

COMMISSIONED REPORT

Commissioned Report No. 023

A Clyde Valley orchards survey

(ROAME No. F02LI21)

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Summary

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Contractor: Ironside Farrar Year of publication: 2004

Background

Orchards have existed in the middle Clyde Valley, between Lanark and Glasgow, over a period of centuries. They have contributed to the cultural and economic wealth of the valley over this period and are still a notable element in the landscape, with no similar area still existing in Scotland. Nevertheless the orchards, in common with other fruit and vegetable growing industries in the valley, have rapidly declined over the latter part of the 20th century and are currently in danger of being reduced to insignificant relic areas within the valley.

This report has addressed all aspects of the orchards including their history, natural heritage value and contribution to the landscape, cultural and economic value of the Clyde Valley. This information includes detailed surveys of orchards and owner attitudes. The information provides a comprehensive database, which will be used as a basis for actions to halt the current decline and create a new environment for the conservation and enhancement of an important cultural resource.

Main findings

The report has amassed a comprehensive set of information describing the existing orchards in detail and confirming their unique status in the Scottish context:

- Comprehensive historical records including statistical accounts indicate a long history of fruit growing with the peak period of the industry in the early 20th century. Scope exists for further study in this area.
- Orchard and owner surveys indicated approximately 70 orchards in the valley with only a few run as commercial concerns. The main crop is the Victoria Plum. Most owners do not consider the orchards commercially viable but many wish to continue to maintain and manage them.
- The orchards make a significant contribution to the landscape character of the valley in key areas where
 a number of large orchards are contiguous. The most important feature is the spectacular spring blossom
 in late April/early May.
- The orchards are at best of local value as habitats, with diverse grasslands beneath the trees and scrub development in unmanaged orchards being the most valuable habitats.

The report concludes that the Clyde Valley orchards are unique in Scotland with particularly high cultural and landscape value. However, as they are not commercially viable they continue to be threatened by decline. Nevertheless a number of opportunities and initiatives exist or can be adapted to assist owners and there is potential for halting or reversing decline by diversifying the usage and products of the orchards. This will require both concerted local co-operation and the help of public agencies.

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1 INTRODUCTION

1.1 Background

The Clyde Valley between Lanark and the southern outskirts of Glasgow has long been famous for its production of fruit and vegetables. A combination of the shelter offered by the enclosing valley sides, a moderate rainfall and well-drained alluvial and valley-side soils has facilitated the intensive production of demanding agricultural produce over the centuries. Despite a long term decline in production, there is still a distinctive character to much of the valley, with glasshouses abounding, neat areas of intensive cultivation on the valley floor and the distinctive 'snow' of fruit tree blossom across the valley sides every spring as, successively, damsons, plums, apples and pears come into flower in the months of April and May.

The Clyde Valley is still an important destination for visitors, and is currently named "The Garden Valley" by the greater Glasgow and Clyde Valley Tourist Board. The current manifestation of this title is a proliferation of garden centres and bedding plant sellers, with fruit and vegetable production playing very much a secondary role in terms of profile and commercial turnover.

Thus a situation prevails in which the original economic mainstay of the Clyde Valley is in decline, replaced by a new industry which in many ways trades on the valley's past reputation and character. The new industry is, however, not closely associated with the valley in terms of the origins of its produce. Most produce and materials are imported rather than grown in the valley, the garden centres being predominantly retail outlets.

By way of contrast recent thinking on sustainability and biodiversity emphasises the importance of local distinctiveness and reducing the distance between producer and consumer. In no area is this more pertinent than in the production and distribution of food. Biodiversity Policies and Action Plans all emphasise the need to reduce the input of chemicals and energy into production and distribution of food as well as to maintain variety in species and cultivars. The production of fruit in particular illustrates the modern trend for intensive agriculture, uniformity of produce and ease of transport and storage in order to supply the modern retail market.

The environmental charity 'Common Ground' was founded with the objective of ensuring that mass production and consumer trends do not obliterate what is left of variety local traditions and distinctiveness. Common Ground has campaigned for traditional orchards and fruit varieties as a key area in which local distinctiveness, biodiversity, sustainability and health are all interlinked. Their campaign has included the invention of 'Apple Day' every year on 21st October as a key promotional event including all sections of the community.

It is the connection between landscape, agricultural production and the economy that has made the Clyde Valley a distinctive landscape in the past. The loss of this connection has led to a decline in distinctiveness and may continue to do so. The current project aims to explore this connection in the past and present and to determine the viability and means of continuing and promoting it in the future. The Clyde Valley is one of central Scotland's most distinctive landscapes and could provide a leading role in demonstrating the connections between agriculture, sustainability and the landscape.

1.2 Purpose of study

Ironside Farrar Ltd, with Heritage Environmental Ltd, Fiona Jamieson and John Butterworth, were appointed by Scottish Natural Heritage in April 2001 to undertake a wide ranging study of the Clyde Valley and

its orchards. The brief was to establish the current and potential contribution of the orchards to the economic and natural heritage value of the Clyde Valley. The objectives of the study include:

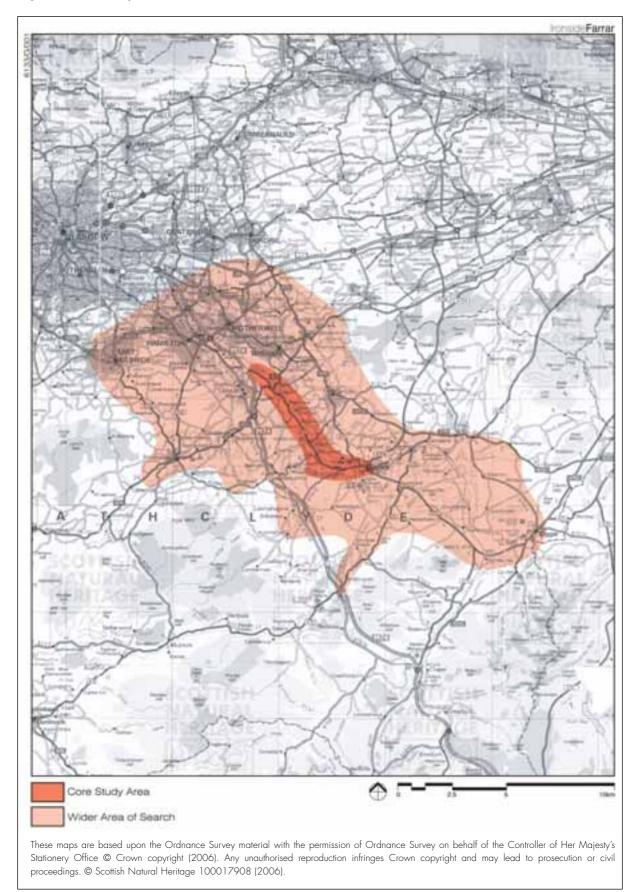
- determining the number and extent of orchards in the Clyde Valley between Lanark and Motherwell and the surrounding area between Glasgow and the Southern Uplands (see Figure 1.1);
- assessing the value of orchards to the natural heritage and landscape character of the Clyde Valley;
- providing recommendations on how the value of the orchards can be maintained and enhanced;
- assessing the orchards' current and potential contributions to the cultural and economic wealth of the Clyde Valley.

The study has included the following elements addressing the objectives:

- a historical study of the development of the orchards from earliest references to the present day;
- an enhanced Phase 1 habitat survey of all orchards of more than 10 trees including details of orchard condition and management;
- a landscape study of the Clyde Valley and the contribution of orchards to its local distinctiveness;
- a collection and identification of fruits to determine the varieties grown;
- detailed consultation with orchard owners and other relevant people or organisations;
- an assessment of the economic viability of orchards and orchard produce currently and in the future.

Initial surveys of the wider study area shown in Figure 1.1 indicated that orchards are not a significant element outside the core area between Lanark and Motherwell. This was backed up by the historical study and orchard survey which found very little indication of orchards in this area. Both currently and in the past they were thinly scattered and small, usually associated with a large house or farm. For this reason the detailed study has concentrated wholly on the core area.

Figure 1.1 Study area



2 HISTORY OF THE CLYDE VALLEY ORCHARDS

Accounts of the fruit growing tradition in the Clyde Valley indicate that it may go back as far as the 5th Century, and certainly references for the medieval period are numerous. Blaeu's map of the Upper and Nether Woods of Clydesdale, based on Timothy Pont's Survey of 1596 displays a figure holding a basket of apples, highlighting the significance of the produce to the county (Figure 2.1). The following is a summary of the detailed historical research in "Clyde Valley Orchards, Historical Research" undertaken by Fiona Jamieson, which is a separate appendix to this report.

There is a long history of fruit growing in the Clyde Valley which is believed to go back to the 5th century. The cultural significance of the area is well documented over the past 300 years. Tourist and statistical accounts are exceptional in providing insight into historic fruit varieties, the pattern of land management and the operation of a commercial fruit growing industry on Clydeside, the leading centre in Scotland for much of this period. Although the orchard area has declined dramatically over the past fifty years, nevertheless, the surviving relic landscape has high cultural value. It remains the best example of its type still surviving in Scotland, albeit degraded.

As a relic orchard landscape, the Clyde Valley's significance is further enhanced by its association with or proximity to a number of historic gardens and designed landscapes included in the Inventory of Historic Gardens and Designed Landscapes — Dalziel House, Lee Castle, Hamilton Palace and Chatelherault. Orchard House, a historic orchard site within the core study area, and the Falls of Clyde designed landscape (embracing the policies of Castlebank, Braxfield, Cora House and Bonnington), the latter part of a World Heritage site, are proposed to be added to the *Inventory of Gardens and Designed Landscapes in Scotland*.

In addition, a number of designed landscapes, some formerly closely associated with the fruit-growing tradition of the Clyde Valley, were identified during this brief historical study but could not be examined on the ground within the research timescale. These are Mauldslie, Milton Lockhart, Stonebyres, Braidwood House, Dalserf House, Garrion Tower, Craignethan Castle. These are likely to be sites of more regional significance, given that some have lost their mansion house or the policy planting is much degraded, but this remains to be verified.

The Clyde Valley slopes have always accommodated most of the tree fruit orchards and much of the bush fruit. There were also strawberry plantations, as well as glasshouses, but there was no major concentration of orchards outwith the core area, apart from a few acres along the banks of the Avon and Nethan and at individual country residences or farm steadings. Grass orchards appear to have been much less common than orchards with an undercrop.

In the 19th century, the orchards chiefly prevailed and were most extensive and productive on the north (or east) bank of the Clyde, having a southern exposure, although there were also a considerable number on the south (or west) bank, some of them very fruitful. This situation is reversed today, with orchards greatly depleted on the northern (or eastern) banks of the Clyde.

