

To Investigate the Feasibility of Establishing a Community Orchard in Ross-on-Wye

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ABSTRACT

The study was conducted with the primary aim of investigating the feasibility of establishing a community orchard in Ross-on-Wye. It is thought that the benefits associated with a community orchard would help enhance the town's social, environmental and economic sustainability.

The study was approached by first determining how other community orchards have become established, what services they provide their local community and how they have achieved continued support and success. This information was acquired through a semi-structured telephone interview of six different members of community orchard projects throughout the country. The interviews identified a number of conditions required for a successful community orchard. These are:

- An interest in the benefits offered by a community orchard in the local population.
- A group of individuals willing to volunteer time to the orchard on a regular basis for its maintenance.
- Some form of income generation needed to help cover initial costs such as tree planting.

A questionnaire was devised and distributed among four separate groups including the general public, Transition Ross members, local internet users and Ross-on-Wye Horticultural Society members in order to determine whether these conditions are present in Ross-on-Wye. The questionnaire found that the conditions for a successful community orchard do appear to be present in the town.

Two major barriers to a community orchard were also identified. These are:

- Identifying a suitable plot of land for planting a community orchard.
- Identifying a group committed to organising and managing a community orchard.

Research was undertaken in order to investigate overcoming these major barriers. The result of which was the identification of a local charity Enviroability, who agreed to incorporate a community orchard into a proposed community food growing project. Suitable land was identified on the outskirts of Ross-on-Wye at Model Farm. The results of the feasibility study have been passed onto Enviroability to help inform a grant application and business plan for this project.

CONTENTS

Chapter		Page
	LIST OF TABLES	v
	LIST OF FIGURES	vi
	ACKNOWLEDGEMENTS	vii
1	INTRODUCTION	1
1.1	Why plant a community orchard?	
1.2	Why plant a community orchard in Ross-on-Wye?	3
1.3	Aims and Objectives	5
2	METHODS	6
2.1	Interviewing members of existing community orchard projects	
2.1.1	Selecting Interviewees	
2.1.2	Choosing data to collect	7
2.1.3	Interview technique	8
2.2	Questionnaire of Ross-on-Wye residents	
2.2.1	Questionnaire Design	9
2.2.2	The Questionnaire Delivery	11
2.3	Identification of barriers to planting a community orchard	12
2.4	Limitations of methods used	13
3	RESULTS	14
3.1	Results from interviews	
3.2	Results from the questionnaire	19
4	DISCUSSION	31
4.1	Community Orchard Interviews	
4.2	Questionnaire Results	34
4.3	Limitations of Study	37
5	CASE STUDY	40
6	CONCLUSIONS	42
	REFERENCES	44
	APPENDICES	46
	Appendix A: Copy of the Questionnaire	
	Appendix B: Interview Results	48
	Appendix C: Questionnaire Results	60
	Appendix D: Statistical Analysis	73

LIST OF TABLES

Table	Page
1. Community orchard <i>modi operandi</i>	14
2. Community orchards major costs and income	16
3. Community orchard membership details	17
4. Community involvement	18
5. Suggested locations for a community orchard	29

LIST OF FIGURES

Figure		Page
1.	Benefits of a community orchard	20
2.	Main benefit of a community orchard	21
3.	Would you personally use a community orchard?	22
4.	What would you use a community orchard for?	23
5.	Would you be willing to volunteer time to a community orchard?	25
6.	Would you be willing to sponsor a tree?	27
7.	How much would be a reasonable amount to pay for tree sponsorship?	28
8.	How important would a community orchard be to Ross-on-Wye?	29

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1. INTRODUCTION

1.1 Why plant a community orchard?

A community orchard is a collection of fruit trees which is open to the public (England in Particular no date). They are usually owned or leased for or by the community, or held in agreement, by a community group, parish council, local authority or voluntary body (England in Particular no date). Unlike a commercial or traditional orchard, the economic production of fruit is not necessarily their most important purpose (King & Clifford 2008).

The literature review shows that Hopkins (2008, 2010) & Woodin & Lucas (2004) amongst others have demonstrated the need for communities to 're-localise' and 'build resilience'. That is an emphasis on a community to be able to provide for its own needs, without an over-reliance on factors outside of that community's control (Hopkins 2010). The UK currently imports around 90% of its fruit, therefore by planting orchards and encouraging the consumption of locally grown food, communities will be less reliant on the globalised food industry and its associated negative impacts (Pinkerton & Hopkins 2009; Woodin & Lucas 2004).

Another aspect of relocalisation is that it promotes local culture and identity. Herefordshire has a rich history of orchards and contains more than any other county in the UK, around 16% of the total orchard area in England (Marshall 2008). Indeed, 2011 is the 'Herefordshire Year in the Orchard' which is a celebration of the counties rich orchard heritage. However, there has been a significant decline in the total area of land covered by orchards in the county, around a 40% reduction in the last 70 years (Marshall 2008). Many of the existing traditional orchards have been converted to commercially intensive bush orchards, which are less diverse, both in terms of wildlife and tree variety, often consisting of only a handful of commercially grown cider apple varieties (Copas & Umpleby 2002).

Community orchards can therefore be a way of preserving the natural heritage of traditional fruit varieties which have fallen out of fashion or are not as commercially viable (King & Clifford 2008). In many cases community orchards have been formed in order to protect an area of green space or indeed an existing traditional orchard which may have otherwise been grubbed up (King & Clifford 2008).

They can also be havens for wildlife, with many community orchard projects devoting space to wildlife areas (King & Clifford 2008). Commercial orchards are also large users of fossil fuels, using high levels of chemicals including inorganic fertilisers and relying on heavy machinery for mowing and harvesting (Robertson & Wedge 2008). Community orchards by contrast are often run using organic principles with harvesting done by hand, therefore using significantly less resources and avoiding the negative effects pesticides have on the environment (King & Clifford 2008). This does of course mean that a community orchard, although likely to be small, will require manual work to maintain. However, compared to some community food projects such as allotments, community orchards can be relatively low maintenance. The perennial nature of fruit trees means that seasonal tasks are usually carried out by volunteers on a monthly basis, as opposed to much higher maintenance required by vegetable growing (Pinkerton & Hopkins 2009). This can fit in well with the busy lives of many members of the community.

Perhaps the most significant advantages of community orchards are their potential social benefits. As the name suggests community orchards act as a communal asset to local residents. As well as being a source of locally grown fruit and preserving traditional fruit varieties, community orchards can provide a place for shared activities and can become a focal point for the area (King & Clifford 2008). They can be the focus for events, education and exercise and provide a way to reconnect people with nature (Pinkerton & Hopkins 2009). They can provide opportunities for socialising with neighbours, thereby contributing to community cohesion. Research by Quayle (2008) has also shown that community growing projects can help promote local action on

environmental issues by encouraging recycling, composting and the use of organic methods of food production. Quayle's research also demonstrated that community food projects can provide important social opportunities leading to lasting friendships and support networks, helping to promote inclusion, integration and acceptance for all age groups.

There are also potential economic benefits to community orchards. Any events that take place in the orchard could be an opportunity for local businesses to attend. They could also offer valuable volunteer and training opportunities in an outdoor environment. This can include hands-on learning to engage and motivate people into providing routes back into education or employment (Quayle 2008). Produce from community orchards can be sold locally, enhancing the 'local multiplier' effect and keeping money circulating in the local economy (New Economics Foundation 2002).

There is also a growing body of evidence that suggests that contact with nature and the outdoors is important for the health and wellbeing of individuals. Maller *et al* (2005) has suggested that contact with nature may help prevent mental ill health and Louv (2009) discusses the importance of the natural world to the development and education of children. Community orchards could help provide the opportunity for contact with the outdoors for adults and children alike.

1.2 Why plant a community orchard in Ross-on-Wye?

Ross-on-Wye is a small market town in Herefordshire with a population of around 10 000 people and a further catchment of around 26 000 people in the surrounding area (Ross-on-Wye Town Plan 2010). The town is well known for its links to the birth of tourism, being a destination on the original 'Wye Tour' in the 18th century. Tourism is still important to the town's economy, as is its role as a centre for commercial and social activity in the area (Ross-on-Wye Town Plan 2010).

It has been noted by The West Midlands Regional Spatial Strategy (RSS) (2008) that the function of market towns in general 'have been affected by social, economic and agricultural change'. Ross-on-Wye is no exception and has suffered some negative consequences because of this. The ability of the town to provide for its own needs, or its 'community resilience', has been eroded with the construction of a supermarket outside of the town centre, which has affected the diversity of local shops. The RSS also emphasised the importance of market towns in providing 'a key role in helping to regenerate rural areas' (West Midlands RSS 2008) meaning that improving sustainability in Ross-on-Wye would have a beneficial knock on effect to the surrounding area.

The Sustainable Food Strategy for Herefordshire (2011) has identified the need for more community food projects. The strategy, which included a consultation of residents in Ross-on-Wye, shows that 58% of respondents thought that 'more allotments, community gardens & grow your own initiatives' were a high priority for addressing health issues through food and drink. 71% of respondents also thought that 'supporting community food initiatives' are a high priority to help enhance local distinctiveness (Sustainable Food Strategy for Herefordshire 2011).

