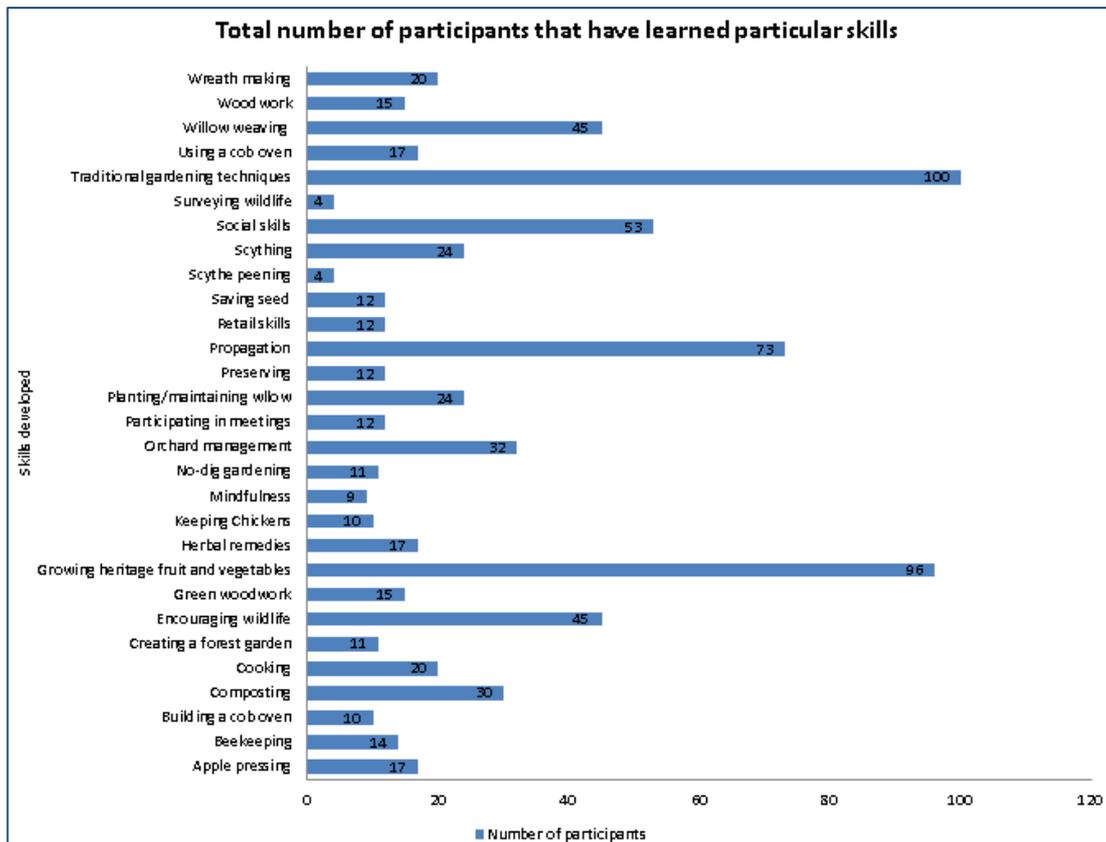


Chart showing how many participants learned particular skills: Jan 2014 - Mar 2016

These workshops and regular work days on the allotment and in the orchard develop participant's skills²:

- 93% of survey participants developed skills in growing heritage fruit and vegetables
- 87% developed skills in traditional gardening techniques
- 87% developed composting skills
- 80% developed their social skills
- 80% developed skills surrounding encouraging wildlife
- 80% developed skills in propagation
- 67% developed skills in orchard management
- 67% learnt how to use a cob oven

² Analysis of Outcome booklets completed by 15 participants W:\Evaluations\Evaluations\Swaffham Orchard Project

Other skills learned by participants included: saving seed, scything/scythe maintenance, no-dig gardening, retail skills, participating in meetings, keeping chickens, beekeeping, creating a forest garden, apple pressing, preserving, woodwork, green woodwork, herbal remedies, surveying wildlife, mental health first aid, outdoor cooking, willow weaving and making wreaths.



Basket weaving workshop



Scythe peening workshop led by Richard Brown



Attendees of herbal remedies workshop making poppy glycerine



Calendula infused oil made at the project

- *"[I've learnt about] managing an orchard using traditional methods, tree maintenance" (Service User)*
- *"I now know the importance of unique plants and their preservation. I spread the knowledge to my family and friends who have also become actively interested." (Service User)*

The project also held a number of popular events demonstrating how the service is well integrated and impacts on the local community:

- Twenty volunteers took part in outreach work such as planting and maintaining a willow coppice at local project The Grange, Great Gressingham, and taking graftwood from old standard apples at Nurture by Nature Forest School, to preserve the varieties.
- The Apple Day in September 2015 had over 100 people involved either as volunteers or visitors – this was a 100% increase on attendance from 2014.
- The community orchard's first Wassail was held on old twelfth night in January this year (see publicity later in evaluation for details). It was attended by around 50 local people and it is hoped that it will become an annual event.
- Service users and volunteers also sold heritage seedlings and produce at local fairs and markets such as the Brecks Food and Drink Festival, Swaffham's Christmas Market, Farmers' Markets and Plant Lovers' Day (organised by the Norfolk Nursery Network) .
- The project raised and provided all of the plants for the Town Council's displays in planters around the town. The planters were also assessed for Swaffham in Bloom.
- The project won Anglia in Bloom's Grow Your Own Award in 2014. This award covers several counties and was a great achievement for the service.



Project participants with their certificates and prize bowl

Press coverage received by the Project:

The great green escape



There's something very special being grown in Swaffham, as **Charlotte Philcox** discovers.

It's a hot summer evening when I speak with Katy Fullilove, Friends of Swaffham Orchard Project Co-ordinator, a scheme which is part of the ESCAPE community garden project in Swaffham, Norfolk.

"I've just started watering," Katy tells me. Any gardener will understand this is no mean feat, when you consider that the projects have three big polytunnels and an outdoor growing area covering two super-sized allotment plots, which all need lots of looking after. They also manage a community orchard of 150 fruit trees, alongside the Orford Road playing field in the town.

"Anyone can get involved," Katy says. "Our aim is to promote well-being and mental health, through being outdoors and making the most of the exercise and social interaction involved in gardening together. We grow fruit, vegetables and herbs using organic methods, and we're also helping people to learn traditional skills. We've run

training sessions on scything, preparing herbal remedies, willow weaving, saving seed, preserving fruit and vegetables, traditional orchard care, and this year have been offering some of these opportunities again, as well as green woodworking and beekeeping workshops. Part of our aim is to promote healthy eating, so we've created a way to do some cooking on site too, in our outdoor kitchen. It has a cob oven, which we built last year."