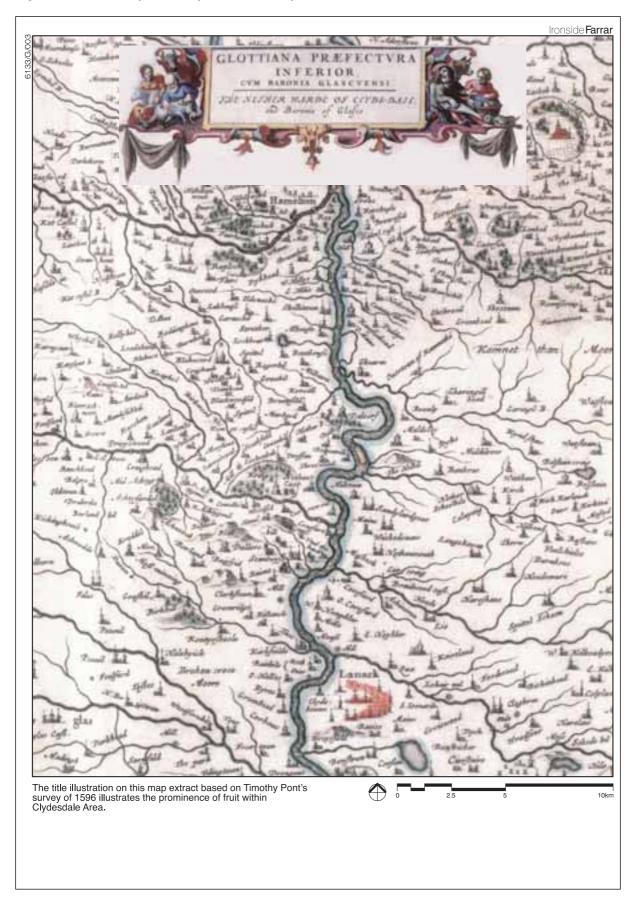
The orchard and fruit growing industry expanded throughout the 19th century and into the 20th. Apples and gooseberries were the main commercial crop in the mid 19th century but the Victoria plum and strawberries gained prominence by the latter part of the century. The zenith of the fruit industry in Clydesdale appears to

have been between 1908 and 1913. Thereafter there was a decline, with tomato growing in heated greenhouses becoming more prominent. The decline in orchards continued between the two World Wars, with the 1950's marking a steep decline due to lack of labour and higher wage costs. The decline has continued through to today. The maps of the Garrion Burn area in Figures 2.2 and 2.3 are indicative of the loss of orchard acreage between the 19th century and recent times.

Plant nurseries with their glasshouses are now the leading commercial enterprises in the Clyde Valley. R & W Scott Ltd of Carluke (now Renshaw Scott) stopped growing their own fruit 15 years ago and instead buy in fruit from outwith the area; other fruit processing firms on which the Clyde Valley was once dependent have closed. Scott of Carluke's archive records could not be accessed within the project timescale, given the wealth of other historical material, but items of potential interest are listed in Appendix VII of the Historical Report (a separate appendix). The firm's emphasis on soft fruit rather than tree fruit, however, suggests that their records may be of only limited value, although this is by no means certain.

It is clear from the historical research that this section of the Clyde Valley has a history of fruit growing that is significant in the Scottish context and that the relict landscape of today is unique and worthy of conservation. The research has highlighted both the complexity and wealth of information on the Clyde Valley Orchards. Considerable opportunity exists for further historical research which may add to our knowledge of individual sites and assist in the interpretation of the Clyde Valley orchard landscape as a remarkable cultural resource.

Figure 2.1 The Clyde Valley – Blaeu's map of 1654



Ironside**Farrar** This map extract shows the extent of orchards in the Dalserf and Garrion Burn areas in the 19th Century. The area is now mainly devoid of fruit trees.

Figure 2.2 Ordnance survey map - 1st edition (1862)

IronsideFarrar Gowkthrapple This map extract shows the extent of orchards on the latest edition 1:25,000 scale map. In reality many of the orchards shown no longer exist. These maps are based upon the Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright (2006). Any unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. © Scottish Natural Heritage 100017908 (2006).

Figure 2.3 Ordnance survey map - current edition

3 CURRENT STATUS OF THE ORCHARDS

A detailed survey of all significant orchards in the Clyde Valley was undertaken as a part of the study. The extent of orchards and owners was established through a combination of desktop research, leafleting and direct contacts. Surveys carried out were a combination of owner questionnaire and habitat survey. The results of the desktop and owner survey are summarised below. The results of the habitat survey are summarised in Chapter 5.

3.1 Context within Scotland and the UK

Consultation with the environmental charity 'Common Ground' and fruit expert John Butterworth has indicated that there are no readily available statistics for orchard numbers, areas and production within Scotland and limited statistics for the UK as a whole. The context for the Clyde Valley Orchards has been determined through analysis and interpretation of relevant literature and the results of consultation with experts and relevant organisations.

Within Scotland it is clear that the Clyde Valley has always been the most significant orchard area. Other areas with a tradition of significant orchard cultivation include Dumfries and Galloway, the Borders and around the Carse of Gowrie on the Firth of Tay. None of these areas currently contains commercial orchards, the few remaining being private concerns.

Within the rest of the UK, England in particular, there are many orchard areas, often significantly larger than the Clyde Valley. As well as growing commercial eating fruit, significant acreage is given over to cider apple production, not a tradition in Scotland. Most of the orchards are in the south of England. Fruits grown include apples, pears, guinces, plums, damsons, cherries, walnuts and cobnuts.

Figures gathered from MAFF, the Countryside Commission, local authorities, wildlife trusts, private organisations and individuals suggest that in 1997 there were 22,400ha of commercial orchards in the UK. Earlier figures suggest there has been a steep decline in this area over the previous three decades.

Table 3.1 Commercial orchard areas in the UK

(Figures from the Common Ground Book of Orchards)

1970: 62,200ha

1980: 46,600ha

1997: 22,400ha

A 64% DECLINE IN 27 YEARS.

3.2 Distribution and abundance of orchards in the Clyde Valley

The core area of search stretches in a 3km wide belt from Overton to Lanark along the Clyde Valley (see Figure 3.1). Within this area approximately 70 orchards were found, concentrated on the sheltered valley slopes around Hazelbank, Crossford, Braidwood and Rosebank. Remaining and vestigial orchards are more or less confined to sites which are of little economic value – this is why they have survived. They occur on slopes that are too steep to intensify, or in gardens and small-holdings which are too small to develop for agriculture, and where the local planning authority will not allow development.

In total 60 orchards were surveyed with a further 11 noted but not accessible to survey.

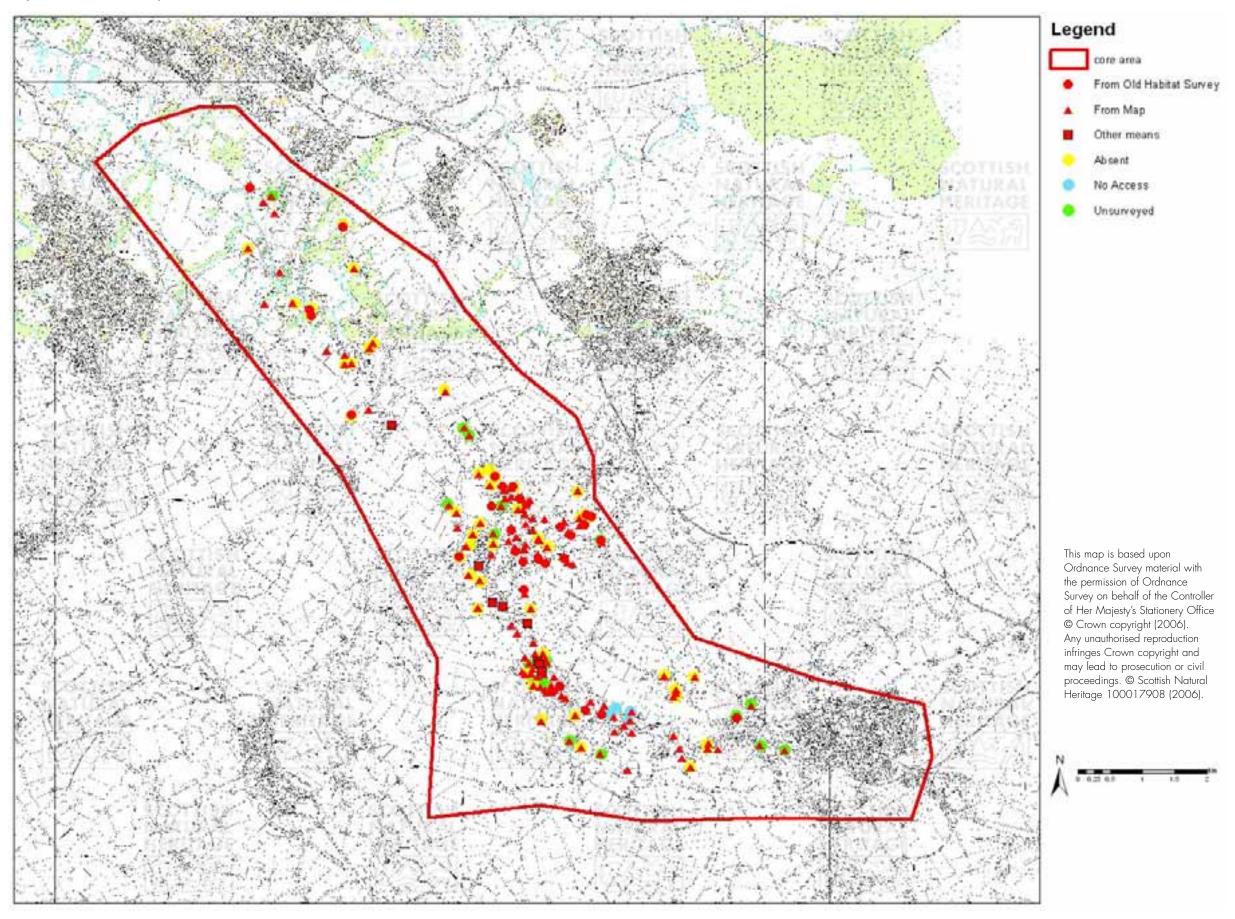
Table 3.2 provides some basic statistics on the orchard resource. A total area of about 64ha was recorded in the Clyde Valley, compared a historical maximum of approximately 307ha (761 acres) of commercial orchards recorded in 1908.

 Table 3.2
 Clyde Valley orchards resource

Number of orchards surveyed:	60
(Number of orchards unsurveyed:	11 (8 unable to contact owner; 3 access denied)
Total area of orchards:	64.4ha
Average area of orchard:	1.0ha
Total number of fruit trees:	7515 (approximately)
Average number of fruit trees per orchard:	114
Average density of fruit trees:	117 fruit trees/ha
Largest orchard:	2.4ha; 1040 fruit trees

A spreadsheet of orchard survey information, including location and size, is given in Appendix 1. More detailed information is given in a separate appendix.

Figure 3.1 Core study area and orchard distribution



3.3 Size and condition of orchards

The 60 surveyed orchards have been classified into six groups depending on their size, condition and management regime. These are listed below in Table 3.3, with reference to examples from the spreadsheet in Appendix 1.