The Ross-on-Wye Town Plan (2010), a steering group of volunteers interested in the future of the town, has highlighted the need for the town to 'maximise the resilience of Ross-on-Wye by strengthening local communities, businesses and services' and recognises the 'value of the town's heritage and unique character'. Whilst there is no mention of establishing a community orchard in the town plan, there is a proposed need to 'improve leisure facilities' and 'build upon and improve the assets of the town' (Ross-on-Wye Town Plan 2010).

'A Better Welcome Programme' organised by Ross Area Partnership (RAP 2007) indicated that some of the major motivations for visiting Ross-on-Wye included outdoor pursuits, countryside and events. It did however highlight

that the town was 'lacking in attractions' and required 'further support for local events'.

It is thought that a community orchard, for the reasons discussed in 1.1, would help to fulfil some of the areas highlighted for improvement outlined above. This in turn would help to improve and enhance Ross-on-Wye's social, environmental and economic sustainability.

1.3 Aims and Objectives

The aim of the project therefore is 'To investigate the feasibility of establishing a community orchard in Ross-on-Wye'. Feasibility studies aim to uncover strengths and weaknesses, opportunities and threats, the resources required to carry out, and ultimately the prospects for success of a proposed project (Georgakellos & Marcis 2009). The objectives of this study therefore are to:

- Investigate what conditions are necessary for establishing and sustaining a successful community orchard.
- Determine whether the conditions for a successful community orchard exist in Ross-on-Wye.
- Identify any barriers to planting a community orchard and possible solutions to those barriers.

These three objectives broadly cover the aims of a feasibility study in that objective 1 identifies the resources required to carry out the project, whilst objectives 2 and 3 identify any strengths, weaknesses, opportunities and threats involved in establishing a community orchard. All three objectives help to contribute towards determining the prospect of success of a proposed community orchard in Ross-on-Wye. The feasibility study could be used by any interested group who may wish to implement its findings.

2. METHODS

The information to inform the study was gathered in three stages. The first stage involved a semi-structured interview with members of existing community orchard projects. The intention of the interviews was to gather information on how to set up a community orchard, what services they provide their local community and how they have achieved sustainable success and support. This information was then used to help inform the second stage of data collection which involved a questionnaire of Ross-on-Wye residents. The questionnaire was designed to determine whether the conditions for a successful community orchard are present in the town. Thirdly, data obtained from the interviews and questionnaire was used to explore the potential barriers and opportunities for planting a community orchard in Ross-on-Wye. To achieve this a number of local community groups, organisations and landowners were contacted.

2.1 Interviewing members of existing community orchard projects

A qualitative interview was undertaken in order to satisfy the project objective to 'investigate what conditions are necessary for establishing and sustaining a successful community orchard.'

2.1.1 Selecting Interviewees

There are a large number of community orchards nationally and therefore deciding which projects to collect data from proved challenging. Ross-on-Wye is a small market town, and whilst it may seem logical to gather information from similar sized communities, it was decided to attempt to collect data from a range of different communities including villages, towns and cities. It was thought that by varying the types of communities and orchard projects that a broader range of knowledge and ideas could be obtained.

A number of community orchard groups were therefore contacted with the intention of gathering information from two rural, two town and two urban

projects. In order to keep bias as minimal as possible, five orchards were contacted via email for each of the three project types and the first two orchard project members to agree to be interviewed from each category were selected. Representatives from the six orchard projects were then contacted via telephone at an agreed time in order to be interviewed.

A small sample was chosen as a large amount of information was anticipated from the interviews and due to the time restrictions involved in gathering and analysing the data, a sample of six was deemed sufficient.

2.1.2 Choosing data to collect

As the aim of this study is 'To investigate the feasibility of establishing a community orchard in Ross-on-Wye', the main purpose of gathering information from other orchard projects was to determine how they went about the process of becoming established. This included finding out why the community orchard was set up, how land was found, how the group organises itself (i.e. does it have committee members, trustees etc?), what its aims are and what its costs are.

It is also important to find out how community orchards operate and sustain themselves; questions were asked therefore about how many members or volunteers the group has, what sort of activities members or volunteers engage in, how income is generated, what events are held, what links to other community groups the orchard has as well as any additional relevant information.

The answers to these questions could therefore be used to help inform a questionnaire of Ross-on-Wye residents in order to determine whether the support and conditions for a community orchard are present in the town. The interview data could also be used to inform any recommendations for implementing a community orchard project in the town.

2.1.3 Interview technique

A semi-structured interview was chosen as the preferred method of data collection from existing orchard projects. As Bell (1999) notes, a semi-structured interview means 'Certain questions are asked, but respondents are given freedom to talk about the topic and give their views in their own time'. It was thought that this would be the best method to obtain information from the interviewees as it allows the flexibility to explore any points of interest and significance. A structured interview with set questions by contrast may have led to the omission of important details that the interviewer may not have thought to consider.

A list of topics to be covered based on the questions outlined in 2.1.2 above was drafted in order to obtain the relevant information. These topics were ticked off as the interview progressed and allowed the interviewer to know at a glance which topics had not yet been covered. If any topics were not covered in the flow of conversation, direct questions could be asked about those areas which had not been covered.

Interviews were recorded with permission by conducting the conversation via loudspeaker and using a USB microphone to record. This allowed exact information to be recorded without the danger of missing or failing to record anything described. Once the data had been gathered and the relevant information captured, a draft copy of the results were emailed to interviewees in order to gain approval and suggest any changes. This was extremely valuable in that, in many cases, extra detail was added to the information.

2.2 Questionnaire of Ross-on-Wye residents

The questionnaire was carried out in order to inform the project objective to 'determine whether the conditions for a successful community orchard exist in Ross-on-Wye'.

2.2.1 Questionnaire Design

The questionnaire was designed to capture information from the general public in order to ascertain the level of interest in a potential community orchard in Ross-on-Wye. This is effectively the 'market research' of the feasibility study (Georgakellos & Marcis 2009). The design of the questionnaire was given careful consideration. Denscombe (2003) argues 'that there is, perhaps, no more effective deterrent to answering a questionnaire than its sheer size'. A conscious decision was therefore made to make the questionnaire as concise and user friendly as possible, only asking questions important to the research.

A brief opening paragraph mentioning the 'Herefordshire Year in the Orchard' was followed by a request to fill out the questionnaire exploring the idea of planting a community orchard in the town. In total nine questions were asked including a final sentence offering people the chance to leave their contact details if they were interested in getting involved with a community orchard project in the future.

The nine questions were developed in order to help satisfy the research question 'To investigate the feasibility of establishing a community orchard in Ross-on-Wye'. These questions were based upon the data obtained from the interviews of existing orchard projects. A copy of the Questionnaire can be found in appendix A.

It was decided that in order for a community orchard to be feasible in Ross-on-Wye, then it must first be established whether the general population are interested in what a community orchard could bring to the town.

Question 1 lists a number of benefits provided by community orchards which were developed using data obtained from the interviews with existing orchard projects. Participants were asked to note all of the benefits that they think a community orchard could bring to the town. There was also an option 'I don't think it would benefit Ross-on-Wye' as well as a chance to write in any other benefits that were not included in the list.

Question 2 asks participants to note what they think would be the main benefit of a community orchard in the town. This is important to determine

where the level of priority lies with regard to the potential benefits of a community orchard. It also helps point out what facilities or services people may perceive as lacking in the town.

In order for a community orchard to be feasible, it is necessary to determine whether the orchard would be used by the people of the town. Question 3 therefore asks directly whether the participant thinks they would personally use a community orchard if one were present in the town. Question 4 asks participants to list all the activities which they think they would use the orchard for. This is important to get an idea of what people would be interested in using the orchard for and could therefore be referred to in a potential project proposal.

Having determined whether people think they would use the orchard, Question 5 moves on to ascertain the level of commitment people would be willing to give a community orchard. This specifically relates to whether people would be willing to volunteer time to help run the orchard. Information from the interviews shows that volunteer time is essential to orchard maintenance and is often a pre-requisite for obtaining grants. This information would also be highly useful to a project proposal in order to identify the potential level of volunteers.

In order for an orchard to be feasible, some form of income generation is likely to be necessary. The interviews show that this can take many forms. Tree sponsorship was chosen as a fund raising option for Questions 6 and 7 as this is the most quantifiable method to give an idea of the amount people would be willing to donate. This does not necessarily mean that if a community orchard were to be established in Ross that this would be the chosen method of raising money, however it gives a useful idea as to whether people would be willing to donate money and how much that might be.

Crucial to the feasibility of a community orchard in Ross-on-Wye is whether a suitable location for planting can be found. Question 8 therefore asks whether the participant in the survey knows of a possible location for a community orchard in Ross-on-Wye. The details from this question could then be used for further investigation into possible sites for an orchard.