Katy explains that as well as inviting local volunteers to get involved, the project takes referrals too. "We have all kinds of people and groups coming along. It's so peaceful up here, and by working together, it really does help reduce the stigma usually associated with mental health problems or emotional difficulties."

While we're talking, I can hear a rooster crowing in the background. "Oh yes," says Katy, with enthusiasm. "We've also got a few chickens. Bees too. We've had those for a couple of years.

There's one guy who comes and shows us how to work with the

■ The group is hosting an **Apple Day**, 10am-4pm on September 12, jointly with the **Green Britain Centre** in Swaffham. There will be stalls, craft demonstrations including willow weaving, green woodwork and scything, autumnal fare (some of it made in the cob oven built on site last year), and apple pressing. Enthusiasts will answer orchard-related questions and give advice.

■ **Friends of Swaffham Orchard** is led by **Family Action** in partnership with Swaffham Town Council, the Garden Science Trust, Swaffham Community and Leisure Gardeners Association, The Iceni Partnership and the Master Gardener Programme. **Karen Bek** oversees the ESCAPE Community Gardening Project, and also delivers basic horticultural courses. Places on these are available free of charge to anyone who is involved, and would like to learn more about gardening.



bees. He knows such a lot, and has been a beekeeper for some 50 years. He's happy to share his skills, and we now have around six or seven people interested in learning more about beekeeping."

Over the past two years, the group has grown hundreds of plants from seed. "We grow a lot for our own use," Katy explains. "In fact we've just been planting out 'Pink Passion' chard, and we have masses of different varieties of squash. An important part of the project is that we grow Heritage varieties too, working with Garden Organic's Heritage Seed Library to grow older and unusual vegetables.

"We were very lucky to have support from the Heritage Lottery Fund, although we now need to become more self-sustaining, and have started to sell plants, especially at some of the North Norfolk Nursery Network open days. If we have any surplus fruit and vegetables, we sell them to cafés in Swaffham, such as the Green Britain Centre, and CoCoe's Café, and we have a stall at least once a month at the Friday Indoor Market in the town."

"We'd love it if people would like to come and join us," she adds. "And of course, if anyone wants to help, we can let them have some of the produce too."

■ Contact Katy Fullilove (Katy.fullilove@family-action.org.uk) or Karen Bek (karen.bek@family-action.org.uk), or tel 01760 720302. The group has a website at <http://swaffhamorchard6.wix.com/familyaction> and you can follow them on Facebook, at <https://www.facebook.com/groups/481728421874507/>

A volunteer describes how they have been helped by the project:

"I began volunteering at the end of last year, after going through a stressful event. I've suffered with anxiety for several years now, and it's often hard to explain it to people who haven't experienced it, which can lead to avoidance of certain situations and isolation. Everyone is so understanding and supportive.

Although not everyone is there due to mental health issues, we all help one another and there is a great sense of community. The name ESCAPE is so apt, it feels like you're escaping from the stresses and pressure of everyday life and entering a peaceful haven.

"I initially began going along just as a distraction from my feelings, but now I love being outdoors and learning about horticulture. The project is affiliated with the Open College Network, so volunteers and service users are able to gain a real qualification in horticulture, which could be a stepping stone to go onto further education or a new career.

"I haven't been able to take part in the course at the allotment, but my new found interest in growing plants combined with a boost in confidence was the trigger for me to decide to go back to college in September to begin a floristry course."



NURTURING: Sarah Green watering. Below, Katy Fullilove. Pictures: IAN BURTT

"Let's Talk" September 2015

Links to more publicity:

- www.lynnnews.co.uk/news/local/latest-local-news/swaffham-open-day-with-pizza-is-simply-topping-1-6207053
- www.lynnnews.co.uk/news/local/latest-local-news/hundreds-enjoy-the-fruits-of-the-orchard-at-swaffham-apple-day-1-6960329
- www.lynnnews.co.uk/news/local/latest-local-news/apple-day-at-swaffham-1-6355932
- www.thebrecklandview.com/2015/12/12/audio-willow-weaving-in-necton/



Guests gather around the oldest tree in the orchard during the Wassail event. MLNF16PM01126

Orchard visitors wake the trees

Event held as fundraising drive continues

BY ALLISTER WEBB
Email: allisterwebb@lynnnews.co.uk
Twitter: @LynnNewsCitizen

Officials of a community orchard project opened the site to the public at the weekend as fundraising efforts to continue its work intensify.

Visitors to the Tumbler Hill site in Swaffham took part in a Wassail event, based on an ancient tradition of waking the trees in a bid to ensure a fruitful harvest, on Sunday.

Co-ordinator Katy Fullilove said: "It was brilliant. We had a really good turnout and couldn't have asked for more."

The event coincided with an ongoing Crowdfunder appeal to raise more than £5,000 for the project to continue its work to support people with a range of mental health, isolation and emotional problems.

Managers have warned they will have to make significant cuts to the support they provide without additional funding beyond the spring.

Around £1,800 has been raised so far for the campaign, which closes next Friday.

Miss Fullilove said that, although the event was not held as a direct fundraiser, they did hope to attract further financial and volunteering support.

She said: "We're pleased with the support we've had."

The appeal is set to be further boosted by money raised during the Swaffham Lions' annual world quiz at the Assembly Rooms next Thursday, January 28.

And an orchard care workshop will take place at the site on Sunday January 31, between 10am and 3pm.

To find out more about the appeal, or to make a donation, visit www.crowdfunder.co.uk/swaffham-allotment-and-orchard-project.



Project co-ordinator Katy Fullilove crowns the procession's queen, Mary Maxey-Miller. MLNF16PM01129

"Lynn News Citizen" January 2016'

The project also has its own website and a very active Facebook page:

www.swaffhamorchard6.wix.com/familyaction

www.facebook.com/groups/481728421874507/?fref=ts

4 and 6: People will have had an enjoyable experience and volunteer their time.

- In total, volunteers and service users gave 3255 voluntary hours to the orchard and allotment in 2014
- The running total from January 2015 to March 2016 stands at 5466 hours of participant and volunteer time, meaning that the total number of hours attended at the service continues to grow (This sum does not include attendance at workshops that took place outside of the three five hour sessions that are held weekly at the project).
- **100% of survey respondents stated that they had developed an interest in something they knew little about.**

When asked to describe anything that is new or different that individuals were likely to do in the future as a result of their involvement in the service, participants replied:

- *"I'm now much more interested in horticulture and working with vulnerable people. I would like to expand my experience in both areas."*
- *"I feel that getting involved in the project has helped me to change my lifestyle, which has helped in my recovery from drug addiction and to maintain a drug-free lifestyle."*
- *"Scything, seed saving (to grow next year), wood turning."*
- *"Take more care of myself and look after my son. Do more course and workshops related to outdoor work. I would now like to be a landscape gardener."*
- *"Get my own allotment; carry on using the heritage techniques and varieties that I have learnt."*

5. Service users reported that participating in the orchard also benefited their mental health. Service users reported that taking part:

- *“Gets me out of the house talking to people”*
- *“[Made] a big difference. It helped to rebuild my self-confidence and recover from a major setback in my mental health.”*
- *“It has given me a lot better outlook on life. I feel a lot more positive and the project has pointed me into a lot more practical help at home.”*

Impact on participant wellbeing:

15 participants completed the Warwick Edinburgh Mental Well-being Scale (WEMWBS)³. WEMWBS is a scale for assessing positive mental health (mental wellbeing) formed of a 14 positively worded item scale with five response categories. It covers most aspects of positive mental health (positive thoughts and feelings).