Table 3.3 Types of Clyde Valley orchard

- Large working orchards (>100 trees, maintained): 8 sites, eg Sites 1, 2, 3.
- Small working orchards (50–100 trees, maintained): 8 sites, eg Sites 4, 8, 24.
- Garden orchards (up to 50 trees, maintained): 7 sites, eg Sites 5, 7, 9.
- Large neglected orchards (>50 trees): 17 sites, eg Sites 10, 11, 12.
- Small neglected orchards (<50 trees): 12 sites, eg Sites 36, 40, 43.
- Defunct orchards (few if any trees): 8 sites, eg 13, 27, 41.

The locations of orchard types are shown in Figure 3.2 and further statistics are given in the spreadsheet in Appendix 1.

It is clear from these figures that the majority of remaining orchards are being neglected and allowed to decline, or already have done so.

3.4 Fruits grown

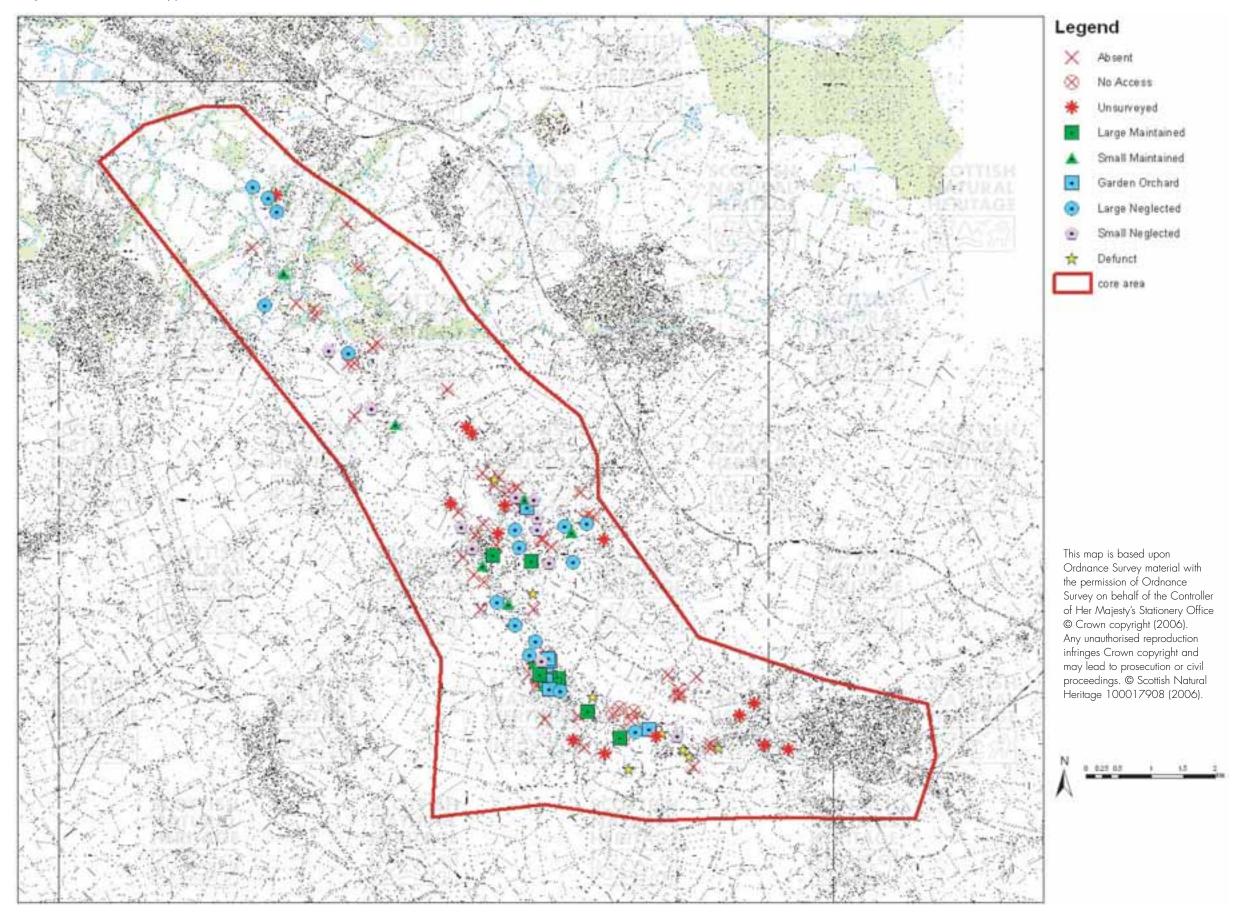
Fruit varieties were identified by Mr John Butterworth, and some specimens were sent to the Brogdale Horticultural Trust in Kent for identification. In total 53 varieties have been identified, but there are likely to be further varieties discovered and the Brogdale Trust was unable to identify all of the varieties sent to them. Table 3.4 overleaf provides a list of the identified fruit varieties. By way of comparison there are well over 6,000 recorded varieties of apples along in the UK.

The research confirms that by far the most important commercial fruit is the Victoria Plum. Bramley apples are also ubiquitous but are not generally a commercial fruit and damsons are also abundant and ubiquitous but not generally a commercial fruit.

 Table 3.4
 Fruit varieties (apples, pears and plums) in the Clyde Valley

Fruit Variety	Abundance
Victoria plum	Abundant and ubiquitous
Bramley apple	Frequent and ubiquitous
Damson	Abundant and ubiquitous
Grenadier apple	A few in most orchards
Worcester Pearman apple	A few in most orchards
Maggie pear	Frequent
Hassel (Hazel) pear	Frequent
Conference pear	Occasional
Pit Maston Duchess pear	Rare
Laird Lang pear	Rare
Maggie Duncan pear	Rare
King of the Pippins apple	Rare
Red Victoria apple	Rare
Damascene plum	Rare
Cambusnethan Pippin apple	Rare
Lord Grosvener apple	Rare
Whitcorn plum	Rare
Shore Egg pear	Rare
Yellow gage	Rare
Pershore plum	Rare
Ellison's Orange apple	Rare
Blenheim Orange apple	Rare
Asian pear	Rare
Beurre Hardy pear	Rare
Jargonelle pear	Rare
St. Julian plum	Rare
River's Early plum	Frequent
Beauty of Bath apple	Rare
Lord Lambourne apple	Rare
Allington Pipin apple	Rare
Russet apple	Rare
Gladdston plum	Rare
George Neal apple	Rare
Lord Suffield	Rare
Pitmaston Pine	Rare
Irish Peach apple	Rare
Thornton pear	Rare
Louise Bonne pear	Rare
Comice pear	Rare
Aurther Turner apple	Rare
Scotch Bridget	Rare
Gascoyne's Scarlet apple	Rare
Close Golden Drop plum	Rare
Burbank plum	Rare
Laxton Superb apple	Occasional
William's bon Cretien pear	Rare
Cherry plum	Occasional
Irish Damson	Rare
Howgate Wonder apple	Rare
Lane's Prince Albert apple	Rare
Monark plum	Rare
Myroblain pear/Bullace	Ubiquitous plum rootstock

Figure 3.2 Orchard types and areas



3.5 Current ownership and management

The productive orchards and many of the Garden orchards are intensively managed by mowing, spraying and pruning, but very few owners are replacing lost fruit trees. Most neglected orchards are completely unmanaged or are very lightly grazed by stock, and a few are heavily grazed. The implications of these management regimes for nature conservation are discussed in Chapter 5.

Of the 60 questionnaires completed 14 owners said that they sell fruit. These are sites: 1, 2, 3, 6, 12, 13, 14, 18, 19, 26, 27, 46, 53 and 56 (see Appendix 1).

The opinions and perceptions of orchard owners are provided on individual orchard recording sheets in a separate Appendix. The following points summarise the views of the 60 orchard owners interviewed:

- Virtually all orchard owners said that they value their orchard, mainly for cultural and aesthetic reasons.
- Only a few owners give priority to nature conservation.
- Many orchard owners expressed a long term desire to restore their orchard even before an orchard scheme was mentioned.
- Virtually all orchard owners said that they would consider entering into an orchard scheme.
- Most owners require advice on fruit and management, financial and marketing assistance.
- A significant proportion of owners consider themselves too old or otherwise unable to do the work of restoration themselves and would require assistance with labour.
- Most owners recognise that a restored orchard is unlikely to make a profit, but they would like to restore
 and continue operating anyway.

Future trends and management options are discussed in Chapter 4 (Orchards and Landscape Character), Chapter 5 (Orchards and Natural Heritage) and Chapter 6 (Economic and Cultural Value).

4 ORCHARDS AND LANDSCAPE CHARACTER

The orchards of the middle Clyde Valley feature in historical and statistical accounts and in travel writings. Clearly they have contributed to the cultural heritage and landscape character of the valley. As part of this study a landscape character assessment has been undertaken to determine how much influence orchards still have on the character of the landscape. The study has also identified landscape trends and potential future scenarios for the Clyde Valley.

4.1 Landscape context

The River Clyde rises south of Elvanfoot in the Southern Uplands. From here it meanders in a northwards direction in the increasingly open upper valley. South of Carstairs it changes direction to the west and south west, passing south of the town of Lanark. Here lie the Falls of Clyde and the World Heritage Site of New Lanark, marking the border with the middle Clyde Valley, which is the core area of study. The valley and its tributaries are also designated as an Area of Great Landscape Value.

The middle Clyde Valley is an incised river valley located in an area of plateau farmland, the sheltered steep side slopes and woodland contrasting with the more open and undulating surroundings. At Kirkfieldbank, south west of Lanark, the river passes below two bridges and is joined by the Mouse Water, feeding in from a meandering gorge to the north east. The river flows rapidly west and then northwest through a narrow valley, hemmed in by woodland and houses on its southern side and woodland and fields on the northern. The lowest falls in the Clyde are at Stonebyres, 2km west of Lanark.

At Crossford, a village 5km north west of Lanark, the valley floor opens out to a U-shaped valley across which the river meanders, characterised by intensive agriculture and large fields on the floodplain. Here it is joined by the River Nethan from the south west and the Fiddler Burn from the north east. The town of Carluke lies to the west on the surrounding plateau. The valley sides are still steep, supporting a pattern of small tributary burns (known locally as 'gills') and woodland strips which enclose small, steep pasture fields.

At Rosebank, 9km north west of Lanark, the river meanders tightly and the valley floor is flat or undulating with a surrounding parkland character influenced by the Maudslie Estate. The valley sides are densely wooded northeast of the river, but have a pattern of wooded gills and pasture south of the river.

The river again meanders tightly around Dalserf to the Garrion Bridge (carrying the A71 trunk road), 11km north west of Lanark, with a ridge of land above Garrion Farm creating enclosure to the north west. The Garrion Burn forms a wooded tributary from the north east. Northwest of this spur the valley once more begins to open up, with the south western slopes becoming shallower and undulating, the river gently meandering through a widening flood plain.

Beyond Upper Carbarns, where the A72 leaves the riverside, the valley is wide and shallow, with clear urban fringe influences from Wishaw and Motherwell to the north and with the M74 and Larkhall lying to the south. Beyond Baron's Haugh, 2km upstream, the river passes into the predominantly urban landscape of the eastern Glasgow conurbation.