Finally Question 9 aims to discover the participant's opinion on the importance of a community orchard to Ross-on-Wye. This is important as it helps determine whether a community orchard is perceived as an essential part of a sustainable community or as an unimportant pastime.

It is thought that the answer to these questions will help build a detailed picture of the opinions of the general public towards planting a community orchard in the town and provide useful information towards any recommendations for a community orchard.

2.2.2 The Questionnaire Delivery

The questionnaire was delivered on a face to face basis, by asking local people in Ross-on-Wye whether they would be willing to take part in the research. A brief explanation of the purpose of the survey was followed by a request to fill in the questionnaire. It is thought that this was the most effective means of obtaining a significant number of responses from a broad representative sample.

A number of locations for gathering responses were attempted including Broad Street and Gloucester Road, the two main commercial streets in the town, as well as various locations along the town's riverfront such as Wye Street and between the Hope and Anchor public house and the rowing club. These locations were chosen as they are generally the busiest areas of the town. In the two commercial streets, passers by were stopped and a request to fill out the questionnaire was made, with limited success. Along the riverfront members of the public were approached and a request to fill out the questionnaire was made. 31 responses were achieved using this method.

It was also decided that in order for the questionnaire to reach as wide an audience as possible, an online internet survey would also be developed using www.surveymonkey.com. This has an advantage in that it extends the survey sample beyond those people who were interviewed face to face.

However it does exclude those people without an internet connection and is inherently difficult to persuade people to complete the survey. The link to the survey was posted on two websites relevant to Ross-on-Wye, the facebook group 'Ross-on-Wye' and the local news website www.wyenot.com. 35 responses were achieved using this method.

The interviews with present community orchards showed that community orchards are often set up by existing community groups. A number of existing community groups in Ross-on-Wye were therefore contacted with the request to attend meetings in order to distribute the questionnaire. Of those contacted, only Transition Town Ross and the Ross-on-Wye Horticultural Society agreed to the distribution of questionnaires. Questionnaires were distributed to members of Transition Town Ross via email as the group is not currently active. 14 responses were achieved using this method. Questionnaires were distributed to Ross-on-Wye Horticultural Society face to face at a monthly meeting with 20 responses achieved using this method.

Four separate groups were therefore questioned, the general public, internet users, Transition Town Ross members and Ross-on-Wye Horticultural Society members. In total 100 people were questioned, approximately 1% of the population of Ross-on-Wye.

2.3. Identification of barriers to planting a community orchard

Both the interviews and the questionnaire results were used to help identify any barriers to planting a community orchard in Ross-on-Wye. The interviews highlighted the major barriers to setting up a community orchard as finding a local community group who would be willing to plant and maintain a community orchard, as well as identifying an available plot of land for planting (see 4.1).

A number of community organisations were therefore contacted in order to help address these barriers. Groups contacted included, Transition Town Ross-on-Wye, Ross-on-Wye Horticultural Society, Ross-on-Wye Civic Society,

Ross-on-Wye Lions club, Tudorville Allotment Society and Enviroability. Many organisations expressed an interest, however only one organisation, Enviroability, were willing to discuss the possibility of establishing and maintaining a community orchard themselves. A meeting was therefore arranged to discuss a project proposal, and investigate the availability of land. The details of which can be found in Chapter 5 case study.

2.4 Limitations of methods used

The information gathered from interviews of existing community orchards may be limited in that data from only 6 orchard groups was obtained. A larger sample may have produced more useful and varied results in order to investigate what conditions are necessary for establishing and sustaining a successful community orchard.

The questionnaire gathered 100 responses from 4 separate groups, the general public, internet users, Transition Town Ross and Ross-on-Wye Horticultural Society members. As only 31 responses were from the general public, this may not be a representative sample of the population of Ross-on-Wye. The 69 responses from the other 3 groups are likely to include those individuals who are more likely to be inclined towards community projects thus affecting the outcome of the questionnaire. However, as the aim of the study is 'To investigate the feasibility of establishing a community orchard in Ross-on-Wye', identifying those groups who would be interested in the project is an important part of the feasibility study.

3. RESULTS

3.1 Results from interviews

A wide range of information was obtained from interviews with six existing community orchard groups. The two rural located orchards were Bradwell Community Orchard in Derbyshire and Chorleywood Community Orchard in Hertfordshire. The two orchards located in towns were Monmouth Community Orchard in Monmouthshire and Bridport Community Orchard in Dorset. The two orchards located in cities were Metford Road Community Orchard and Horfield Community Organic Orchard, both located in Bristol. A list of findings from the six individual orchards can be found in appendix B.

Each community orchard contacted had unique aspects to it; however there were also a number of common themes shared by the six orchards. The common themes are shown by the following tables. Table 1 shows the common *modi operandi* of community orchards.

Table1. Community orchard *modi operandi*

	Common Themes
Why was an orchard group formed?	4 of the 6 groups were formed in order to put unused land into productive use. The remaining 2 were formed in order to protect land from development.
How is it structured?	4 of the orchard groups are 'community groups' with differing structures, 2 are charities.
What are the stated aims of the orchard?	4 groups have a list of formal aims. 2 have general aims and objectives. Common themes include: <ul style="list-style-type: none"> • Benefit the local community (6 of 6) • Provide/Promote Fruit (5 of 6) • Use organic principles (4 of 6) • Benefit wildlife/Biodiversity (3 of 6) • Share knowledge and skills (3 of 6)

	<ul style="list-style-type: none"> • Preserve local fruit varieties (2 of 6)
Orchard Details	Number of fruit trees range from 30 – 120. 2 groups also grow soft fruit. 1 has a polytunnel, 1 runs two allotments. 4 orchards are newly planted (within the last 4 years or earlier). The 2 city orchards have been established 10-15 years
Other Information	Wildlife areas are a key theme with 4 of 6 having specific wildlife areas and one (Chorleywood) being located inside a nature reserve.

Table 1 shows that there are a number of common themes shared by the six community orchards. Four of the six orchard groups were formed in order to put unproductive or unused land to good use. Both of the city orchards were planted on unused allotment sites, Monmouth and Chorleywood orchards were planted on unused common land. Bridport community orchard was successfully planted on land which was under threat of development. Bradwell community orchard was planted on land donated by a local company; however the group originally formed in an attempt to protect an existing orchard.

Levels of formality in how the groups are structured vary significantly. Bradwell and Chorleywood, the two rural orchards, are charities with formal constitutions and trustees. The remaining four have various levels of formality from informal community groups (Monmouth & Bradwell) with *ad hoc* arrangements to formal community groups with committee members (Metford and Horfield).

The two charity orchards are required to have a formal list of aims as part of their designation. The two city orchards were also required to state a list of aims by Bristol City Council. Bradwell and Monmouth have a more informal list of orchard objectives for internal use.

The six orchards vary significantly in size with 35 trees at Metford Road up to 120 trees at Chorleywood. The number of trees is generally dependent on

the size of the plot of land available. The six orchards can be broadly categorised by number of trees:

- Small - Metford Road (30) & Bradwell (35)
- Medium - Monmouth (53) & Bridport (65)
- Large - Horfield (100) & Chorleywood (120)

The size of the orchard does not appear to correspond to whether the orchard is located in a rural, town or city location although both of the town orchards are of medium size. A broader sample would be required to determine any correlation between location and size.

Table 2 shows the common costs incurred and income generated by community orchards. This is important to determine how a community orchard can be financially sustainable.

Table 2. Community orchards major costs and income

	Common Themes
Costs	4 groups have no rent due to varying factors such as council ownership. The 2 city orchards have minimal rent, specifically half allotment rent (of 4 plots) and £100 a year. All have general maintenance costs. 4 newly planted orchards acquired the initial cost of trees and guards. Other costs include insurance, events and publicity.
Income	Grants were obtained by 5 of the 6 orchards. 3 orchards have tree sponsorship between £25 - £35 as a one off payment. 3 orchards have membership fees of between £5 - £25 per year. Other income includes from events, donations, workshops and sale of produce.

Table 2 shows that the two city orchards are the only community orchards that pay a fee to lease the land. This is due to their location within allotment sites. Bridport community orchard land is leased by the Town Council from West Dorset District Council; however these costs are not passed on to

the orchard group. Monmouth, Chorleywood and Bradwell have all been allowed by the orchard land owners to use their land rent free. None of the community orchards interviewed therefore owned their own land.

The main sources of income are in the form of small grants, tree sponsorship and membership fees. Some costs such as events also generate income in the form of donations and produce sales. Some orchards, such as Chorleywood, hope to be self funding through the sale of orchard produce, others such as Horfield, rely on membership fees to cover costs.

Table 3 shows the common practices and activities those members of community orchards are involved in.