On average the total starting score was 38 and this rose to a total score of 49 at review. This increase in score indicates that participants at the service experienced **an improvement in positive mental health**.



Outdoor cooking sessions using the cob oven are social events as well as a celebration of what is grown on the site

Impact on participant self esteem:

15 participants completed the Rosenberg Self Esteem Scale⁴ on joining the project and then again at a review point. The Rosenberg Self Esteem Scale is a scale for assessing changes in self esteem through a mix of positively and negatively worded statements with four response categories.

On average the total starting score was 23 and this rose to a total score of 30 at review. This increase in score indicates that participants at the service experienced **an improvement in self esteem**.

³ <http://www.healthscotland.com/documents/1467.aspx>

⁴ Rosenberg, M. (1965)

6. Please see Outcome 4 above.

7. Environmental impacts will be reduced: we will record the resources used in the project, and the steps taken to reduce environmental impact and increase biodiversity.

- The orchard and allotment are managed organically, using permaculture principles.
- The project reuses and recycles wherever possible; preventing many materials from ending up in landfill and saving resources (see Appendix 3).
- Rainwater is harvested from the polytunnels and used to water them.
- The project has just invested in a small solar panel to charge the battery that powers the water pump.
- There is a compost toilet on site and all green/food waste is composted in the compost bins or wormery.
- The project has a cob oven, and cob rocket stoves, fuelled using local, sustainably-sourced wood.
- Environmental awareness is encouraged amongst participants and has noticeably increased in some.
- Biodiversity is increased by:
 - leaving refuges for wildlife
 - companion planting to encourage insects
 - keeping honeybees
 - growing a wide variety of unusual vegetables, flowers and herbs
 - the creation of habitats (e.g. bird boxes, insect hotels) around the allotment/orchard
 - careful management of the orchard sward to maximise wildflowers and habitats for a variety of creatures.



Bluetits nesting in a bird-box built by service user

8. More people, and a wider range of people, will have engaged with heritage:

- 24% of participants have a learning disability (33/135 people)
- 19% are unemployed
- 17% have a mental health condition
- 10% have a physical health condition
- The project also engages with carers, retired people and those with difficulties such as emotional difficulties (e.g. bereavement)



Workshop on herbal remedies led by Master Herbalist Melanie Cardwell

Key learnings and findings

Survey responses around the impact of the service on improving mental health, are also borne out through testimonials:

Testimonial – Janet and Bill*

When the scheme was recommended to us last year, we had no idea what a huge impact it would have on our lives.

When My husband Bill had to give up work last year, due to being diagnosed with Dementia (aged 59), I had concerns how he would fill his time. He had been so active working full time as a property maintainer and is not one to sit around.

Right from the start, Bill showed great enthusiasm and excitement about going to the allotments and orchard, which reassured me as I needed to know he was doing something he loved. Combining his love of the outdoors with doing repair jobs without the pressure meant so much.

Bill refers to his three days a week at the allotment as his work, which gives him a purpose and makes him feel useful without any pressure. The site benefits from his work too, so it's a win / win situation.

I personally benefit too, as I am able to carry on with my holistic therapy work knowing Bill is taken care of and is happy. Katy is a wonderful lady who seems to bring out the best in Bill which I'm so grateful for.

I can't praise the scheme enough, it's a simple but fantastic concept, which really reinforces the fact that gardening is great therapy for those with mental illness.

I will continue to sing their praises and recommend the scheme to everyone!
Thank you so much

*Names changed to preserve confidentiality

Testimonial Megan*

I began volunteering at the Orchard the end of last year after going through a stressful event. I've suffered with anxiety for several years now, and it's often hard to explain it to people who haven't experienced it, which can lead to avoidance of certain situations and isolation. The great thing about this project is that everyone is so understanding and supportive, although not everyone is there due to mental health issues, we all help one another and there is a great sense of community... Although I initially began going to the project just as a distraction from my feelings, now I genuinely love being outdoors and learning about horticulture. The project is now affiliated with the open college network and volunteers and service users are able to gain a real qualification in horticulture, which could be a stepping stone to go onto further education or even a new career. I haven't been able to take part in the course at the allotment, but my new found interest in growing plants combined with a boost in confidence was definitely the trigger for me to decide to go back to college in September to begin a floristry course. I hope I will be able to create my own flower garden with the advice of people at the project!

*Names changed to preserve confidentiality

Testimonial: Charlie *

I am writing to thank Katy and her team for transforming my son Charlie's life. Charlie is diagnosed as autistic. This is compounded by a number of physical disabilities which restrict his movement. Autism is, at its root, a social impairment. It leads to isolation and depression, which, in Charlie's case, led to psychosis and a great deal of distress. He eventually ended up being treated by the mental health unit at King's Lynn hospital. He was on the verge of being committed under the mental health act. It was during this low period that he was accepted onto the project and introduced to life on the Swaffham allotment.

It is no exaggeration to say that his life was transformed. And not just his life, the whole family has been lifted in spirit by his placement. From being a withdrawn, psychotic and lonely young man Charlie has blossomed into a lively, interesting and deeply caring person. His interest in plants, and in particular the Heritage Project, has given him a purpose and a goal. His interests have always bordered on obsession and he has become a knowledgeable and erudite champion of the need to conserve old and endangered species. He preaches his gospel at every opportunity and has, without doubt, raised the awareness of the issue amongst many of the villagers he now feels confident enough to converse with. He has gained a qualification in Horticulture, a fact which boosted his self-esteem and allowed him to feel a degree of self worth that most of us take for granted. His transformation has been nothing short of astonishing.

I cannot praise the staff at the allotment highly enough. We have got to know Katy and the team over the year that Charlie has spent with them and realise that their hard work and enthusiasm lie at the heart of the transformation. Katy in particular is a rare Jewel among the community. As an ambassador it would be hard to find anyone who was as effective. Her enthusiasm, good nature, knowledge, personality and idiosyncrasies mark her out as a star. I am sure great things lie ahead in her future.