Geology and geomorphology

The principal rock formations in the study area are sedimentary, belonging to the Old Red Sandstone and Carboniferous. The sandstone forms the higher ground do the south, with the Falls of Clyde marking the transition to softer carboniferous deposits to the north (coal measures, millstone grit and limestone). The surrounding plateau farmland is formed over harder igneous intrusions, the highest point of which includes Black Hill (290m AOD), above Stonebyres.

The course of the Clyde cuts across the prevailing geology and was probably established before the last glacial period. Successive glaciations deepened the valley between Crossford and Hamilton. The river itself and tributaries have also cut through glacial deposits, and sometimes the bedrock, forming alluvial terraces on the valley sides. The prevailing superficial deposits are boulder clay on the valley slopes and surrounding plateau farmland with glacial sands and gravels and river alluvium along the floor of the valley.

There are numerous tributary streams along the valley sides, the main ones being the Mouse Water, Fiddler's, Jock's and Garrion Burns flowing from the north and the Rivers Nethan and Avon from the south. Numerous other small incised burns known locally as 'gills' flow down the valley sides to join the Clyde.

Soils

The predominant soil types in the area are imperfectly-drained non-calcareous gleys derived from the overlying mantle of glacial tills and boulder clays. The better soils are the brown forest soils on the fluvioglacial sands and gravels and the freely-drained loamy alluvial soils formed over river deposits along the valley bottom. Consequently the valley floor (typically land capability 2) is used for the most intensive agricultural production and demanding crops, whereas the lower slopes (land capability 3 and 4, often limited by gradient) are more suitable for less demanding forms of agriculture including leys, pasture and orchard production. The upper slopes and plateau (mainly land capability 4) are dominated by pasture.

4.2 Previous landscape character assessments

The Clyde Valley has been covered by at least two previous landscape character studies:

- 1. Glasgow and the Clyde Valley Landscape Assessment, 1999;
- 2. Clyde Valley Area of Great Landscape Value Landscape Assessment, 1998.

A regional character assessment features in SNH's Glasgow and the Clyde Valley Landscape Assessment. Figure 4.1 shows the area covered and the main landscape character types and areas described, with the Mid-Clyde Valley highlighted. The Mid-Clyde Valley and its main tributaries are described as an Incised River Valley landscape type, characterised by:

- narrow, steep sided valleys cut deeply into the plateau farmlands;
- rich broadleaf woodlands on steep valley sides;
- agriculture, where valleys are wide enough, with a mixture of pasture, arable, market gardens and orchards;

- a series of policy landscapes, castles and other historic sites;
- linear villages and winding roads;
- focal role of rivers and tributaries;
- rich, sheltered and settled areas, often hidden within the wider landscape.

Key landscape issues affecting the valley include:

- the importance of ensuring that woodland, which makes an important contribution to landscape character and is often of particular nature conservation importance, is managed effectively and appropriately;
- the decline of orchards which were once characteristic of the main Clyde Valley;
- the decline of field boundaries hedges, walls and trees;
- the visual and landscape impact of inappropriate development, (eg certain suburban housing developments), particularly given much of this landscape type's designation as an AGLV;
- potential responses to subsidence and erosion along water courses, and the importance of conserving natural river landscapes and of ensuring that management responses do not comprise major engineered solutions which would be out of scale and character with the intimate valley landscapes;
- concerns that minor or major road improvements could result in the loss of important landscape features
 or characteristic qualities, and that people's perceptions of the intimate valley landscapes could change
 as a result.

Specifically the study makes mention of the orchards:

'Within the main valley of the Clyde between Hamilton and Lanark there are a number of orchards, reflecting the area's history of fruit growing. These orchards make a significant contribution to the character of the valley. Many of these are derelict and in decline, reflecting the economic changes that have affected this sector of farming. The landscape is sensitive to the continued decline of these orchards.'

The study recommends examining ways of supporting the fruit industry with the objective of encouraging management and restoration of orchards within the larger valleys, particularly along the Clyde. This is to be viewed as part of a wider-ranging woodland planting and management strategy.

The more detailed Landscape Assessment focuses in more detail on the Clyde Valley Area of Great Landscape Value. The AGLV extends from east of Lanark, up the middle Clyde Valley to Hamilton and includes the valleys of the Rivers Nethan and Avon.

The study identifies 9 landscape character types within the AGLV:

- Plateau Farmland;
- Rolling Farmland;
- Narrow Incised Rivers;

- Broad Incised Rivers;
- Open Valley;
- Valley Floor;
- Valley Side;
- Valley Shoulder;
- Urban Fringe.

The extent of each type is shown in Figure 4.2.

Most of these landscape types are found in more than one location throughout the AGIV. In particular there is a vertical transition from the River Clyde at the valley bottom to the surrounding plateau farmland represented by the sequence: Valley Floor, Valley Side, Valley Shoulder and Plateau Farmland. These landscape character areas reflect the changes resulting from the topography of the valley section and can be seen quite clearly along much of the Clyde Valley.

Most of the orchards are located in the Valley Side character area, which lies between Kirkfieldbank and Hamilton on the south western side of the valley and the Fiddler Burn and Motherwell on the north eastern side of the valley.

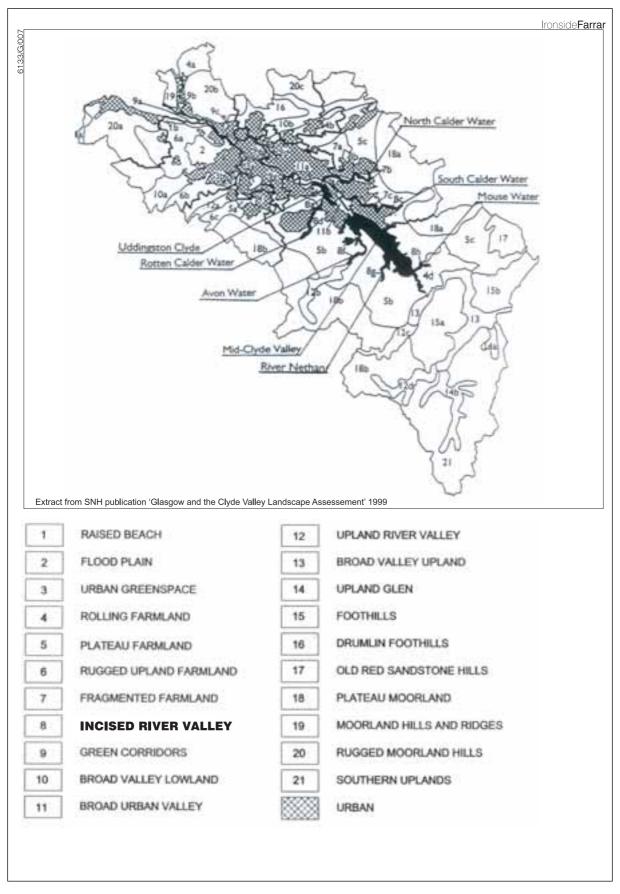
The lower boundary of the steep Valley Side is at the marked break with the valley floor, which is generally flat or gently sloping. The upper boundary is with the valley shoulder or plateau farmland, where the side slopes ease off to a convex transitional zone characterised by a more open pastoral landscape.

The valley sides are characterised by numerous small burns (known locally as 'gills') which cut into the slope and usually support semi-natural woodland. Fewer, larger burns are deeply incised and break through the side slopes as narrow incised river valleys. The woodlands of the burns combine with areas of broadleaf woodland, blocks of coniferous planting and orchards to give the valley its woodled character.

A number of designed landscapes straddle this character area, particularly on the north and east side of the valley, whereas villages and farms tend to be concentrated on the south western side. The older settlements tend to sit comfortably in the landscape due to their location and use of local materials. More modern developments, including greenhouses, garden centres and modern suburban houses are less sensitive, often clashing visually with the otherwise rural landscape. Many of the slopes are characterised by the geometric rows of fruit trees in the orchards, forming a significant landscape feature, particularly in spring. The report notes that many are derelict or lost.

Towards Hamilton and Motherwell, the urban influences become stronger, with agriculture under pressure, field boundaries breaking down and fewer farmland buildings intact. The proximity of the urban areas and their building mass further influences the character of the valley sides.