Table 3. Community orchard membership details

	Common Themes
Number of Members	<p>Number of members range between 20 – 120. Membership can be grouped into small, medium and large:</p> <p>Small - Metford Road and Horfield 20 – 30 Medium - Monmouth and Bradwell 50 – 60 Large - Bridport and Chorleywood 90 & 120</p>
Work Days	<p>All 6 orchards have monthly work days with additional days as required (such as during harvest). Attendees can range from between 10 – 50. Work days involve general maintenance and seasonal duties such as pruning.</p>
Membership Activities	<p>All groups practice a combination of distributing fruit amongst members, giving it away or turning it into products to sell. Members are also generally involved with organising any events, workshops and open days.</p>

The number of members do not necessarily correspond with the number of trees or size of the orchard (see table 1), although Metford Road, Monmouth and Chorleywood have a very similar number of trees to members. This may be due to how members are counted, with Chorleywood counting its members as

those who have sponsored a tree, as opposed to Horfield where members pay a yearly fee.

Monthly work days are an important part of maintaining a community orchard in order to keep it accessible and complete general maintenance tasks. Without this level of commitment, the orchard may become neglected.

All orchards state their aim as to ‘benefit the local community’. Table 4 shows some common methods that community orchards use to involve their local communities.

Table 4. Community involvement

	Common Themes
Events	All orchards hold or are planning to hold events. Events include: <ul style="list-style-type: none"> • Apple Day (4 of 6) • Wassailing (4 of 6) • Demonstrations/Workshops (3 of 6) • Open Days (3 of 6)
Links with community groups	All orchards have links with other community groups including: <ul style="list-style-type: none"> • Local allotment groups (6 of 6) • Transition Groups (4 of 6) • Local Schools (3 of 6)
Access	4 orchards have open access at all times. The 2 city orchards are not open access due to their location within allotment sites; however both have public open days and events.

Table 4 shows that Apple Day and Wassailing are popular events with community orchards. Attendances will vary depending on the size and location of the orchard. Horfield organic community orchard for instance, despite having the lowest number of members, attracted over 300 attendees to their Apple Day which included juicing, tastings and stalls.

All community orchards interviewed have made a conscious decision to include other community groups where possible. Many have done so in order to encourage 'ownership' of the orchard by members of the community and discourage vandalism. Vandalism and theft of tools has occurred at Bridport Community Orchard, mainly due to its central and open location within the town. Links with community groups are also encouraged as a way of sharing and learning new skills, sharing surpluses and educating children and adults alike about local food and environmental issues.

These common themes provide a useful insight into how community orchards operate and sustain themselves. If Ross-on-Wye is to plant its own community orchard, then it is very likely that a community orchard group will need to adopt many of the same principles seen above.

3.2 Results from the questionnaire

The following figures show the results from a questionnaire of 100 residents of Ross-on-Wye asking their views on a potential community orchard in the town. The 100 residents include four separate groups including internet users with 35 responses, the general public with 31 responses, Ross-on-Wye Horticultural Society members with 20 responses and Transition Town Ross members with 14 responses. Data from the four separate groups can be found in appendix C. The following figures show the total results using data from these four separate groups. Figure 1 shows the answers from Question 1 'In what ways do you think a Community Orchard could benefit the residents of Ross-on-Wye?'

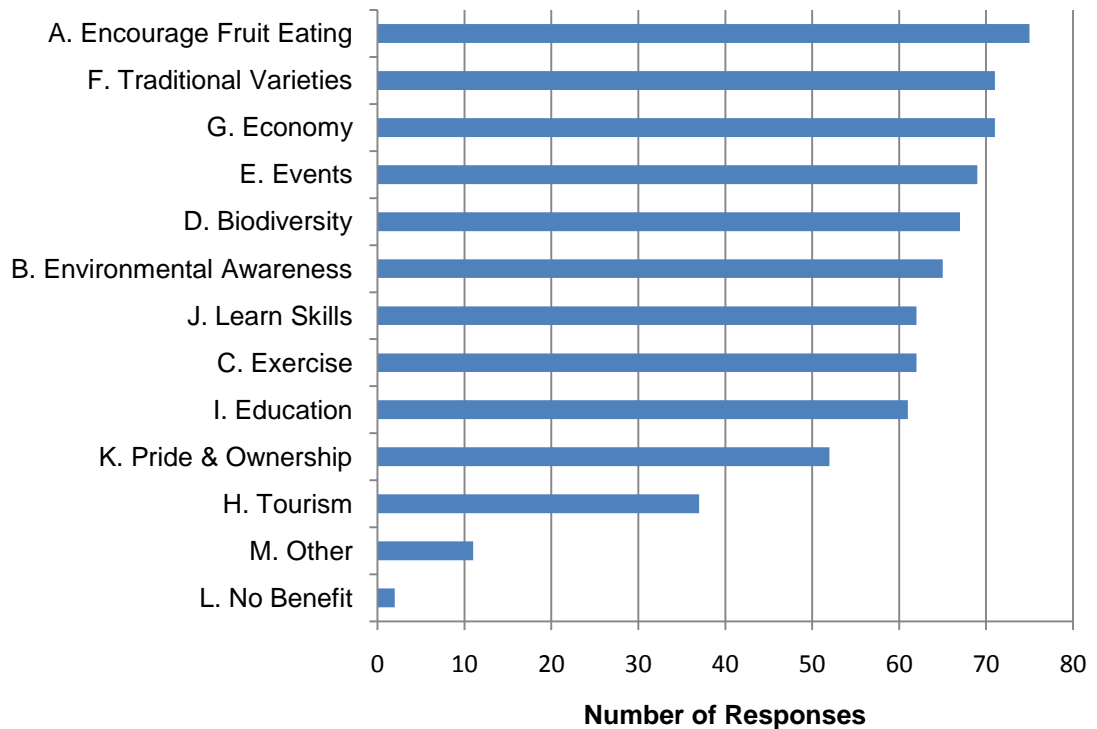


Figure 1. Benefits of a community orchard

The options used in Question 1 were chosen as a result of the information obtained from the interviews and literature review as common benefits to the local community of a community orchard. Respondents were asked to circle ‘all that apply’. This resulted in a large number of respondents choosing every, or nearly every option. Only 2 responses suggested that a community orchard would not benefit the town and the most popular benefit with 75 responses was ‘Encourage and promote the health benefits of eating fruit’. ‘Encourage tourism by providing an extra attraction for visitors’ was the lowest rated specified benefit with 37 responses. ‘Any other benefits’ received 11 responses and included answers such as ‘meet new people’ and ‘eating fresh fruit’. A full list of other benefits can be found in appendix C.

Figure 2 shows the responses to Question 2 ‘Which of the above do you think would be the main benefit?’ Participants were asked to write in the letter of the main benefit, however in some cases participants wrote in more than one answer. This will therefore have affected the results.

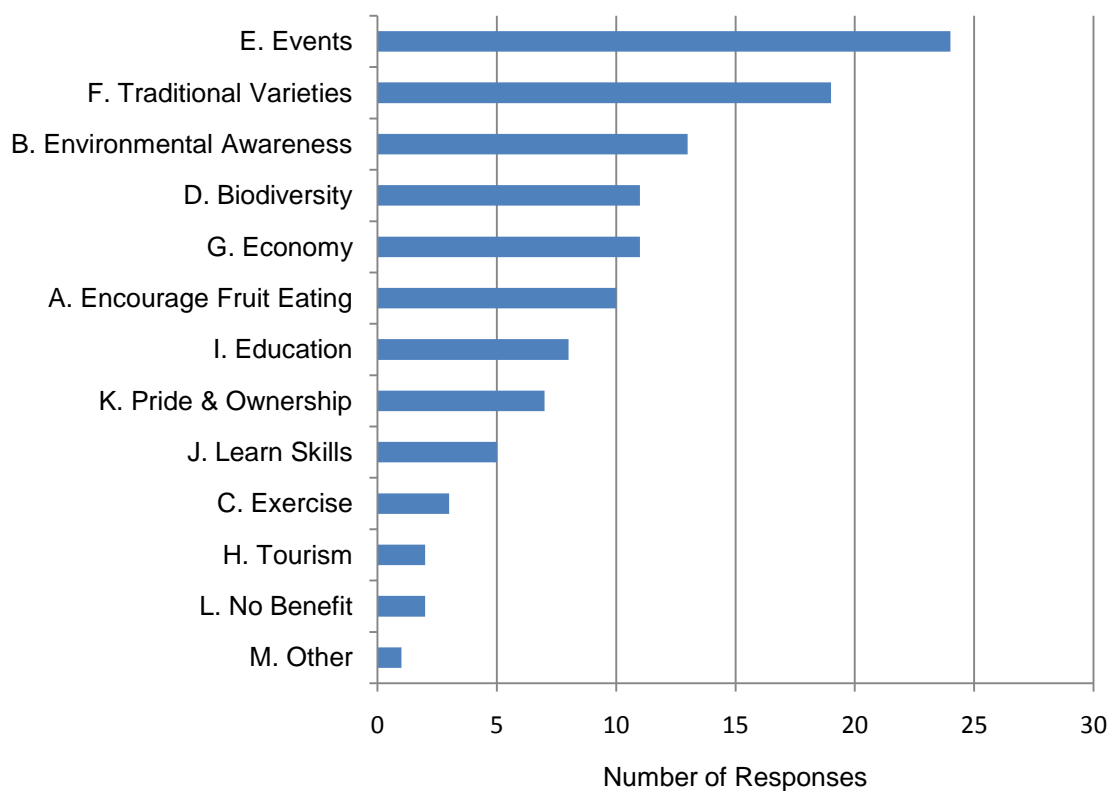


Figure 2. Main benefit of a community orchard

Figure 2 shows that the main benefit of a community orchard chosen by participants in the questionnaire was ‘Bringing the community together for events and celebrations’ with 24 responses. Despite being the most frequent answer to question 1 ‘Encourage and promote the health benefits of eating fruit’ was not considered the most important benefit with 10 responses. ‘Encourage tourism by providing an extra attraction for visitors’ however received the lowest number of responses for a specified benefit for Questions 1 and 2.