In conclusion I would like to thank the staff of the allotment and all those who have invested their money into the project. Charlie's story is just one of many whose lives have been improved and made bearable by the generosity shown in the past. If anyone doubts the efficacy of the project I can do no more than ask them to speak to Charlie. Where once they would have spoken to a deeply troubled and depressed youth, they will now enjoy a conversation with a bright, knowledgeable and erudite young man. I encourage anyone reading this to speak with him. It will be an enjoyable and possibly enlightening experience, and watch for the sparkle in his eye, it took 23 years to get there but it now shines like a beacon.

Thank you from a grateful father.

*Names changed to preserve confidentiality

Testimonial: Thomas*

I have been attending the allotment and orchard project for the last two years, it has been great to have somewhere to go and meet people. I have a lot of mobility issues, but that has been catered for at the project, and was pointed in the right direction to get a mobility scooter on a life time loan, which has been an absolute god send, and has saved me loads of money in taxi fares, and given me independence. I've learn loads of new skills at the project like weaving, plant identification, soil management, mental health first aid, have done courses in well being, have helped with selling plants at markets, been to many social events linked to the project, have met people from all walks of life (service users and volunteers), and have made many new friends. It has been one of the all round best things I've ever done, joining the project, and I would be lost without it.

*Names changed to preserve confidentiality

Testimonial: Janine*

I got involved because it was something new and something different that offered hope and fun during a difficult time, having recently then been diagnosed with a mental health illness. I am so glad I did as it truly was one of the best things I've done. It has given me friendships and a sense of comfort and belonging to a small but lovely community of people. It has become very homely over time and I have attended some wonderful courses and workshops. I loved the herbal day. I have made scarecrows, painted tyres and learnt how to make a cob oven. I have also had great fun at open days, helped on numerous market stalls and taken loads of photos which I love doing... Some went in our calendar and some on our Facebook group. I have enjoyed 'meet and eats' (*cooking sessions using the project's produce*) and visiting the Grange at Cressingham. I have learnt how to prune fruit trees and joined in the fun at our Apple Days too. I have met so many interesting and special people and I am so very grateful and lucky to be part of the allotment and orchard project. It's a very special place for me. I feel a part of it, which is quite something, especially with the stigma of having bipolar disorder. The staff have always been a shoulder to cry on and a support for me. Thank you deeply to all at the allotment.

*Names changed to preserve confidentiality

Testimonial: John*

Following retirement, I moved to Swaffham and began looking for voluntary work to fill my time. I found details of the charity, Family Action, through a local newsletter and what caught my eye was the reference to a project named Friends of Swaffham Orchard, which ran allotments and an orchard growing heritage varieties of apples and pears. As I am a keen gardener, this interested me. However, I had not been involved with a mental health charity before and therefore had no experience in dealing with adults with such issues, but I was willing to learn. and was soon "mucking in"!

Since I started, I believe the project has gone from strength to strength and numerous undertakings have been completed, such as building a cob oven, a wood-store, a forest garden and delivering a horticultural course. Helping out has given me the confidence to interact with those who have educational or confidence issues and to help them to obtain satisfaction in what they do and above all, to enjoy their time at the project. I have also been able to increase my knowledge of many aspects of gardening which I would otherwise not have done, including attending the horticultural course and the many workshops put on for the benefit of participants, which have included willow weaving, scything, pruning, apple pressing, beekeeping, propagating, grafting, health & safety, plants with medicinal uses and many more. Volunteers and service users are given the opportunity to join in as many of these workshops as they wish. The project grows heritage plants and we visit a number of fairs or shows to sell this stock which again, gives people the satisfaction that they have made a contribution to the project.

Being a regular volunteer, I get the pleasure of having got know a number of clients who attend on the same days as I do, we can chat together and work in a safe environment and I can pass on my knowledge where it is required. The participants can trust me and on some days I will be left in charge to run a session. More than anything, I have gained invaluable knowledge of the many aspects of mental health, how it impacts on different personalities and what the project can do to help. I believe this is a unique scheme because it engages people with nature, the great outdoors and above all, teaches them not just gardening, but about the environment generally. It gives people the opportunity to spend time outdoors and learn skills which they can take away with them.

*Names changed to preserve confidentiality

Focus Group

A group discussion with volunteers and other participants was also conducted in July 2015. Findings support the results of surveys and testimonials - demonstrating that people developed new heritage-related interests, learned skills and experienced improvements in wellbeing as a result of their involvement. All contributors to the discussion reported enjoying their time at the project and appreciated the social/community aspect of it.

Participants described developing skills, learning about heritage and sharing this with the local community:

- *'We've learned how to scythe and manage the orchard in a traditional way, which is far more peaceful than using machinery.'*
- *'We had a workshop making herbal remedies... I made one out of marigold petals and extra virgin olive oil, which is good for people with skin conditions, and one with poppies which is good for anxiety and sleeping problems.'*
- *'It has expanded my knowledge of different heritage varieties.'*
- *'I've learned about different kinds of bugs and wildlife, through helping with a wildlife survey.'*
- *'I'm going back to college in September... Coming here was the trigger for that, and has taught me how I can grow my own veg and flowers at home.'*
- *'Stalls at the larger plant fairs really help to raise community awareness of what's going on here, especially when we're selling heritage vegetable seedlings.'*

Volunteer comments:

- *'I find it very stimulating and interested getting to know people from different backgrounds... Being involved in the project has been a very varied experience, and I have learnt a lot through other project participants.'*
- *'It gives me a purpose... A lot of people retire and think 'what am I going to do with my life?'*
- *'I have learnt a lot about plants and bees, but the main thing for me is the social side. It sounds a bit cheesy, but some people talk about their allotment family, and it does feel like that! We're all from different backgrounds, but somehow we just get on really well.'*
- *'When you're at home and everything's going wrong, it's somewhere peaceful to go and meet interesting people.'*
- *'I wasn't really involved in anything before this, and I've really seen it progress over the years. When we say we're going to do something, we go ahead and do it!'*

Conclusion and next steps for the project

In conclusion, the Orchard Project has achieved the outcomes agreed with Heritage Lottery

- The heritage of the site is in better condition
- Individuals have learned about heritage, through a wide number of popular workshops and events, and have gained valuable heritage skills as a result
- The orchard has become integrated into the community
- People have enjoyed the experience of participating in the project and have volunteered their time
- The service has had a positive impact on the mental wellbeing and self esteem of participants



One of the project's regular steering group meetings where participants contribute ideas and suggestions about how the project moves forwards

The project is working towards becoming more self-sustaining

- Skills have been developed by staff and volunteers that will enable them to charge for workshops such as willow weaving, building a cob oven and horticultural skills in the future. The project was paid to deliver in-service training to Master Gardener volunteers in December 2015, and will build on this in 2016 to generate further income.
- The project has been selling its plants at local markets and plant sales, specialising in heritage/heirloom vegetable seedlings, sensory ornamentals and plants for wildlife. Norfolk Nursery Network fairs have been identified as the most suitable and profitable local markets to sell plants at, so the project will attend several of these in the coming year.