Figure 4.1 Clyde Valley regional landscape context



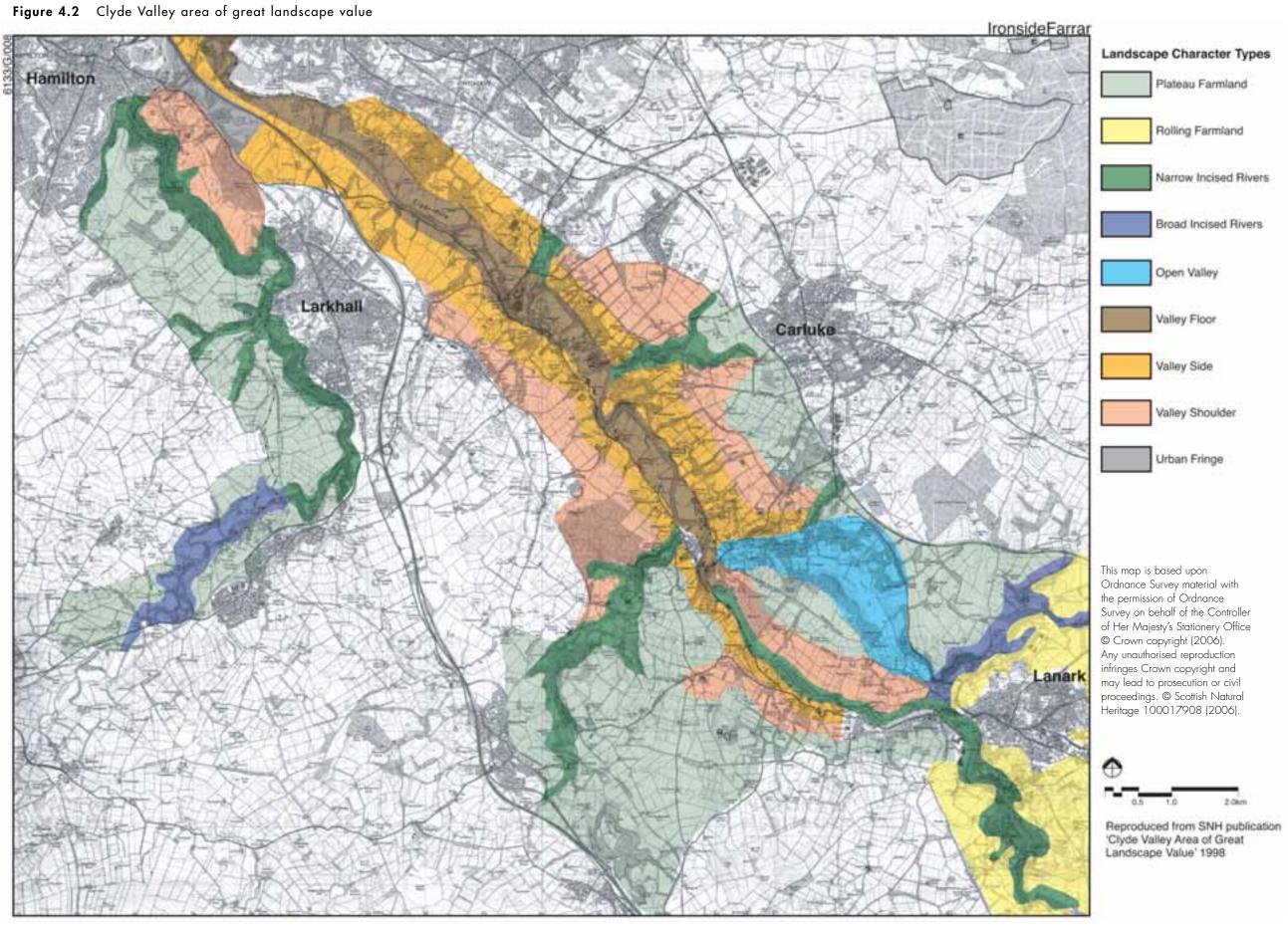
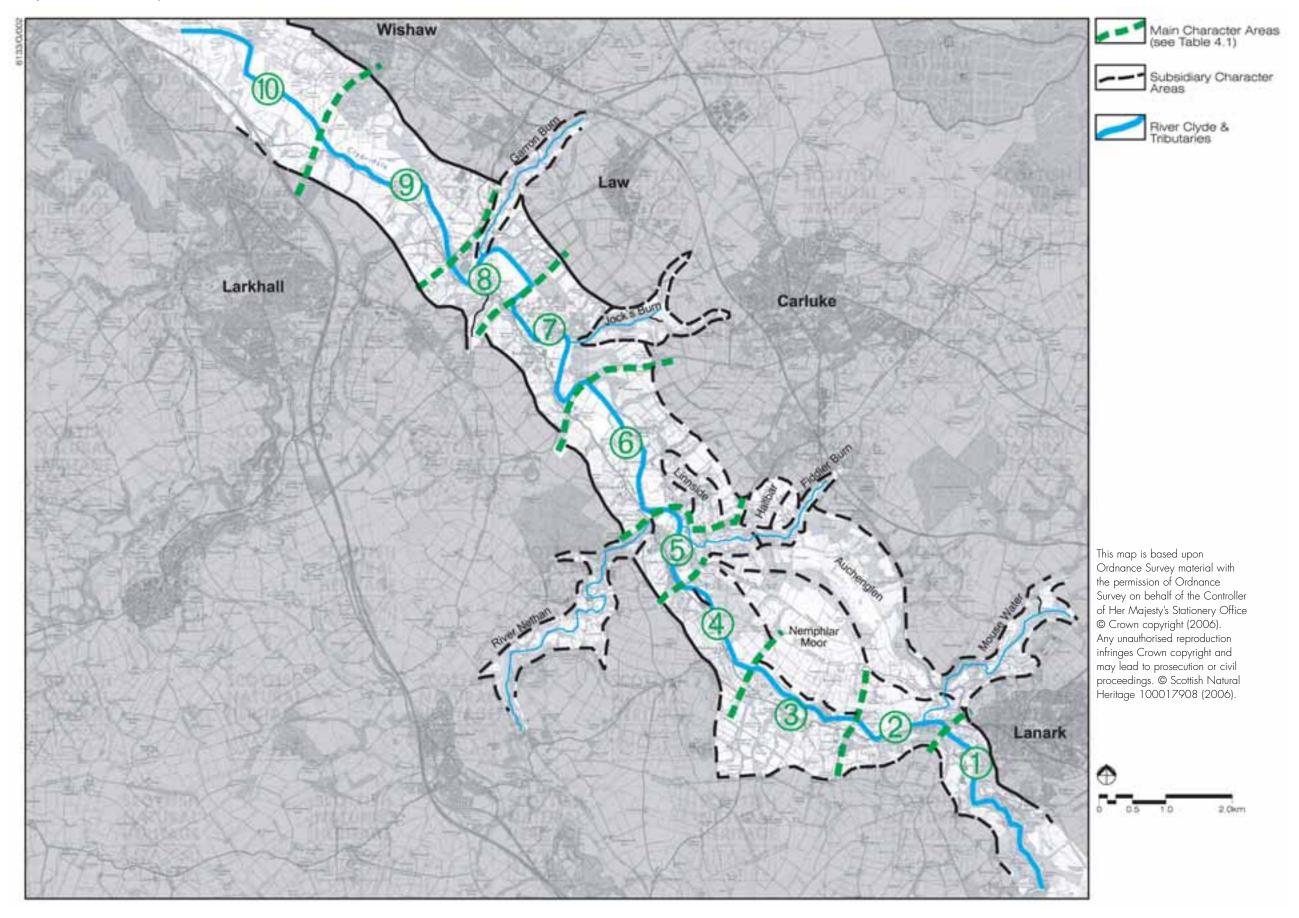


Figure 4.3 Landscape character areas



Key landscape issues identified in the AGLV report include:

- sensitive management of designed landscapes to protect their integrity as far as possible;
- lack of woodland management which threatens the overall extent of tree cover because of lack of natural regeneration, species diversity and replanting;
- loss of field boundary trees;
- decline of field boundaries, particularly hedges, through inadequate maintenance;
- control over inappropriate, poorly located or designed developments;
- management of surviving orchards to promote productivity and longevity and maintain existing visual character;
- Garrion Bridge road proposals with consequent disturbance of land and impact on local character.

Specific guidelines for woodland and orchards include:

- explore opportunities to introduce a maintenance programme for farm trees and shelterbelts to create an ongoing healthy structure of mixed age and suitable species;
- on lower slopes examine the feasibility of redeveloping fruit orchards for productive use. Establish a market for the fruit and source aid for orchard owners;
- enlist the help of relevant organisations and authorities in the renewal of orchards;
- establish a management programme for the replanting and ongoing development of the fruit orchards;
- consider the introduction of other varieties and species of fruit to serve the contemporary market.

The existing studies clearly indicate the importance of the orchards in contributing to the character of the Clyde Valley. They also emphasise the decline in the areas and upkeep of the orchards and the need to implement management strategies to halt and reverse this trend. Also emphasised is the corollary to the situation of decline, in which the increase in garden centres and other themed attractions has occurred as a part of agricultural diversification. This had led to an increased urbanisation of the valley, particularly from Crossford northwards.

4.3 Landscape character assessment

The existing AGLV landscape assessment is comprehensive and objective in its characterisation of the Clyde Valley. It is not the purpose of the current landscape study to systematically re-evaluate this assessment. Further landscape character assessment as part of this study was carried out concentrating on the sequence of change along the length of the valley between Lanark and Hamilton and with particular reference to the influence of orchards on the landscape.

The assessment methodology is based on the 'Interim Landscape Assessment Guidance, 1999' published by SNH and the Countryside Agency. It records both objective and subjective observations, but a more

subjective approach was taken compared with the AGLV study. The assessment examined the sequence of change much as might be experienced by the majority of linear travellers along the A72 or Clyde Valley walkway, in particular. The study has also looked in depth at the seasonal change and cultural influences of the orchard areas, with the spring blossom and the autumn fruit harvest being potentially important seasonal contributors to the character of parts of the Clyde Valley.

4.4 Landscape character areas

The valley between Lanark and Motherwell divides into ten linear sequential character areas, distinguished principally by their topography and land use but also by other features such as extent of settlement and more subjective qualities such as sense of scale and enclosure (see Figure 4.3 and Table 4.1).

Table 4.1 Middle Clyde Valley character areas

- 1) New Lanark to Kirkfieldbank
- 2) Kirkfieldbank to Linnville
- 3) Linville to Hazelbank
- 4) Hazelbank
- 5) Crossford Village
- 6) Crossford to Overton
- 7) Overton to Dalserf
- 8) Dalserf to Garrion Bridge
- 9) Garrion Bridge to Carbarns
- 10) Carbarns to Hamilton

A number of other character areas influence the periphery of these areas, either as incised gorges cutting into the main valley landscape or as subsidiary features in line with valley. The principal areas are shown in Figure 4.3 and are:

- a) Mouse Water
- b) Auchenglen
- c) Nemphlar Moor
- d) Fiddler Burn/Hallbar
- e) Linnside
- f) River Nethan Valley
- g) Jock's Burn
- h) Garrion Burn

Detailed Descriptions of the Character Areas are given in the following pages, together with illustrative photographs.

I NEW LANARK to KIRKFIELDBANK

Location and extent

Between New Lanark and the Clydesholm Bridge, including the river gorge, the southwestern edge of Lanark, including Braxfield Park and Kirkfield Road and Byretown Road to the southwest of the River.

Description

A pleasant and varied river valley landscape with a river and woodland core rising to open valley shoulders overlooked by a leafy suburban fringe, with issues of landscape degradation and management.

Small to medium scale enclosed steep sided river valley, with fast-flowing winding river. Riverbanks densely covered with semi-natural woodland. Lower and middle slopes with mature conifer/mixed forestry, upper slopes more rolling or shelved, with pasture, glasshouses or leafy suburban edge (on the Lanark side). The riverside is fairly inaccessible, with tracks or paths mostly higher above river. Higher slopes with minor roads and scattered houses.



The River Clyde flows through natural woodland growing on the lower slopes and banks

Positive features

- Fast flowing wide river.
- Mature semi-natural woodland.
- Enclosure enhancing seclusion and drama of river.
- Varied well-wooded suburb of Lanark.



Conifer plantations dominate some of the mid slope areas with agriculture and glasshouses on upper edges

Negative features

- Areas of monoculture conifers on lower slopes.
- Intrusive glasshouses on western side.
- Poor hedgerows on upper slopes.
- Sewage treatment works by river.

Orchards

Little evidence of orchards except for isolated fruit trees and garden plantings.

Management issues

- Woodland management on riverside and lower/middle slopes including semi-natural woodland and plantations. To maintain/enhance the landscape and biodiversity.
- Restoration of hedgerows and hedgerow trees on upper slopes.
- Control of inappropriate/poorly designed development on upper slopes including planting of tree screens where appropriate.



The village of Kirkfieldbank marks the edge of the character area

2 KIRKFIELDBANK to LINVILLE

Location and extent

Clydesholm Bridge to the footbridge below Linville, including the river, the south-facing slopes up to East Nemphlar, Kirkfieldbank, Linville and the surrounding slopes south of the River.

Description

An attractively set riverside village encompassing traditional and modern aspects set opposite a rural valley side, the two providing an interesting contrast.

Small to medium scale semi-enclosed river valley, with broad, fast-flowing meandering river. North banks densely covered with semi-natural woodland. South banks dominated by settlement and gardens or other plantings. Higher slopes more rolling, with pasture and narrow incised woodled tributaries to main river. Busy main road close to river. Kirfieldbank is a traditional linear village with areas of new housing. Linville is a small village dominated by a mid 20th century even-aged housing development.