Figure 3 shows the responses to question 3 ‘Do you think you would personally use a Community Orchard if one were present in Ross?’

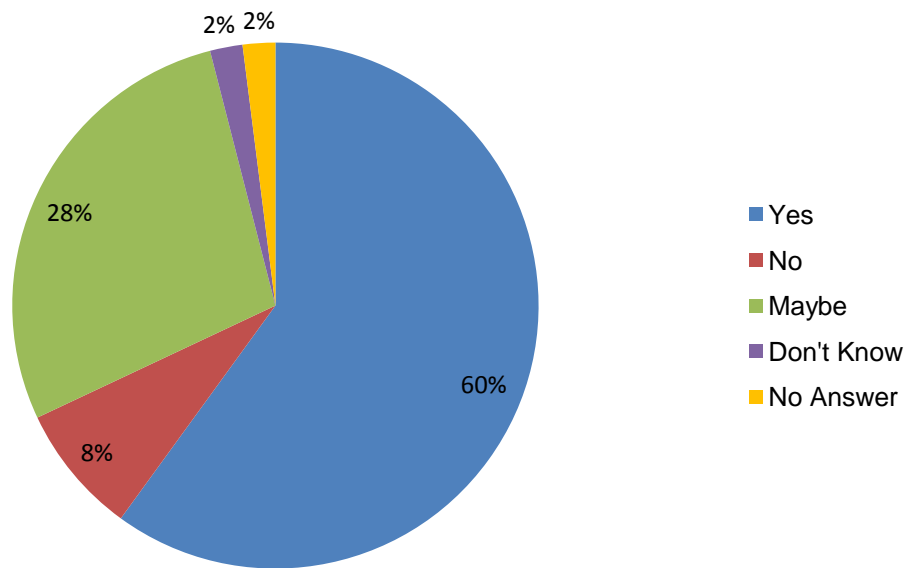


Figure 3. Would you personally use a community orchard?

Figure 3 shows that a majority of 60% of Ross-on-Wye residents questioned would use a community orchard if one were located within the town with a further 28% stating that they may use it. Only 8 respondents answered that they would not use a community orchard.

The Chi-Squared test was carried out on the answers to Question 3 in order to determine whether there was a significant difference between the four groups questioned. The test showed that there is a significant difference ($p < 0.01$), with members of Transition Ross and internet users more likely to say 'yes' to using a community orchard than the general public and members of the Horticultural Society. Full statistical analysis can be found in appendix D.

Figure 4 shows the responses to Question 4 'If applicable, for what do you think you would use a community orchard for?' Participants were asked to write in any activities they would use the orchard for. Many people listed more than one activity however 29 gave no answer.

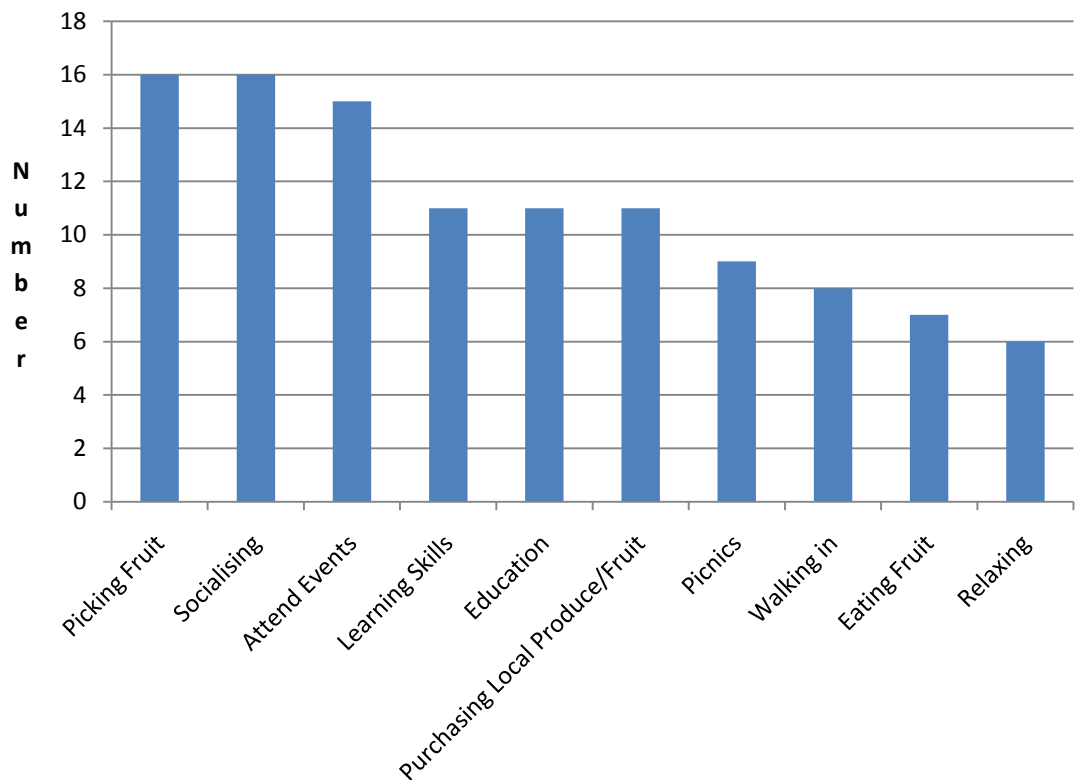


Figure 4. What would you use a community orchard for?

The categories shown in figure 4 are the top 10 answers out of 71 responses to Question 4. The categories include a range of unique answers all with a similar theme. Examples of answers for each category are as follows:

- Picking Fruit included answers such as ‘collecting apples’, ‘picking apples’, ‘picking fruit with children’, ‘harvesting’, ‘harvesting produce’ and ‘PYO’.
- Socialising included answers such as ‘meeting people’, ‘meeting new friends’, ‘community gatherings’, ‘social’, ‘social activities’ ‘make connections with community’, and ‘bring people together’.
- Attend Events included answers such as ‘festivals’, ‘local festivities’, ‘wassail etc’, ‘apple festival’, ‘apple day’, ‘take part in events’ and where

participants wrote in the letter 'E' referring to Question 1 of the questionnaire.

- Learning skills included answers such as 'learning', 'learn about cultivation', 'develop new knowledge', 'learning more about growing' and where participants wrote in the letter 'J' referring to Question 1 of the questionnaire.
- Education included answers such as 'teaching environment', 'educating children', 'education of young children', 'potential for youth work projects', 'schools could use it', 'teaching children where food comes from' and where participants wrote in the letter 'I' referring to Question 1 of the questionnaire.
- Purchasing local produce/fruit included answers such as 'buying local produce', 'buying apples', 'buying fruit', 'getting cheap fruit' and where participants wrote in the letter 'G' referring to Question 1 of the questionnaire.
- Picnics included answers such as 'communal area for picnics', 'family picnics', and 'harvesting produce in groups with picnics'.
- Walking in included answers such as 'walking through' and 'walks'.
- Eating Fruit included answers such as 'eating fruit', 'using fruit', 'eating apples', 'having local fruit', 'fruit tasting' and the non-specific 'fruit'.
- Relaxing included answers such as 'relaxation' and 'chill out time'.

The three categories of 'picking fruit', 'purchasing local produce/fruit' and 'eating fruit' were deemed sufficiently variant to warrant their own categories due to the different activities implied. 'Learning skills' was also deemed sufficiently variant to 'education' as the former implies teaching adult's practical skills and the latter implies the education of children. 'Socialising' was also seen as sufficiently different to the more specific 'attending events'.

Overall figure 4 shows that respondents see a community orchard as a potential social resource which can be used to pick fruit and attend events as a way of socialising with other members of the community. It is also seen as a potential educational and recreational resource, with picnics, walks and relaxation featuring as important uses.

Figure 5 shows the answers to Question 5 'Would you be willing to volunteer time to a Community Orchard, for example, to help with planting, pruning, organising events, fundraising etc?'