- The community allotment and orchard project will be **opening a shop** in 2016, jointly with local charity the Garden Science Trust. This will be based at the Green Britain Centre in Swaffham and will give the project a permanent outlet for plants and craft items such as bird-boxes, willow ornaments and structures. Work has commenced to prepare the site and it is hoped that the shop will open later in the Spring.
- Surplus produce has been sold to local cafes and restaurants since Spring 2014, generating a small but not insignificant income. The project is run on permaculture principles, and the yield of fruit, vegetables and other crops including willow will increase as perennial plants establish and the potential of the space is maximised. Funds from produce sales should therefore form a more important income stream in the future.



Garden Organic Master Gardener in service training delivered by orchard project coordinator Dec 2015



Project volunteers setting up a stall at Plant Lover's Day May 2015

The process of becoming more self-sustaining is continuous, and in the meantime the project has re-applied to the Heritage Lottery Fund for a grant to establish a Heritage Skills Training Centre, which would expand upon the educational aspects of its work. Since Spring 2015, Friends of Swaffham Orchard has been supporting its sister project, ESCAPE, to deliver a level 1 qualification in horticulture, certified by the National Open College Network. Funding is being sought to enable the two projects to work together to offer a wide variety of learning opportunities to their participants, including the development of traditional skills, horticulture qualifications and conservation awards such as the John Muir Award.

Katy Fullilove, Project Coordinator and Pauline Clandillon-Baker, Outcomes and Evaluation Manager, March 2016



Bumper crop of heritage and heirloom tomatoes including Green Grape in Summer 2015



Freshly picked strawberries from the allotment

Appendix 1

Friends of Swaffham Orchard: Annual Orchard Plan

November - February	<ul style="list-style-type: none"> • Regularly check all stakes, ties and guards. Check for vole and other animal damage and peg down loose guards. • Prune all apples and pears, keeping a look out for woolly aphid and canker. Scrape off woolly aphid with a stiff brush and prune out canker if possible.
When leaves start to open	<ul style="list-style-type: none"> • Check for aphids. Aphid and blackfly are a common pest of cherry trees so regular checks are important. • Check for winter moth caterpillars. Grease-band any trees which they are found on and the trees immediately surrounding them.
April	<ul style="list-style-type: none"> • Cut back suckers on plums and cherries. • Cut back brambles and nettles (if weather is mild, you may need to do this sooner).
May	<ul style="list-style-type: none"> • Formative pruning of plums and cherries (keep cuts as small as possible to minimise risk of disease).
Summer months	<ul style="list-style-type: none"> • Look out for mildew on tips of fruit trees, especially if it has been hot and dry. • Keep brush-cutting brambles and nettles. Eventually, they will be replaced by grass sward.
July	<ul style="list-style-type: none"> • Thin fruit if too much sets, as it could be too much weight for young branches to bear.
Autumn	<ul style="list-style-type: none"> • Cut sward before you start picking (grass sward should be cut at least once per year). • Harvest fruit • Apple day

Appendix 2

Biodiversity Report for Friends of Swaffham Orchard

Introduction

The results presented here were recorded on 12th June 2015 as part of a base-line biodiversity survey, carried out as agreed with the Heritage Lottery Fund.

The project consists of two adjacent allotments on the north-east edge of Swaffham, a small market town in the Breckland area of Norfolk, and an adjacent community orchard containing around 150 fruit trees. The approximate positions and extent of these areas are shown on Fig. 1.



Fig.1 The allotments are labelled A & B, and the orchard O.

Topography, Geology and Soils.

The area slopes gently southwards. According to the geological map⁵ of the area the underlying rock consists of Cretaceous Upper Chalk, a fine grained limestone. Slightly to the east a small patch of 'Brickearth' is indicated; this consists of silts and clays deposited by the last glaciation to affect the area, the Anglian Glaciation. However, the soils on the site itself are fairly sandy, suggesting that the patch of Brickearth indicated on the map may be more extensive than shown.

According to the soil map of Norfolk⁶ the local soils are argillic brown sands (coversands over chalk sand and glacio-fluvial drift), i.e. clayey sands, incorporating some chalky material from the underlying bed rock, but largely derived from glacial deposits.

These materials obviously impact on what can be grown, and also on what grows nearby, and the vegetation has a profound effect on all other aspects of the local ecosystem.

The Biodiversity of the Site

The biodiversity of a site such as this is complex; on the one hand there is what might be called the 'natural' diversity of the site, contributed by those animals and plants which have arrived there by essentially natural processes, and which survive despite human activities, such as weeding.

On the other hand *genetic* diversity also needs to be considered. This is particularly important in relation to crop plants where old varieties, which may - for instance - possess qualities of disease resistance, are as deserving of conservation as wild animals and plants. An important part of the project's ethos is the preservation of such genetic diversity. Accordingly, a list of genetically or historically interesting plants that are grown deliberately is also included.

Survey Methodology

The three units, A, B & O shown on Fig. 1 were initially recorded, as separate units, for their plant life. Although this has resulted in considerable repetition in the lists which follow (Tables 1, 2 & 3), it was felt worth recording in this way as it would enable later small-scale changes to be picked up more easily.

The biodiversity of an allotment is, inevitably, going to be affected by recruitment from adjacent allotments, as well as from the wider countryside nearby. Seeds can get blown in, or carried in by birds, animals and human feet. Some of these plants can be tolerated, and can thus coexist with the crop plants being grown; others ('pernicious weeds') may need to be eliminated. Thus, what is present at any one time is part of a pattern which changes both seasonally, but also with gardening activity.

⁵ **British Geological Survey. 1999.** *Swaffham. England & Wales Sheet 160. Solid & Drift Geology.* British Geological Survey; Keyworth

⁶ **Soil Survey of England & Wales. 1979.** *Soils of Norfolk, 1:100 000 Series.*

SURVEY RESULTS

Plants have been listed alphabetically by their *scientific names*, and then followed by one or two of their common names. This avoids the problem of trying to decide whether something should be listed as Creeping Thistle, or Thistle, Creeping.