The village of Kirkfieldbank contrasts with the tree covered rural character of the northern bank of the river

Positive features

- Fast flowing wide river.
- Mature semi-natural woodland along north bank.
- Traditional village at Kirkfieldbank with sympathetic style new housing.
- Kirkfieldbank gardens backing onto river.

Negative features

- Stark exposed housing on higher ground at Linville.
- Busy main road close to river and through village.
- Caravan/camping site (well hidden).

Orchards

Little evidence of orchards.

Management issues

- Woodland management to maintain/extend semi-natural woodland.
- Control of inappropriate and poorly designed development.
- Screening existing development with tree planting.

Mouse Water

The Mouse Water enters the River Clyde from the north, just west of the A72 crossing, issuing from a narrow ravine with steep crags and dense semi-natural woodland. Further north and east the river meanders through a small scale incised valley containing woodland and pasture, with areas of arable and glasshouse farming, reminiscent of the main Clyde Valley.

Auchenglen

A wide, curving medium-sized valley between Mouse Water and Fiddler Burn (originally the course of the Mouse Water), separated from the main Clyde Valley by an 'island' of plateau farmland around Nemphlar. The valley provides a simple harmonious lowland setting of woodland and pasture for Lee Castle but has little physical connection with the main Clyde Valley and has an insignificant watercourse.



Auchenglen is a short, medium scale valley lying parallel to the Clyde

3 LINVILLE to HAZELBANK

Location and extent

The footbridge below Linville to Low Wood, including the river, the steep wooded slopes on the north bank and the slopes and undulating farmland to the south rising towards Stonebyres and Black Hill.

Description

A rural river valley broadening into rolling semi-wooded countryside, with a powerful and dramatic river at its core.

Small to medium scale enclosed river valley, with broad, rapid flowing, meandering river including dramatic rapids and waterfalls and a hydro power station. The steep rocky banks are densely covered with seminatural woodland. The north slopes of the valley are dominated by the broad open pasture slopes of the **Nemphlar Moor** area, which appears more akin to the plateau farmland in character. The south slopes rise in more complex rolling topography around Stonebyres and below Black Hill. There are many small woodlands, tree belts and narrow incised woodled tributaries to the main river, enclosing small fields and scattered farms/houses. The busy, tightly twisting main road is well removed from river.



The river flows dramatically towards Stonebyres Falls

Positive features

- Fast flowing wide river with dramatic waterfalls.
- Mature semi-natural woodland along steep banks.
- Small scale mixed and deciduous woodlands on southern valley slopes.
- Narrow enclosed, often dramatic views framed by trees.
- Walkway path along river.



The rolling wooded fields around Stonebyres contrast with the large open fields of the Nemphlar Moor area to the north of the river (left side of picture)

Negative features

- Hydro power station in otherwise natural-looking gorge (well hidden from most views).
- Electricity transmission line cutting up valley side.
- Adjacent open pasture with bland character on north side.

Orchards

One or two large and small remnant orchards are located in this character area.

Management issues

- Maintaining/expanding existing orchards.
- Restoring/maintaining hedgerows and hedgerow trees.
- Management of existing semi-natural woodlands.

4 HAZELBANK

Location and extent

Low Wood to the Carfin footbridge, including the river, Westside of Nemphlar and Big Wood on the north east side and the slopes around Hazelbank on the south west side.

Description

The 'orchard heart' of the valley based round a small traditional village with the cultivated orchards on the north east facing slopes contrasting with woodland and pasture on the opposite south facing slopes and a fast flowing river at its core.

Medium to large scale semi-enclosed valley. Focused around a broad, fast flowing river including rapids. Banks support areas of semi-natural woodland and trees. North side of the river is dominated by mixed woodland and scrub/regenerating woodland. On the south west side of the valley slopes rise steeply, dominated by small tree belts, hedgerows and orchards with scattered houses and glasshouses. Busy main road close to but mainly visually separated from river.



Extensive orchard areas and blossom in the late spring

Positive features

- Fast flowing wide river.
- Mature semi-natural woodland along steep banks.
- Extensive orchards and small woodlands.
- Small traditional village.

Negative features

- Intrusive glasshouses (some derelict).
- Busy main road.
- Large area of plantation woodland north of river appears little-managed.



The patchwork of orchards and small fields on the south west side of the river contrasts with the large open fields and woodland to the north east

Orchards

Extensive managed and relic orchards are located in this character area.

Management issues

- Opportunity to capitalise on extensive orchards by managing existing resource and reversing decline in some areas.
- Management of semi-natural woodland to maintain woodland network and linkages with orchards.
- Control of inappropriate and poorly designed development to maintain rural character.

5 CROSSFORD VILLAGE

Location and Extent

The Carfin footbridge to the confluence with the River Nethan and ascending the Fiddler Burn to Birkhill Farm. Including the rivers, Crossford village and Braidwood Road.

Description

The main village and a historical crossing point in the valley, marking a transition between the fast flowing river and enclosed character of the valley to the southeast and the broader flat-bottomed valley and meandering river to the northwest as well as a focus for side valleys of the Fiddler Burn and River Nethan.

Medium scale semi-enclosed flat bottomed valley with tributaries focused around the broad, meandering river and Crossford village. Enclosed by rolling slopes with pasture and semi-natural woodland belts. Settled, domestic character with small traditional village and traditional stone arched bridge, mixed with areas of newer housing and scattered peripheral housing areas. A number of small orchards fringe the village. Busy main road and narrow winding lanes. Views are more open than upstream but still limited by the valley slopes.



The village of Crossford lies enclosed by the valley sides and woodland belts

Positive features

- Sizeable traditional village and bridge.
- Mixed pasture, woodland and orchards.
- Wide meandering river.
- Complex of tributaries and side valleys.

Negative features

- Some intrusive newer housing.
- Busy main road.

Orchards

A number of remnant orchards are located in this character area.

Management issues

- Management of existing orchards and creation of new orchards to maintain/expand orchard character
 in this area, linking with Hazelbank and the orchards around the Fiddler Burn and Linnside (see Character
 Area 6).
- Control of inappropriate and poorly designed development.
- Restoration/management of hedgerows and hedgerow trees on upper and side slopes.
- Continuing conservation/management of semi-natural woodland and plantations.

Fiddler Burn/Hallbar

A small scale branched side valley to the east of the main character area. The northerly branch contains a narrow lane ascending to the village of Braidwood and holds Hallbar Tower, a restored Tower House with a newly planted orchard, situated by a small ravine. The southern fork holds the Fiddler Burn, a rapid watercourse in a narrow ravine enclosed by steep slopes clothed with mature deciduous woodland. Relic and recently planted orchards lie at the lower end near Crossford. Rolling small scale farmland lies between the two branches.



Hallbar Tower has a small newly planted orchard

River Nethan

The River Nethan joins the Clyde from the west, just north of Crossford, after plunging through a narrow densely wooded ravine, below Craignethan Castle. Further south and west the valley opens out to a smaller scale version of the Clyde Valley with steep enclosing slopes holding semi-natural woodland and pasture and a more fertile valley floor with small arable fields and farms/nurseries around a tightly meandering river.

6 CROSSFORD to OVERTON

Location and extent

The confluence of the River Nethan with the Clyde to the southern Maudslie Estate Bridge including the river floodplain and valley sides.

Description

An agricultural valley area of managed and open character slightly marred by unscreened commercial and agricultural buildings and a busy main road visible from most areas.

Medium to large scale semi-enclosed flat bottomed valley with a broad, meandering river and flood plain supporting intensive agriculture. Enclosed by rolling slopes of improved pasture and narrow semi-natural woodland belts, including small tributary burns. Large farm buildings and glass houses/retail outlets on valley floor with scattered smaller houses and farms on valley side. Busy main road conspicuous on southern side and narrow winding lanes ascend the valley side slopes. Views up and down the valley are open but limited by the valley slopes and spurs.



Extensive arable fields on the river flood plain enclosed by rolling slopes with woodland belts

Positive features

- Mixed pasture, woodland and hedgerows on valley sides.
- Wide meandering river.

Negative features

- Intrusive farm buildings.
- Garden centre/glasshouses are unscreened and visually intrusive.
- Busy main road unscreened.

Orchards

A number of small remnant orchards are concentrated in one part of this character area.

Management issues

- Screening of intrusive development and main road.
- Maintenance of woodland and hedgerows on valley sides.
- Conservation of remaining orchards.



The intimately enclosed side valley around Linnside contrasts with the main valley

Linnside

A small scale side valley within the main character area but distinctive and visually separated from within. A still, sheltered atmosphere enclosed by steep slopes clothed with mature deciduous woodland, containing a small settlement and a few larger houses with small relic orchards.

7 OVERTON to DALSERF

Location and extent

The southern Maudslie Estate Bridge to the river bend downstream of the northern Maudslie Bridge, including the river floodplain, Rosebank village and valley sides.

Description

A mature estate landscape with elements of both grandeur and decline providing a picturesque setting for the River Clyde and contrasting with the intensive agricultural areas both up and downstream.

Medium scale semi-enclosed flat bottomed valley with a broad, meandering river and flood plain supporting estate parkland with mature specimen trees. Two ornamental stone arch bridges, one with gatehouse access to the former estate. This section of the valley is enclosed by rolling slopes, predominantly wooded but with some improved pasture and narrow semi-natural woodland belts following small tributary burns. Rosebank village forms the focal settlement, the oldest part built in a distinctive mock-tudor style, but with newer housing and a commercial garden centre. Busy main road screened by woodland and narrow winding lanes ascending the valley side slopes. Views are limited by trees and the valley slopes and spurs.



Meandering river and a mature parkland landscape characterise the Maudslie estate policies

Positive features

- Parkland, specimen trees and mature woodland.
- Ornamental bridges.
- Wide meandering river.
- Village and hotel of distinctive co-ordinated character.

Negative features

- Intrusive garden centre/glasshouses in village.
- Water treatment works (not conspicuous).
- Minimal maintenance of estate lands.



Parkland, glasshouses and village edge of Rosebank

Orchards

No orchards evident.

Management Issues

- Management of semi-natural woodland and plantations.
- Maintenance/replanting of parkland trees.
- Control/screening of poorly designed commercial development.

Jock's Burn

A densely wooded ravine and burn merging with the valley from the north east, hidden from the main valley by a wooded spur.

8 DALSERF to GARRION BRIDGE

Location and extent

The river bend downstream of the Maudslie Bridge to Garrion Bridge, including the river floodplain, Dalserf village and valley sides.

Description

An intensive agricultural area and the main crossing point in the valley marking the transition between a fully rural character and the influence of the urban fringe to the north and west.

Medium scale semi-enclosed flat bottomed valley with a broad, meandering river and flood plain supporting intensive arable agriculture. There are large scale glasshouses close to Garrion Bridge but these are only conspicuous from the upper valley sides due to tree screening. This section of the valley is enclosed by rolling slopes, predominantly wooded but with some improved pasture and narrow semi-natural woodland belts following small tributary burns. Dalserf village is small, historic and built in distinctive style with most buildings whitewashed and single storey. The busy main road is screened by woodland, and narrow winding lanes ascend the valley side slopes. Views are limited by the valley slopes and spurs and mature woodland.