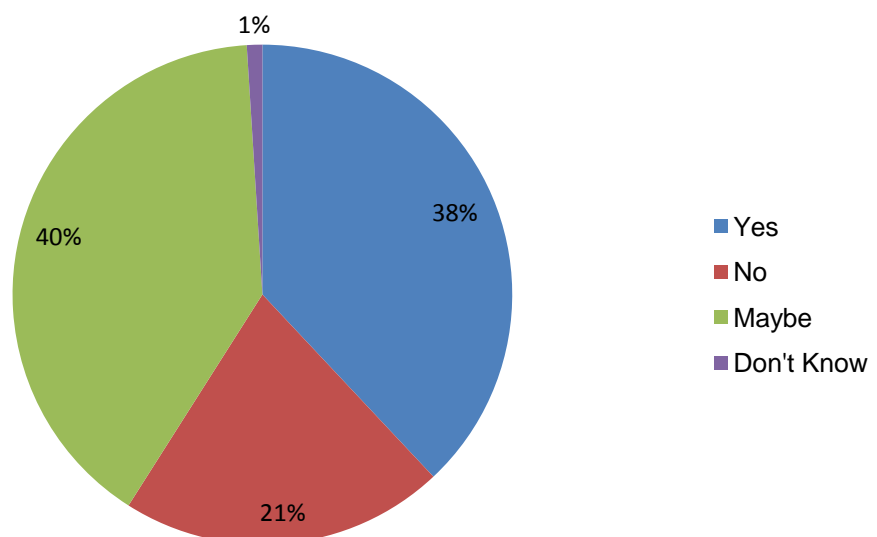


Figure 5. Would you be willing to volunteer time to a community orchard?

A large number of 38 respondents suggested that they would be willing to volunteer time to a community orchard. Whether in practice this would translate into actual volunteers however is not known. Also the level of volunteer time was not specified in the question. Many may be willing to volunteer as a one off but not commit to a regular monthly work day.

The highest number of 40 however said that they 'maybe' be willing to volunteer time to a community orchard. This may be due to not wanting to commit on the spot to volunteering time, or could also be down to the participant not wanting to give what they perceive would be a disappointing answer of 'no' to the questioner. Other variables may include the location of a community orchard in the town and its accessibility, which may have affected people's answers to question 5.

The Chi-Squared test was carried out on the answers to Question 5 in order to determine whether there was a significant difference between the four groups questioned. The test showed that there is a significant difference ($p < 0.05$), with members of Transition Ross and Ross Horticultural Society more likely to agree to volunteer time to a community orchard than the general public or internet users. Full statistical analysis can be found in appendix D.

Figure 6 shows the answers to Question 6 'There are many costs associated with establishing a Community Orchard, would you be willing to sponsor a tree in order to help raise funds for an orchard?'

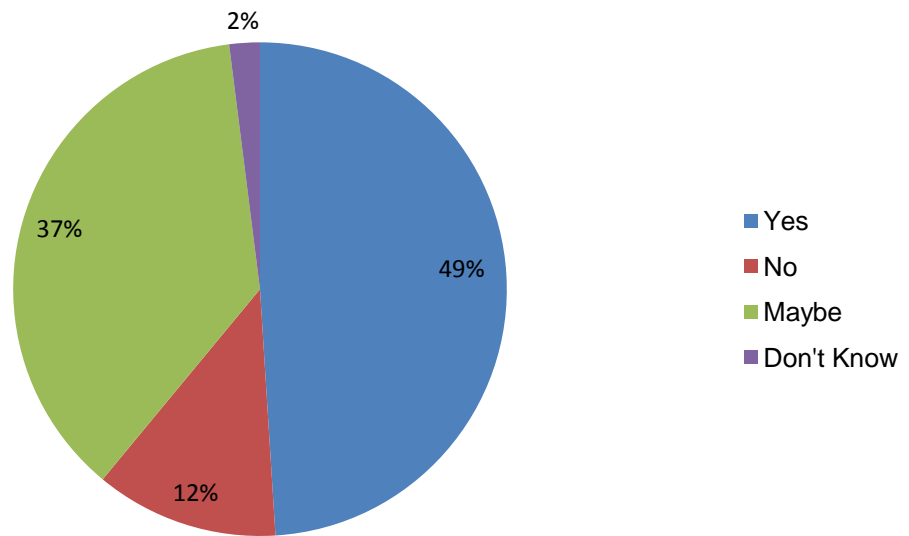


Figure 6. Would you be willing to sponsor a tree?

A large number of 49 participants said that they would be willing to sponsor a tree. Again however whether this would translate into actual tree sponsorships is not known. It is possible that many participants did not want to give what they perceive would be a 'disappointing' answer, which may also explain the high number of 'maybes'. Another variable which may have resulted in a high number of 'maybes', is that the cost of sponsoring a tree is unknown to the respondent. Only 12 however said that they were not prepared to sponsor a tree.

The Chi-Squared test was carried out on the answers to Question 6 in order to determine whether there was a significant difference between the four groups questioned. The test showed that there is no significant difference between the four groups as to whether they would be willing to sponsor a tree. Full statistical analysis can be found in appendix D.

Figure 7 shows the answers to Question 7 'If applicable, what do you think would be a reasonable amount to pay for tree sponsorship?'

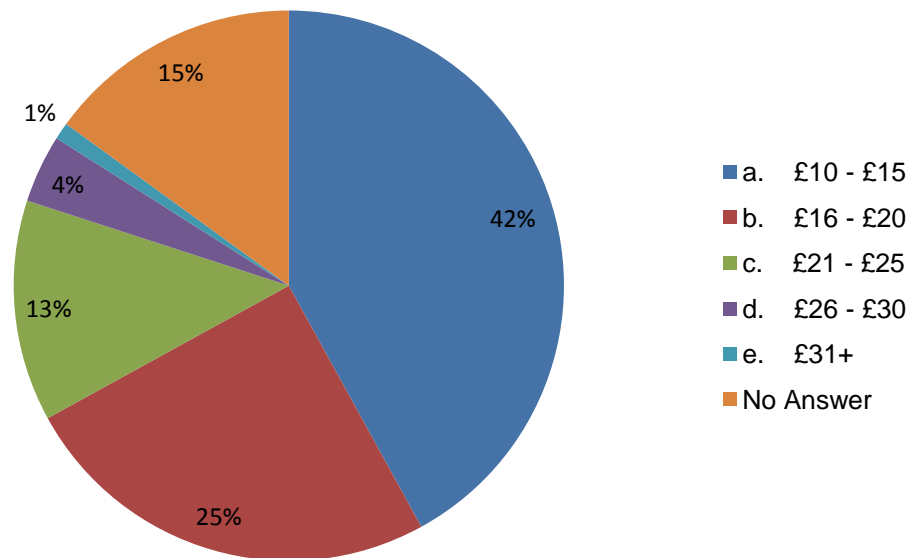


Figure 7. How much would be a reasonable amount to pay for tree sponsorship?

Despite 49 people answering that they would be willing to sponsor a tree, 85 answered the question ‘If applicable, what do you think would be a reasonable amount to pay for tree sponsorship?’ This means that most of those who answered maybe to question 6 were willing to give an answer to question 7. This suggests that their answer to question 6 may have been dependent on the cost of tree sponsorship. The highest number of 42 respondents gave the lowest amount of £10 - £15. Only one person was willing to pay more than £31. The lowest sponsorship of £10 - £15 is unlikely to cover the cost of buying and protecting fruit trees.

Question 8 asked ‘Can you think of a good location for a Community Orchard in Ross-on-Wye?’ This resulted in 50 different suggestions, with some respondents suggesting more than one location. The detail of locations varied considerably from vague suggestions such as ‘Between Ross and Walford’ to specific areas such as ‘An area of open land in Duxmere Drive’. Most

suggestions were relatively vague; however a number of popular locations are detailed in table 5:

Table 5. Suggested locations for a community orchard

Location	Number of Suggestions
Near the River/Riverside	6
Homs Road/Green	3
Sports Centre/Fields	3
Hildersley/Near to Hildersley	3

Figure 8 shows the answers to Question 9 ‘Overall, how important do you think a Community Orchard would be to Ross-on-Wye?’

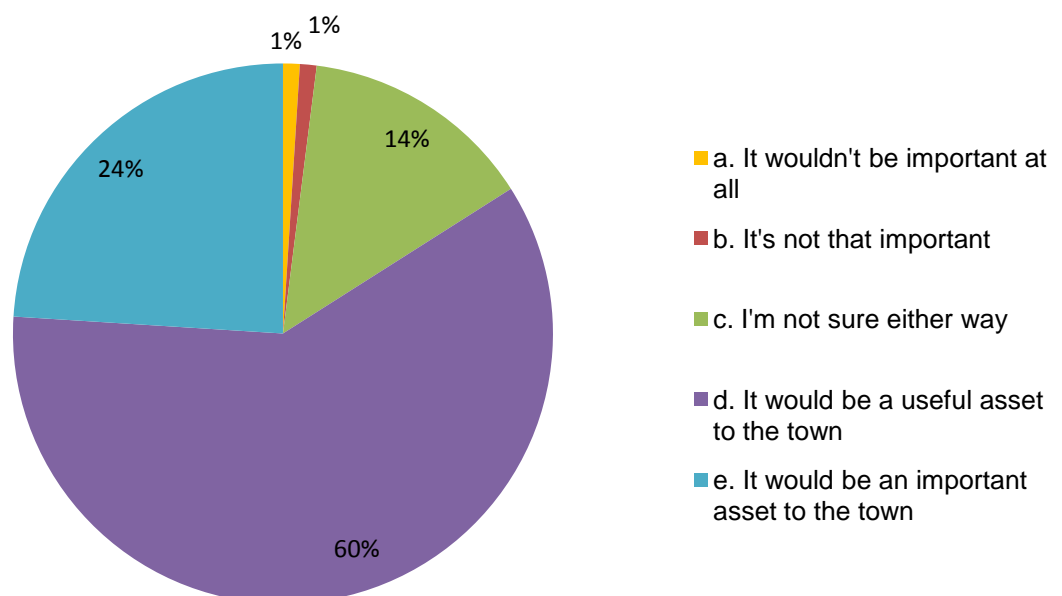


Figure 8. How important would a community orchard be to Ross-on-Wye?