Table 1. The plants of Unit A

<i>Aegopodium podagraria</i>	Ground Elder
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Arrhenatherum elatior</i>	False Oat-grass
<i>Artemisia vulgare</i>	Mugwort
<i>Bryonia dioica</i>	White Bryony
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Capsella bursa-pastoris</i>	Shepherd's Purse
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Chamerion angustifolium</i>	Rosebay
<i>Chenopodium album</i>	Fat Hen
<i>Cirsium arvense</i>	Creeping Thistle
<i>Claytonia perfoliata</i>	Springbeauty
<i>Dactylis glomerata</i>	Cock's-foot Grass
<i>Epilobium hirsutum</i>	Codlin's & Cream
<i>Epilobium parviflorum</i>	Hoary Willowherb
<i>Festuca rubra</i>	Red Fescue Grass
<i>Fumaria officinalis</i>	Fumitory
<i>Galium aparine</i>	Cleavers / Goosegrass / Soldier's Buttons
<i>Geranium robertianum</i>	Herb Robert
<i>Geum urbanum</i>	Herb-benet
<i>Glechoma hederacea</i>	Ground Ivy
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Hypericum perforatum</i>	Perforate St. John's-wort
<i>Lamium album</i>	White Dead-nettle
<i>Lamium hybridum</i>	Cut-leaved Dead-nettle
<i>Lapsana communis</i>	Nipplewort
<i>Lolium perenne</i>	Perennial Rye-grass

<i>Medicago lupulina</i>	Black Medick
<i>Myosotis arvensis</i>	Field Forget-me-not
<i>Papaver rhoeas</i>	Common Poppy
<i>Papaver somniferum</i>	Opium Poppy
<i>Poa pratensis</i>	Smooth Meadow-grass
<i>Rosa canina</i>	Dog Rose
<i>Rubus fruticosus</i>	Bramble
<i>Sambucus nigra</i>	Elder
<i>Senecio vulgare</i>	Groundsel
<i>Silene dioica</i>	Red Champion
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Thlaspe arvense</i>	Pennywort
<i>Trifolium repens</i>	White Clover
<i>Urtica dioica</i>	Stinging Nettle
<i>Veronica arvensis</i>	Wall Speedwell
<i>Veronica persica</i>	Common Field-speedwell
<i>Vicia hirsuta</i>	Hairy Tare
<i>Vicia sepium</i>	Common Vetch



Fig.2 Area within unit A, Summer 2015

Table 2. The plants of Unit B

<i>Agrostemma githago</i>	Corn Cockle
<i>Anagallis arvensis</i>	Scarlet Pimpernel
<i>Anchusa arvensis</i>	Bugloss
<i>Armoracia rusticana</i>	Horseradish
<i>Borago officinalis</i>	Borage
<i>Bryonia dioica</i>	White Bryony
<i>Buddleja davidii</i>	Buddleia
<i>Calendula officinalis</i>	Marigold
<i>Caltha palustris</i>	Marsh Marigold
<i>Carex pendula</i>	Pendulous Sedge
<i>Centranthus ruber</i>	Red Valerian
<i>Cerastium glomeratum</i>	Sticky Mouse-ear
<i>Cerastium tomentosum</i>	Snow-in-summer
<i>Chamerion angustifolium</i>	Rosebay
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium arvense</i>	Creeping Thistle
<i>Crepis vesicaria</i>	Beaked Hawk's-beard
<i>Escholtzia californica</i>	Californian Poppy
<i>Festuca rubra</i>	Red Fescue
<i>Filago vulgaris</i>	Common Cudweed
<i>Foeniculum vulgare</i>	Fennel
<i>Fumaria officinalis</i>	Fumitory
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Glechoma hederacea</i>	Ground Ivy
<i>Hesperis matronalis</i>	Dame's-violet
<i>Hieracium aurantiacum</i>	Fox & Cubs
<i>Hypericum perforatum</i>	Perforate St. John's-wort
<i>Isatis tinctoria</i>	Woad
<i>Isis pseudacoris</i>	Yellow Flag-iris
<i>Lagurus ovatus</i>	Hare's-tail
<i>Lamium album</i>	White Dead-nettle
<i>Lamium purpureum</i>	Red Dead-nettle

<i>Lapsana communis</i>	Nipplewort
<i>Lemna minor</i>	Duckweed
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Malva neglecta</i>	Dwarf Mallow
<i>Mercurialis annua</i>	Annual Mercury
<i>Papaver somniferum</i>	Opium Poppy
<i>Phacelia tanacetifolia</i>	Phacelia
<i>Poa trivialis</i>	Rough Meadow Grass
<i>Prunella vulgaris</i>	Selfheal
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubus fruticosus</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Senecio vulgaris</i>	Groundsel
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sowthistle
<i>Sonchus oleraceus</i>	Smooth Sowthistle
<i>Tanacetum parthenium</i>	Feverfew
<i>Tanacetum vulgare</i>	Tansy
<i>Thlaspe arvensis</i>	Pennywort
<i>Trifolium repens</i>	White Clover
<i>Urtica dioica</i>	Stinging Nettle
<i>Urtica urens</i>	Small Nettle
<i>Veronica persica</i>	Common Field-speedwell
<i>Vicia sativa</i>	Common Vetch

Unit 3, the orchard, differs considerably from Units A and B in that the ground under the trees is not cultivated, but - apart from mowing - is essentially left undisturbed. It is, at present, dominated by coarse grass species.

Table 3. Plants in the orchard area

<i>Acer pseudoplatanus</i>	Sycamore
<i>Arrhenatherum elatior</i>	False Oatgrass
<i>Bellis perennis</i>	Daisy
<i>Borago officinalis</i>	Borage
<i>Bromus sterilis</i>	Barren Brome
<i>Carex pendula</i>	Pendulous Sedge
<i>Centaurea nigra</i>	Common Knapweed
<i>Cornus sanguinea</i>	Dogwood
<i>Dactylis glomerata</i>	Cock's-foot Grass
<i>Digitalis purpurea</i>	Foxglove
<i>Equisetum arvense</i>	Horsetail
<i>Hypericum perforatum</i>	Perforate St. John's-wort
<i>Linaria vulgare</i>	Common Toadflax
<i>Malva sylvatica</i>	Common Mallow
<i>Rumex acetosa</i>	Sorrel
<i>Silene latifolia</i>	White Campion
<i>Sonchus oleraceus</i>	Smooth Sowthistle
<i>Symphytum x uplandicum</i>	Russian Comfrey
<i>Tragopogon pratensis</i>	Jack Go-to-bed-at-noon
<i>Trifolium pratense</i>	Red Clover
<i>Ulmus minor</i>	Small-leaved Elm
<i>Urtica dioica</i>	Stinging Nettle
<i>Veronica chamedrys</i>	Germander Speedwell
<i>Viola odorata</i>	Sweet Violet

In addition to the plants listed in Tables 1 - 3, a number of plants technically outside the plots managed by the project, but immediately adjacent to them, were also recorded. They are listed below in Table 4. They have been included because they are all species capable of invading the site, as well as offering food and shelter to more mobile species such as birds or invertebrates.