The flood plain at Dalserf is surrounded by rolling slopes and woodland

Positive features

- Enclosing slopes and semi-natural woodland.
- Historic village with distinctive architectural style.
- Wide meandering river.

Negative features

- Large glasshouses (well screened from lower viewpoints).
- Farm park with brightly coloured facilities.
- Second Garrion Bridge under construction.

Orchards

No orchards evident.

Management issues

- Control of inappropriate development.
- Maintain/improve screening of existing glasshouses and Farm Park.
- Integrate new Garrion Bridge into landscape.

Garrion Burn

A narrow incised side valley and rapid flowing burn joining the Clyde close to Garrion Farm. Much of the valley is wooded with semi-natural deciduous woodland and scrub, but there are small areas of enclosed pasture. A few scattered fruit trees remain from extensive former orchards.

9 GARRION BRIDGE to CARBARNS

Location and extent

Garrion Bridge to Upper Carbarns, including the River Clyde and valley sides.

Description

A larger scale and more open valley than downstream with urban and commercial influences reducing the sense of rural character.

Medium to large scale semi-open flat bottomed valley with a broad, meandering river and flood plain supporting improved pasture and some arable agriculture. Field boundaries are predominantly fences. There are large scale garden centres close to Garrion Bridge but these are only conspicuous in the south eastern end of the character area. This section of the valley is enclosed by rolling slopes to the north east and shallower more undulating slopes to the south west. The northern slopes are predominantly half wooded and half pasture. There are a number of remnant orchards, particularly towards the Garrion end. The southern slopes are mainly improved pasture with large fields and narrow semi-natural woodland belts following small tributary gills. There are scattered houses on the valley slopes and two farms on the valley floor. The busy main road along the valley floor is partially screened by hedges but the recently constructed realignments of the A71 and A72 are visually prominent. Heavy traffic reduces the tranquillity of the rural setting. Views are fairly open and taller buildings on the urban fringe of Wishaw are prominent to the north.



Garden centres and greenhouses are conspicuous in the area around Garrion Bridge

Positive features

- Semi-natural woodland and plantations on valley sides.
- Wide meandering river with riverside trees.
- Hedgerows.



The River Clyde meanders through the wide valley bottom

Negative features

- Intrusive garden centres and glasshouses.
- Busy roads including newly constructed road alignments.
- Views of urban edge.

Orchards

A few remnant orchards are evident above Garrion Bridge and along the northern slopes of the valley.

Management issues

- Control/screening of urban fringe development on north side of valley.
- Maintain/improve screening of existing garden centres.
- Integrate new A71/A72 into landscape.
- Maintain/extend woodlands and orchards.

10 CARBARNS to HAMILTON

Location and extent

Upper Carbarns to Baron's Haugh and Dalziel Park, including the River Clyde and valley sides, extending over the M74 to the south.

Description

A broad river valley of open character heavily influenced by the urban fringe.

Large scale broad open valley with a broad, slow meandering river and flood plain on the urban fringe of Wishaw and Motherwell. Valley floor and sides supporting improved and semi-improved pasture with scattered farms/smallholdings mainly on the north east side of the river. Field boundaries are predominantly fences with gapped hedges. Slopes are predominantly open with small scrubby woodlands but a larger woodland is located around Dalzell Park on the north side of the Clyde. The area is fringed to the south by the A72 trunk road and the M74 motorway, the latter of which is not visually prominent. The area is influenced by the urban fringe and does not have a well defined valley character compared with areas upstream.



Beyond Carbarns the valley widens out and urban influences dominate the northern horizon

Positive features

- Broad meandering river and wetlands.
- Former policy woodland.

Negative features

- Views of urban fringe to north.
- Busy road and motorway.
- Opening out of valley losing sense of enclosure/identity.

Orchards

A few fruit trees evident in smallholdings but no clear evidence of former orchards.

Management Issues

- Control/screening of urban fringe development on north side of valley.
- Management/improvement and extension of woodlands.
- Improvement of field boundaries by hedge and tree planting.

4.5 Contribution of orchards to landscape character

The landscape character assessment has demonstrated that whilst orchards are a significant feature of the landscape in this part of the Clyde Valley, this influence is limited to a few areas. Furthermore, the indications from the orchard survey (Chapter 3) and historical study (Chapter 2) are that this is a declining influence, due to the derelict state and decline of many of the orchards. There are, however, new plantings which may reduce or reverse the decline in some locations.

Distinctive features of orchards

Seasonal change

One of the most distinctive features of the orchards is that which is characteristic of most crops: a sequence of seasonal changes over wide uniform areas in narrowly defined time periods. Typical changes in the orchards are illustrated by the photograph sequence in Figure 4.4a–c.

At no time is the orchard landscape more distinctive than during late April and early May, when the blossom is on the trees and the leaves have not fully expanded. Where large areas are covered and the orchards are well maintained there is a distinctive cover of white blossom (Figure 4.4a). The precise timing and longevity of the blossom is dependent on weather conditions and the mix of species and varieties. In some seasons the timing is acutely tuned according to environment with trees lower in the valley flowering a day or two before those higher up the slopes.

The first blossom to appear is the small white flowers of the damsons and wild plum rootstock, visible as splashes of white among the fringes of orchards or in abandoned orchards that have reverted to wild scrubby thickets. This is soon followed by the larger and more profuse white blossom of the grafted plum varieties that now dominate the orchards (Figure 4.5) and then by the pinker blossom of apples and the white blossom of pears (Figure 4.6). In the Clyde Valley it is the plums that perform the leading part of this show, with areas such as Hazelbank and Crossford experiencing a late 'snow' for a week or two in early May.

In the summer (Figure 4.4b), the orchards are perhaps at their least prominent, the heavy leaf cover obscuring the ripening fruit and softening the regular grid appearance of the trees that is more evident in winter.

In late summer and early autumn the fruit is visible on the trees against the leaves, a feature that is visible from close range but not generally in the wider landscape (Figure 4.4c). Late in the season the heavily laden branches of the older trees are propped with poles, boughs may snap off and trees are sometimes blown over in high winds. The main feature of this period is that of agricultural activity: the harvesting and selling of the fruit. Ladders are seen against trees; pickers harvest the plums and gateways along the A72 are adorned with hand made signs advertising the sale of fruit (Figure 4.7). In contrast apples tend to ripen and fall without being collected (Figure 4.8).

In late autumn the changing leaf colour can be distinctive depending on the timing of leaf fall relative to frosts and winds.

By winter the trunks and branches of orchard trees are stark against the grassy ground cover, forming a distinctive pattern on clear sunny days.

Landscape pattern

The regular planting grids of orchards contribute a distinctive pattern to the valley sides (Figure 4.9). The twisted and gnarled forms of the older trees contrast with the more uniform repetition of the younger well-maintained orchards, this being particularly noticeable without leaf cover.

Derelict orchards

The pattern of extensive well-maintained orchards is concentrated in very few areas of the valley. Equally common and more diffusely spread are orchards that have been left to decline, either by growing wild to scrub and woodland or by a gradual loss to grassland, wasteland or pasture, with a declining number of trees in the margins of the former orchard. Whilst adding character to the edges of villages or houses it is clear that these are signs of decline.

Other landscape features

Whilst this study concentrates on orchards it is worth including mention of other features characteristic of this part of the Clyde Valley (and other tributaries) that represent the changing agricultural and commercial base of the area.

Glasshouses

Commercial glasshouses of varying sizes and ages are a distinctive feature of most of the study area, particularly where the topography allows (Figure 4.10). The older glasshouses were originally constructed in the late 19th and 20th centuries for tomato growing, which is still prevalent in the valley. A particularly characteristic feature throughout the valley is that of the brick chimney stacks that vented the greenhouse heating systems. Often it is only these that are left standing after years of abandonment (Figure 4.10). Many glasshouses are in a state of disrepair or abandonment, reflecting the parallel decline in commercial tomato growing.

Latterly, the purpose of glasshouses has diversified, with the majority housing potting plants, flowers and garden retail centres (see below).

The glasshouses extend beyond the Clyde Valley and into other sheltered valleys with sufficient flat ground, including those of the Mouse Water and River Nethan.

Figure 4.4a Seasonal change photographs



At the beginning of May the first blossom begins to appear on the trees

01/05/01



One week later the 'snow' of plum tree blossom covers the hillside

08/05/01

Figure 4.4b Seasonal change photographs



By mid May the plum blossom is over, leaves are out and more subtle apple and pear blossom gives a low key display

18/05/01



In the middle of the summer the leafy fruit trees are less distinguishable from other trees

06/08/01

Figure 4.4c Seasonal change photographs



By the end of the summer the trees are laden with ripening fruit

12/09/01



A lack of sharp frost means no autumn colour

16/11/01

Figure 4.5 Plum blossom photographs



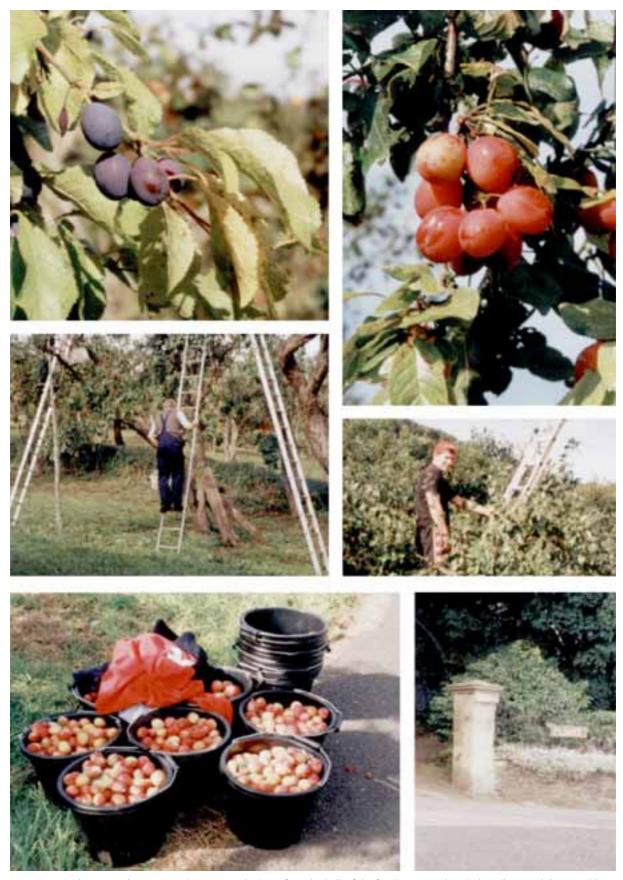
Plum blossom, early May 2001. The blossom of the plum tree is particularly distinctive, being white, profuse and borne on branches prior to leaf opening

Figure 4.6 Apple and pear blossom photographs



Cherry, apple and pear blossom. May 2001. These trees form a lesser part of the annual display but are distinctive in their own way

Figure 4.7 Plum harvest photographs



Damsons and Victoria plums, September 2001. The latter form the bulk of the fruit harvest in the Clyde Valley, much being sold at the roadside following hand picking

Figure 4.8 Apple photographs



Apple trees ubiquitous in the Clyde Valley but few if any trees provide a commercial crop. The bulk of the fruit falls to the ground to rot and be eaten by insects and other animals

Figure 4.9 Orchard landscape patterns



Whether as lines and grids of trees or as tree trunks outlined against a grassy backdrop, the orchards contribute a distinctive pattern to the valley sides

Figure 4.10 Non-orchard features









Greenhouses, both viable and derelict are a ubiquitous feature of the Clyde Valley, and isolated chimney stacks indicate the location of former greenhouses

Garden centres

Billed by Greater Glasgow and Clyde Valley Tourist Board as 'The Garden Valley', this section of the Clyde Valley houses a few large commercial garden centres and a number of smaller operations including small nurseries, bulb and bedding plant sellers. The centres are popular day-trip destinations, offering not only a wide range of plant and garden-related material but also household furniture and decorative items, coffee shops and restaurants. However, they are often visually intrusive due to the extensive glasshouses, storage yards, car parking and a profusion of permanent and temporary signage. They bear little relation to the surrounding landscape and many have minimal screening. Most of their produce is not local, although a small amount of local fruit and jam products is sold at one or two locations.