Figure 8 shows that the majority of 60 respondents think that a community orchard would be a 'useful asset to the town'. A sizeable number of 24 however thought that it would be 'an important asset to the town'. Only one person thought that 'it wouldn't be important at all'.

Finally the questionnaire gave a chance for people to leave their contact details if they were interested in hearing more or getting involved with a possible community orchard in Ross-on-Wye. This resulted in 23 individuals leaving their contact details. This list could be passed on to any group interested in pursuing a community orchard in the town.

4. DISCUSSION

This chapter discusses the main findings of the data collection. It shows that the feasibility study has identified that the conditions needed for a community orchard do appear to exist in Ross-on-Wye. The success of a community orchard project will however depend on overcoming the two major barriers discussed in 4.1.

4.1 Community Orchard Interviews

The interviews have provided a large amount of information with regards to the requirements for establishing a successful community orchard as set out by the project objectives. They show that in general community orchards are set up by existing community groups, often using previously unproductive land (see table 1). An existing orchard is not necessary to form a community orchard group, with many groups planting new orchards.

However in all but one of the community orchards interviewed, land was identified as available by an existing group or individual prior to a community orchard group being formed. It was in deciding what to do with unused land, or in the case of Bridport protecting land from development, that the idea for planting an orchard was formed. Bradwell community orchard group formed with the intention of protecting an existing orchard from development and later found land to plant a new orchard. This means that for a community orchard group to form in Ross-on-Wye, it is likely that land will need to be identified by an existing group or individual before a community orchard group can be formed. It is unlikely that a group will form prior to land being available. This is a major barrier to establishing a community orchard in the town. The case study (Chapter 5) shows a potential option for overcoming this barrier.

If this barrier is overcome the 'type' of group formed will depend on the level of formality needed for organisational purposes. For example, if leasing land from a local authority, then the terms of the agreement may require a formal

group with a set of aims and objectives and a written constitution. It is likely that most community orchard groups will therefore require committee members or trustees. The type of group set up will determine whether these individuals are liable for any debts of the organisation. Whichever way the group is organised, a small and committed number of people will be required to manage the running of a community orchard, as is the case for the six community orchard groups interviewed. This management will include dealing with financial and legal considerations such as health and safety, lease agreements and insurance. Identifying those individuals willing to commit to managing a community orchard is another major barrier to establishing a community orchard in Ross-on-Wye. The case study (Chapter 5) shows a potential option for overcoming this barrier.

The aims of all community orchards interviewed included to 'benefit the local community' as well as a number of other common aims. A similar list of aims will also be important to any community orchard group in Ross-on-Wye in order to attract a range of users to the orchard. The types of events and activities offered will also be important to attract members of the public who may not necessarily be involved with the management of the orchard. The questionnaire has identified a number of benefits and activities the people of Ross would be interested in using an orchard for (see 4.2).

The orchard details shown in Table 1 demonstrate that community orchards can come in a variety of sizes from relatively small orchards of 30 trees to large orchards of 120 trees. A community orchard group in Ross-on-Wye need not therefore be restricted to a large or small area of land.

Table 2 shows that costs will vary between community orchards depending on a number of variables such as rent and maintenance costs. It is not known therefore what costs would be incurred by a community orchard in Ross-on-Wye, but it is inevitable that some costs will need to be covered. One method of income generation is tree sponsorship, used by 3 of the orchards interviewed and has been explored by Questions 6 and 7 of the questionnaire

(see 4.2). Tree sponsorship could be an effective way to raise initial capital requirements. There are a number of other possible methods of income generation identified in Table 2 which could be used once an orchard becomes established.

The number of members of the community orchard groups interviewed shown in Table 3 range from a low membership of 20 to a high membership of 120. Again this shows that a community orchard group need not necessarily be restricted by low or high levels of interest. Much will depend on the size and access of the land available. Metford Road for example has restrictions on membership due to its location within an allotment site and relatively small size. Chorleywood by contrast has a large number of members and a large openly accessible area of land. A community orchard will however need commitment from some members to volunteer to maintain the orchard. The common theme from the interviews seems to show that monthly work days are required for general maintenance such as pruning, mowing and other seasonal jobs. A community orchard in Ross-on-Wye will therefore require some regular volunteers. This has been explored by Question 5 of the questionnaire (see 4.2).

There were no major differences between community orchards located in different sized settlements; however the two city orchards have restricted access due to their location within allotment sites and for security reasons. Security is potentially an issue that would need to be considered. The two city orchards were also the two orchards which had been established longest. This also shows that orchards need not be restricted to large areas of countryside and can be located in almost any sized settlement.

The interviews have shown that each community orchard is as unique as the locality and members that organise it. There are however a number of shared benefits to the local community provided by community orchards. There are also a number of shared conditions which need to be in place in order to sustain a successful community orchard. These have been identified as:

- An interest in the benefits offered by a community orchard in the local population.
- A group of individuals willing to volunteer time to the orchard on a regular basis for its maintenance.
- Some form of income generation needed to help cover initial costs such as tree planting.

These conditions will be discussed further in section 4.2. The major barriers to a community orchard in Ross-on-Wye have been identified as:

- Identifying a suitable plot of land for planting a community orchard.
- Identifying a group committed to organising and managing a community orchard.

These barriers have been explored in greater detail in the case study in Chapter 5. If the conditions and barriers identified can be met and overcome then the feasibility of a community orchard in Ross-on-Wye will be much more likely.

4.2 Questionnaire Results

The questionnaire results have helped to determine whether the conditions identified in 4.1 for a successful community orchard exist in Ross-on-Wye. They also help provide information to any group that might wish to establish a community orchard in the town.

For instance, Figure 1 shows that respondents to the questionnaire believe a community orchard would bring a wide range of benefits to the town. This demonstrates that a community orchard would potentially have a wide reaching influence beyond its membership. The question was not designed to ask whether the participant would individually benefit, but whether the residents of the town as a whole would benefit, which is the common aim of community orchards found in the interviews. Overall 98 out of 100 people thought that a

community orchard would bring at least one or more benefits to the town's residents.

The most commonly chosen benefits in figure 1 appear to confirm some of the main sustainability advantages of community orchards outlined in the literature review. Encouraging a healthy lifestyle, holding events and enhancing the local economy could all significantly contribute to the wellbeing of local residents. Conserving traditional varieties, improving biodiversity and increasing environmental awareness could bring significant environmental benefits to the town.

Figure 2 shows specifically which option participants thought would be the main benefit to the town. This suggests that any community orchard group should focus on planting traditional fruit varieties and holding events for the benefit of the local community. The high number of responses highlighting 'bringing the community together for events and celebrations' as the main benefit implies that there may be a lack of community events in the town at present. Hosting events would be a key method of engaging the local population with a community orchard.

The answers shown in figure 3 demonstrate that there would be a personal interest in using a community orchard for 60 of the questionnaire participants. Not only that a further 28 said they would 'maybe' use a community orchard. This high positive response suggests that a community orchard would be a popular local amenity. The chi-squared test showed that Transition Ross and internet users were more likely to say 'yes' to using a community orchard than the general public and members of the Horticultural Society. This may be because Transition Town members are likely to be more aware of sustainability issues and the internet users who responded to the questionnaire may be more likely to be interested in community activities, as they have actively chosen to take part in the questionnaire. The general public by contrast include a more random sample of participants and the Horticultural Society may have more interest in their own gardens. Despite this 50% (10 out of 20) of Horticultural Society members did answer that they would use a community orchard. This

shows that there is generally a strong interest amongst local residents in using a community orchard which helps to satisfy one of the conditions necessary for a successful community orchard.

Figure 4 gives an indication of what those interested in using a community orchard would like to use it for. This will prove helpful to any group that wishes to establish a community orchard in the town so that they can prioritise what activities the orchard should provide. Picking fruit and socialising are the two most popular chosen activities. Picking fruit can only occur at certain times of year; however this could be prolonged by planting varieties which ripen at different times throughout the season. Socialising could encompass a range of activities and events, the key will be to organise activities that draw in people with different interests and skills at different times so as to maintain interest in the orchard, as has been achieved with those orchards that were interviewed.