Table 4. Additional plants

<i>Acer campestre</i>	Field Maple
<i>Hedera helix</i>	Ivy
<i>Oxalis incarnata</i>	Pink Sorrel
<i>Pentaglottis sempervirens</i>	Evergreen Alkanet
<i>Prunus domestica</i>	Plum
<i>Prunus laurocerasus</i>	Cherry Laurel

Some of the plants cultivated to preserve genetic diversity

Bolivian Giant	Acocha
Exploding Cucumber	Acocha
Ronde de Valence	Aubergine
Rosa di Rotonda	Aubergine
Rosa di Bianca	Aubergine
Sanguina	Beetroot
Touchstone Gold	Beetroot
Crimson Flowered Broad Bean	Broad Bean
Early Purple Sprouting Broccoli	Broccoli
Rouge Tete Noir	Cabbage
Giant Red Carrot	Carrot
Dragon Purple Carrot	Carrot
Czar	Cherry
Stella	Cherry
Morello	Cherry
Albertos Locoto Rotoco	Chilli Pepper

Early Jalapeno	Chilli Pepper
Basque	Chilli Pepper
Dedo de Mocha Sweet Aji	Chilli Pepper
Black Hungarian	Chilli Pepper
Lemon Drop	Chilli Pepper
Barlett's Bonnet	Chilli Pepper
Red Streak	Cider Apple
Dunkerton	Cider Apple
Camalot	Cider Apple Cooker
Cosse Violette	Climbing Bean
Cherokee Trail of Tears	Climbing French Bean
Verde Di Italia	Courgette
Striato Di Napoli	Courgette
Boothby's Blonde	Cucumber
Early Fortune	Cucumber
Tamra	Cucumber
Paris Pickling	Cucumber
Monarch	Culinary Apple
Howgate Wonder	Culinary Apple
Howgate Wonder	Culinary Apple
Adam's Pearmain	Dessert Apple
Red Falstaff	Dessert Apple
Harling Hero	Dessert Apple
Sandringham	Dessert Apple
Caroline	Dessert Apple
Suffolk Pink	Dessert Apple
St Edmunds Russet	Dessert Apple

Banns	Dessert Apple
Happisburgh	Dessert Apple
Norfolk Royal	Dessert Apple
Lynns Pippin	Dessert Apple
Spartan	Dessert Apple
Cox Orange Pippin	Dessert Apple
Lord Lambourne	Dessert Apple
Captain Palmer	Dual Purpose Apple
5 Crown (London Pippin)	Dual Purpose Apple
Cupidon	Dwarf French Bean
Minidor	Dwarf French Bean
Colossale	Fennel
Mr Fearn's Purple Podded	French Beans
Hungry Gap	Kale
Pentland Brig	Kale
Yings Lablab	Lablab
Jaune de Poitou	Leek
Bulgarian Giant	Leek
Bleu de Solaise	Leek
Really Red Deer Tongue	Lettuce
Australian Yellowleaf	Lettuce
Rose	Oca (edible tuber, similar to potatoes)
Papalo	Papalo (culinary herb from Mexico, used by the Aztecs)
Purple Podded Pea	Pea
Telephone	Pea
Lord Leicester	Pea
Robin	Pear

Conference	Pear
Conference	Pear
Buere Hardy	Pear
Chard	Pink Passion
Reine Claudes Althan	Plum Greengage
Rainbow Quinoa	Quinoa
Summer Crookneck	Squash
Amish Paste	Tomato
Gardeners' Ecstasy	Tomato
Gardeners' Delight (Irish version)	Tomato
Rose de Berne	Tomato
Green Grape	Tomato
Green Zebra	Tomato
Purple Ukraine	Tomato
San Marzano	Tomato
Costoluto Fiorentino	Tomato
Norfolk Purple Top	Turnip
Boston	Winter Squash
Anna Schwarz	Winter Squash
Hokkaido	Winter Squash
Waltham Butternut	Winter Squash
Paul and Becky's Austrian Tree Cabbage	Cabbage
Tree Onions	Perennial Onion
Claytonia	Leafy Salad Crop
<i>Eryngium bourgattii</i>	Thistle-like Flowers
<i>Eryngium giganteum</i>	Thistle-like Flowers
Mint, Black peppermint	Mint

Mint, Eau de Cologne	Mint
Mint, Menthe mobilei	Mint
Mint, Moroccan	Mint
Mint, Spearmint	Mint
Mint, Strawberry	Mint
Mint, Variegated ginger mint	Mint
<i>Papaver orientale</i> 'Victoria Louise'	Poppy
Pelargonium, Apple Betty	Scented-leaved Pelargonium
Pelargonium, Attar of Roses	Scented-leaved Pelargonium
Pelargonium, Lara Starshine	Scented-leaved Pelargonium
Pelargonium, Old Spice	Scented-leaved Pelargonium
Pelargonium, Pink Capricorn	Scented-leaved Pelargonium
Skirret	Sweet root vegetable, popular in the 16 th and 17 th centuries
Sage, Icterina	Sage
Sage, Pineapple	Sage
Sage, Tricolour	Sage
Salad Burnet	Edible herb with a cucumber-like flavour
Salsify	Biennial root vegetable, also known as 'oyster plant' due to its taste
Scorzonera	Similar to above, but perennial
Sea Kale	Perennial vegetable in the cabbage family which can be forced for its tender shoots in the Spring
Sweet Woodruff	Fragrant strewing herb, with additional medicinal uses
Welsh Onions	Perennial Onion

Mammals and Birds

The attached list of birds includes species seen flying overhead, or singing near at hand. Most mammals are shy and not always easily identified from a quick glance, so it is anticipated that - as with the birds - species remain to be added to the list.

Animals	Birds
Brown Rat	Barn Owl
Common Frog	Blackbird
Common Toad	Bluetit
Field Mouse	Bullfinch
Hedgehog	Buzzard
Muntjac	Carrion Crow
Rabbit	Chaffinch
Roe Deer	Chiffchaff
Vole	Collared Dove
Wood Mouse	Common Gull
	Dunnock
	Feral Pigeon
	Great Tit
	Greenfinch
	Green Woodpecker
	House Sparrow
	Jackdaw
	Kestrel
	Magpie
	Pheasant
	Red-legged Partridge
	Red kite
	Robin
	Song Thrush
	Sparrowhawk
	Starling
	Woodpigeon
	Wren

There are many groups of invertebrates which, whilst they contribute enormously to the overall biodiversity of any site, are difficult to identify. In particular things like flies and beetles present major problems. However, staff and volunteers at the project are attempting to forge links with local naturalists in order to learn from them, and thus add to the catalogue of the site's biodiversity. The table below lists those few species which have been identified so far.

Name	Group
Cherry blackfly	Fly
Black garden ant	Ant
Brimstone butterfly	Butterfly
Buff-tailed bumblebee	Bumblebee
Burnet moth	Moth
Cinnabar moth	Moth
Common carder bumblebee	Bumblebee
Common centipede	Centipede
Common earthworm	Earthworm
Common field grasshopper	Grasshopper
Common garden snail	Snail
Common pill woodlouse	Woodlouse
Cucumber green spider	Spider
Earwig	Earwig
Elephant hawk moth	Moth
Fast woodlouse	Woodlouse
Green shield bug	Shield Bug
Harlequin ladybird	Ladybird
Harvestman	Harvestman
Honeybee	Honeybee
Hornet	Hornet
Lacewing	Fly
Large white butterfly	Butterfly
Marmalade hoverfly	Hoverfly
Orange tip butterfly	Butterfly
Orb weaver	Spider
<i>Oniscus asellus</i>	Woodlouse
Peacock butterfly	Butterfly
<i>Porcellio scaber</i>	Woodlouse

Red admiral butterfly	Butterfly
Red-tailed bumblebee	Bumblebee
Seven-spot ladybird	Ladybird
Small tortoiseshell butterfly	Butterfly
Soldier beetle	Beetle
Tree bumblebee	Bumblebee
Two-spot ladybird	Ladybird
Woolly aphid	Aphid
Yellow meadow ant	Ant
Yellow dung fly	Fly

Appendix 3

Resources Used

Resources	Purpose	Source/Sustainability comments.
Aggregate	Filling in holes in track	Waste product. Donated
Batten	Building cloche	Travis Perkins
Bee suits x 6	Beekeeping	Online shop
Blue plumbing tube, soakhose	Irrigation system	Second hand, donated
Cardboard	Mulch	Donated by supermarket
Carpet for green roof on shed	For green roof on wood store, to prevent puncture of liner	Saved from landfill
Chicken house	Housing chickens	Second hand, donated
Chicken house	Housing chickens	Donated by member of public- second hand.
Chicken wire	Tree guards	Donated by another allotment holder
Clay	Building rocket stove	Found on site. Local, sustainable material.
Clay	Cob oven	Donated by Middleton Aggregates (local quarry)
Clear plastic	Cloche	Probably would have ended up in landfill
Compost	Fertilising polytunnels and allotment.	Greenworld. Local centre recycling garden and food waste.
Crates	Transporting plants and produce	Second hand, donated by local shop
Darlek compost bins	To recycle organic matter	Donated by member of public
Fallen leaves	Mulch, compost	Town council, local people
Flints	Cob oven base	Donated by Middleton Aggregates (local quarry)

Flints	Cob oven base	Found on site. Locally sourced
Gardening gloves x 10		Second hand, donated.
Guttering	Collecting rainwater from polytunnels	Rescued from skip
Guttering	Harvesting rainwater from polytunnels	Had to buy some new, but got a lot of it out of skips or second hand
Heavy duty tarpaulin	Army surplus store	Second hand
IBC tanks x 5	Storing water	Collected from a farm that needed to dispose of them.
IBC tanks x 6	Storing water	Bought second hand - reused.
Jars	Filled with water and used in heat sink as thermal mass	Donated by participants. Second hand.
Large picnic table	Allotment	Second hand, donated.
Mypex membrane	Weed suppressant, pathways	Amazon
Netting	Protecting crops	Donated by somebody who gave up their allotment
Paint	Fences and sheds	Donated by Travis Perkins as unsaleable
Pallets	Top bar beehive for natural beekeeping	Made at the project from reclaimed wood (mostly pallets)
Parasol	Providing shelter	Second hand, donated
Paving slabs	Floor of outdoor kitchen	Donated by volunteer, second hand
Pea shingle	Cob oven	Jewson
Perspex	Making cloche	Donated by a school that took down its greenhouse
Pipes, joints, timers and plastic cement	For irrigation system	Bought new from irrigation adviser

Plant pots and modules	Raising plants for the allotment and to sell	Donated by a nursery that had closed down, and various individuals. May have gone to landfill otherwise, and it saved us buying them new.
Plastic	Sheet mulch	Donated
Plastic pots and module trays	For raising plants to grow on the allotment and sell	Saved from an old garden centre. Would have gone to landfill.
Polytunnel plastic	For door repairs and covering small tunnel inside middle polytunnel	New, but no other option.
Potting compost- New Horizon organic and John Innes	For raising plants for the allotment and to sell	We use a half and half mixture of organic compost, which is very sustainable, and JI no. 3. This is a soil based compost but does contain some peat. We are trying to find a locally available peat free alternative.
Railway sleepers	Cob oven	Jewson
Reclaimed wood	General building and maintenance	Most of the wood that has been used on site has been skipped, donated or otherwise reclaimed
Roofing felt	To repair existing shed roof and erect new ones.	Had to buy new, but this prolonged the life of the sheds, thus saving materials.
Rubber inner tube	Tree ties	Tyre garage- waste product
Sand	Cob oven	Jewson
Screws, nails and other fixings	General building and maintenance	Travis Perkins, Bonnets
Scythes	Maintaining orchard	Bought from local tutor- very sustainable when compared to power tools as an alternative!



Seaweed extract	Fertilising polytunnels and allotment.	Natural, sustainable fertiliser from local garden shop.
Shed	For making hot drinks and housing notice boards	Second hand. Donated by volunteer.
Shed	To house compost	Was derelict when donated, but we repaired it.
Sink	Outdoor kitchen	Stripped out of somebody else's kitchen
Small pallets	Building compost bins, shed base, wood store and stands for large water tanks	Were being disposed of by Swaffham company, Purdys
Small picnic table	Allotment	Made from recycled wood by participant
Solar panel	To charge battery that powers water pump	Online store, but rated green as will enable project to harness renewable energy
Stainless steel kitchen unit	For outdoor kitchen	Stripped out of local community centre. Would have gone to waste management centre.
Stakes	Apple trees	Rescued from vacant allotment
Stakes	Orchard	Stoke Ferry Timber
Tools (including saws, forks, spades, pitchfork, hammer, trowels)	Various	Second hand. Donated by volunteers and members of the public.
Tree guard roll	Fruit trees	Internet supplier
Willow	Fences and garden supports	Grown and harvested by the project's volunteers
Willow cuttings	Planting coppices	Donated, and some taken from our own willows.
Woodchip	Pathways and mulch	Donated by local tree surgeon and is biodegradable. Rotted material from paths reused as mulch.

Worktop	Outdoor kitchen	Stripped out of somebody else's kitchen
1 beekeeping smock	Keeping bees	Second hand, donated.
2 x gloves	Keeping bees	Second hand, donated.
2 x veils	Keeping bees	Second hand, donated.
2 x WBC bee hives containing bees	Keeping bees	Second hand, donated.
3.6m long pallets	For building kitchen, staging, benches, sheds, edging beds, etc.	Would have been burnt



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