Figure 5 helps to determine whether there would be an interest in volunteering time to maintain a community orchard, which is one of the conditions identified in 4.1. A good response of 38 people replied that they would be willing to volunteer time to a community orchard, with a further 40 suggesting that they 'maybe' willing to volunteer time. This number is more than adequate to cover general maintenance during monthly work days as identified by the interviews. However the question did not specify how often participants would be willing to volunteer, so there is a possibility that volunteers may not be willing to commit to regular monthly work days. Also only 23 people provided their contact details, meaning that many of those who have expressed an interest in volunteering are not contactable.

The chi-squared test showed that members of Transition Ross and Ross Horticultural Society were more likely to offer to volunteer than the general public or internet users. This may be due to demographic reasons, with members of Transition Ross and the Horticultural Society possibly more likely to have spare time available. Members of the general public were also less likely to commit on the spot and as such resulted in a high response of 'maybes' (16

out of 31). These results suggest that members of existing community groups are more likely to volunteer their time and therefore a good place to advertise for volunteers.

Figure 6 helps to determine whether people would be willing to sponsor a tree, which is one form of income generation identified in 4.1 as a necessary condition for a successful community orchard. A highly positive response shows that 49 people would be willing to sponsor a tree in a community orchard with 37 'maybes'. Figure 7 then shows that the majority of 42 people would only be willing to spend the lowest amount of £10 - £15 on tree sponsorship, which may not realistically be enough to cover the costs of buying and protecting a fruit tree including stakes and tree guards. This may not therefore be the most effective method for income generation however it may be important in order to help raise some initial revenue.

Figure 8 shows a highly positive response to the importance of a community orchard in Ross-on-Wye with 84 people replying that it would be a useful asset or better. The responses to this question, as well as those to the questionnaire as a whole, suggest that there is significant interest in planting and using a community orchard in the town of Ross-on-Wye.

The evidence collected by the questionnaire has a practical application in that it could be passed on to any community group or organisation who might wish to plant a community orchard in the town. This includes the suggestions for possible orchard locations identified in table 5 and the list of 23 names interested in hearing more about a community orchard. The results also present a strong case for any potential grant opportunities which may exist to help fund a community orchard.

The results of the feasibility study show that the conditions identified for a community orchard do exist in the town, depending on overcoming the two major barriers identified in 4.1. These barriers are explored in more depth in Chapter 5.

4.3 Limitations of Study

As the overall aim of the project is 'to investigate the feasibility of establishing a community orchard in Ross-on-Wye' the study has been broadly successful. A number of conditions for a successful community orchard have been identified and found to exist in the town. There are however a number of limitations inherent in the study.

The method of using interviews to obtain data from existing community orchards yielded a large amount of information on how existing community orchards operate. The information was however limited by the low sample of six community orchards. A larger sample would have allowed for a more comprehensive comparison between community orchards in rural, town and city locations in order to identify whether there were any significant differences. Ultimately however the interviews did achieve the necessary information of how to establish and sustain a successful community orchard.

The questionnaire results helped to show that the conditions for a successful community orchard in Ross-on-Wye appear to be present. There were however some limitations with regards to the questionnaire delivery. By delivering the questionnaire in electronic form, participants had to actively choose to take part in the survey and are therefore not a random sample. It is possible that many people may have clicked the link and decided not to complete the questionnaire due to a lack of interest in the subject matter. This means that people with an interest in the community are perhaps more likely to have completed the survey. This is true for the two groups who received the questionnaire electronically, internet users, and Transition Ross contacts via email, amounting to 51 of the 100 participants.

Of those who completed the questionnaire on a face to face basis there were also a number of problems. In many cases there was some confusion as

to what a community orchard is and an explanation was required. This may have affected answers.

There was much difficulty in persuading members of the public to fill out the questionnaire within the town centre. This was perhaps due to the location and the perception that the questionnaire was a sales attempt. Many more people were willing to participate at the riverside location, where intentions were perhaps viewed with less suspicion. However again this may have affected the randomness of the sample due to the demographic of people in this location which tended to be young families and dog walkers.

There is also the question of honesty and whether respondents were simply replying how they think they 'should' reply or so as not to offend the questioner. This leads to uncertainty as to whether questionnaire answers will translate into reality. For example, many people agreed to sponsor a tree, but did not leave their contact details; this is also the case for many who said they would be interested in volunteering.

There are also a number of variables involved in answering many of the questions. For example, committing to volunteering will depend on what it involves, how often it is required and the location of the orchard, none of which are known to the participant.

If the investigation were to be repeated, a wider more random sample would have provided a more comprehensive picture of Ross-on-Wye residents opinions. Ideally a larger number of local organisations would also have been involved; however there are a limited number of potential community groups in the town who may have an interest in a community orchard.

5. CASE STUDY

Further research was undertaken in order to investigate the two major barriers identified in 4.1:

- Identifying a suitable plot of land for planting a community orchard.
- Identifying a group committed to organising and managing a community orchard.

As one of the major barriers to establishing a community orchard is finding a local group willing to organise and manage it, an attempt was made to contact a number of local community groups in Ross-on-Wye. The intention of contacting these groups was to discuss a potential community orchard project proposal, informed by the results from this feasibility study. A number of organisations expressed an interest, however only Enviroability, a local environmental charity, were willing to discuss the possibility of running a community orchard project.

A meeting was arranged with representatives from Tudorville Allotment Society, Ross-on-Wye Town Council and Enviroability. Enviroability were in the process of applying for a 'Local Food' grant from the 'Big Lottery Fund' for a community food growing project in the town. The aim of this project is:

'To develop a sustainable, community run, not for profit, social-enterprise fulfilling the need for locally produced foods to be available to everyone in the Ross-on-Wye area, that will also address environmental, social and economic impacts'. (Enviroability 2011)

It was agreed that the incorporation of a community orchard into the food growing project would add an extra dimension to the likelihood of a successful grant application.

A total of four possible locations for a potential community food project were identified during the meeting, including a field off Merrivale Lane known as 'The Orchard', two fields in Hildersley near the rifle range and Model Farm, a council leased farm to the east of the town.

The field known as 'The Orchard' does not contain any fruit trees and has no registered owner. The smaller of the two fields in Hildersley also has no registered owner. The other larger field in Hildersley is designated for housing. This left Model Farm as a potential location for a community food growing project. The tenant at Model Farm has expressed interest and has agreed to allow use of part of the farm for the community food project. This includes an area of existing orchard which could be expanded upon.

The results of this feasibility study have been passed onto Enviroability in order to help inform their grant application and business plan for a community food growing project. The results could also be used to help inform what a community orchard should focus on offering local residents, such as events and social opportunities identified in the questionnaire.

As part of a larger community food growing project, a community orchard could have an even wider social, economic and environmental sustainability benefit. However if the grant application is unsuccessful then the two major barriers identified will still require overcoming.

6. CONCLUSIONS

To conclude, a feasibility study investigating the possibility of establishing a community orchard in Ross-on-Wye has been broadly accomplished. The study has managed to investigate the necessary conditions for a successful community orchard through identifying their common features and characteristics via interviews with existing orchard groups. The interviews therefore helped to satisfy the first project objective. A total of three conditions were identified from the interviews including:

- An interest in the benefits offered by a community orchard in the local population.
- A group of individuals willing to volunteer time to the orchard on a regular basis for its maintenance.
- Some form of income generation needed to help cover initial costs such as tree planting.

The questionnaire then helped to determine whether these conditions exist in Ross-on-Wye. It found that there is a good level of interest in the benefits offered by a community orchard with 60% declaring that they would use a community orchard in the town. 84% also suggested that a community orchard would be a useful asset to the town or better.

A total of 38 individuals also expressed an interest in volunteering time to a community orchard project, which suggests that there would be sufficient man hours available to maintain and manage a community orchard.

Additionally 49 individuals suggested they would be willing to sponsor a tree in a community orchard, which would help to generate income to cover expected initial costs. The questionnaire therefore helped to satisfy the second project objective.

Additionally two major barriers to a community orchard were also identified. These are:

- Identifying a suitable plot of land for planting a community orchard.

- Identifying a group committed to organising and managing a community orchard.

A potential solution to these two barriers was investigated through the identification of local charity Enviroability. Enviroability agreed to incorporate a community orchard into their community food growing project proposal. A number of possible locations were identified with one tenant farmer at Model Farm just outside the town expressing interest in the project. The results of this feasibility study have been passed onto Enviroability to help inform a grant application and business plan for the food project. This research helped to satisfy the third project objective of identifying any barriers to planting a community orchard and possible solutions to those barriers.

The feasibility study has therefore investigated the prospects for success of a proposed community orchard as well as demonstrating a number of possible suggestions for what services a community orchard in Ross-on-Wye should focus on providing. Creating and maintaining a community orchard in Ross-on-Wye will require hard work, the conditions are in place but the major barriers still need to be overcome. If they are however, a community orchard will provide Ross-on-Wye with an invaluable local amenity, which will help to improve the town's environmental, social and economic sustainability.

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