4.6 Future trends and management options for landscape

The survey of individual orchards (Chapters 3 and 5) has indicated a picture of continuing decline in maintenance and orchard area over most of the Clyde Valley. Further continuation of current trends will result in the loss of more trees and orchards, further reducing the distinctiveness of the Clyde Valley landscape. In particular there is a danger of the few remaining key areas of orchards fragmenting, leading to their loss as a notable element of the valley landscape.

Future resources used to halt orchard decline may address a number of issues including nature conservation and commercial ventures. However, if landscape issues are to be effectively addressed, efforts should initially be concentrated on the areas of the valley where there is still a tangible managed orchard character. This principally comprises the area between Linville and Crossford, including the Fiddler Burn, Hallbar and Linnside. In these locations orchards and fruit trees are still a prominent feature. As a viable resource already exists in these areas, real progress can be made by arresting decline. Other areas would require extensive new planting and a period of time to re-establish a noticeable orchard character.

5 ORCHARDS AND NATURAL HERITAGE

5.1 Natural heritage context

The study area is within the undulating landscape of a low dissected plateau. The open landscape is predominantly given over to large fields of improved pasture and arable land, with occasional conifer plantations, and grading to moorland on the highest ground. Semi-natural habitats are generally confined to the slopes of the incised valleys of the River Clyde and tributaries. Orchards are also restricted to these sheltered valleys where they contribute to a linear patchwork of smaller agricultural fields, woodland, scrub, ruderal areas and vestigial semi-improved neutral and poor semi-improved grasslands. Broadleaved woodland is the most extensive semi-natural habitat of the valley slopes.

In an evaluation of the Clyde Valley forest network, Peterken (2000) estimates that approximately 12% of the landscape consists of river valley slopes and floodplain, and within this the Clyde and Avon Valleys Project (Todd *et al.* 1991) calculated that 11% of the land cover is of semi-natural broadleaved woodland. These woodlands are recognised as being amongst the most valuable in Scotland, and many have been designated as SSSI's. A current thrust of nature conservation efforts in the area is the Clyde Valley Forest Habitat Network. The main aims of this project are to expand the area of woodland and increase connectivity between individual woodlands and between different river valleys to create a cohesive network of woodland that will allow the migration of woodland species.

Although orchards cover only a tiny proportion of the land they are concentrated within the valley of the Clyde and may contribute to the forest habitat network. Peterken (2000) has stated that: 'Orchards can be regarded as a specialised form of wood-pasture. Given the antiquity of orchards in the Clyde Valley it is possible that orchards harbour rare species. Usually, however, orchards are more valuable as general habitat diversity in farmland, and as places where semi-natural grasslands are more likely to survive.'

5.2 Survey methodology

Desktop survey

Potential orchards within the core area were identified by:

- a reconnaissance survey of Ordnance Survey 1:10,000 maps for orchard symbols.
- by reference to target notes of the Clyde and Avon Valleys Project habitat survey (Todd et al. 1991).
- by visual search from roads
- through publicity, consultation and word of mouth.

Where an orchard was found to be present (defined as 10 or more fruit trees) owner and orchard information were collected on a recording form (see Appendix 2). Where the orchard was no longer present no information was recorded other than the present habitat/land use.

Phase 1 habitat survey

A Phase 1 habitat survey was completed for all extant orchards. In summary, the Phase 1 habitat survey method (NCC 1990, and revised by JNCC 1993) involves a standard technique for the ecological

surveying of large areas of land, and provides the framework for a consistent national approach to the gathering and recording of land cover information. This standardized approach was employed to survey all habitat types encountered throughout the study site, ensuring that the survey is carried out to a consistent level of detail and accuracy. The methodology involves a trained surveyor visiting every parcel of land within the survey area and mapping the vegetation present, in terms of some ninety specified habitat types. The minimum polygon size mapped was less than 0.1 ha.

Extensive use was also made of target notes in order to provide extra information on sites of rare or localised species and/or interesting habitats. The identification of areas which merit target notes was undertaken using the guidelines provided in JNCC (1993).

A walk-over survey of each orchard was undertaken to identify any animal species of significance. This focused on species with enhanced statutory protection (eg badgers, bats, water vole etc), and priority species in the region.

Proforma information (eg ownership, number of fruit trees, varieties etc.) for each orchard was gathered by interviewing the owners and from a site survey. Fruit varieties were identified by fruit expert John Butterworth. Specimens were sent to Mr. Butterworth for identification, and he also visited a few of the more diverse orchards. Specimens that could not be identified were sent to the British Fruit collection at The Brogdale Horticultural Trust for identification. The completed proformas are in a separate appendix.

The Phase 1 habitat survey maps are in a separate appendix. The extent of orchard coverage is represented as a red outline superimposed over the Phase 1 habitats since there is no specific orchard category within the Phase 1 methodology. Thus habitats beneath orchards were mapped rather than mapping orchards as the conventional Phase 1 habitat category of Broadleaved plantation.

All survey information was digitised using Arcview GIS to provide a database of the current orchard resource in the Clyde Valley. The following information is shown as a table in Appendix 1:

- Site Number (relating to survey form and map);
- Site Name:
- Grid Reference;
- Status (present/scattered trees/denied access/unsurveyed);
- Orchard Area (m²);
- Number of fruit trees;
- Site Area (m²);
- Natural Heritage Value.

Limitations of the survey

Due to the number and extent of orchards and numbers of fruit varieties it has not been possible to survey a wider study area or identify all species of significance and fruit varieties:

- Extent of survey: All potential orchard sites discovered during the reconnaissance survey within the core study area (see Figure 1.1) were checked except for those orchards/potential orchards for which access could not be gained. However, potential orchards within the wider area of search were not verified due to a lack of time and the greater than estimated number of orchards found within the core area.
- Species of significance: These were not systematically assessed but, rather, noted during a walk-over survey of each orchard. An assessment of the suitability of the habitats for was made, particularly for fauna with enhanced protection. Signs of Badger activity were particularly obvious during the walk-over surveys. A systematic assessment of invertebrates in the orchards may be particularly informative.
- Fruit identification: Some fruit varieties may well have been missed, particularly in very overgrown orchards. Also some plum specimens were in too poor a state to identify once they had arrived at the Brogdale Horticultural Trust.

5.3 Summary of results

Only extant orchards were surveyed, with target notes provided on the recording forms for individual sites (see separate appendix). If it was found that all the fruit trees have disappeared from a former orchard site then the site was not surveyed, but the current land use noted to provide information on the land use changes that lead to orchard decline.

Extant orchards provide a number of habitats which are determined by management. These can be summarised as follows:

Productive orchards

These are orchards which are managed to provide a fruit crop. Most productive orchards have improved grassland or species-poor semi-improved grassland beneath which is managed by mowing, strimming, and with herbicides (see Figures 5.1a and b). The flora of these is generally very impoverished and dominated by a couple of grass species with few if any herbs. Where herbicides are applied the ground cover is of ephemeral and short perennial vegetation. Also the fruit trees tend to have a uniform structure with a very open canopy and few micro-habitat features such as nest holes or dead wood. The intensity of management of grassland beneath orchards tends to be too disturbing to allow a species-rich sward to persist. Where some herbs such as meadowsweet (Filipendula ulmaria) or black knapweed (Centauria nigra) do persist they tend to be in adjacent rough areas on the fringes of the managed orchard. No currently productive orchards had grazing stock pastured beneath them as sheep, cattle and horses damage fruit trees by pulling off the bark.

Garden orchards

These are generally small with fruit trees clustered around houses. These tend to be managed intensively as gardens, particularly lawns. However, some garden orchards are neglected and have reverted to rank grass, ruderal and scrub.

Neglected ungrazed orchards

Most neglected orchards have a rank species-poor sward of tussock-forming grasses of such species as false oat-grass (Arrhenatherum elatius), cocksfoot (Dactylis glomerata) and tufted hair-grass (Deschampsia cespitosa)

beneath the usually scattered fruit trees. These often have a few herbs present, particularly black knapweed (*Centauria nigra*), meadow vetchling (*Lathyrus pratensis*), as meadowsweet (*Filipendula ulmaria*), hedge woundwort (*Stachys sylvatica*) and common valerian (*Valeriana officinalis*). However, most neglected orchards have been so for such a time that if they have not been grazed beneath they revert to tall ruderal vegetation and scrub in the succession to woodland (see Figure 5.1a). A few orchards which are contiguous with mature broadleaved woodland are beginning to develop a woodland groundflora, however, this only occurs if the canopy casts sufficient shade to suppress competitive grasses and ruderal herbs.

Neglected but grazed orchards

The value of the habitat in grazed orchards depends on the intensity of the grazing:

- Where grazing is sporadic or of low intensity successional grassland, ruderal and scrub habitats develop as above (see Figure 5.1b).
- More intense grazing pressure keeps some orchards in a state of equilibrium between grassland and scrub. These tend to have a fine textured structure of short grazed grassland interspersed with clumps of ruderal and scrub development. The grassland in such situations is often semi-improved neutral grassland of common bent (Agrostis capillaries) and crested dog's-tail (Cynosurus cristatus) plus a few characteristic herbs such as selfheal (Prunella vulgaris), common cats-ear (Hypochoeris radicata), yarrow (Achillea millifolium), meadow vetchling (Lathyrus pratensis), common sorrel (Rumex acetosa) and bird's-foot trefoil (Lotus corniculatus).
- Many orchards have been turned over to pasture with regular grazing by sheep or cattle. In such cases
 remaining fruit trees occur as scattered individuals or small groups over improved or species-poor semiimproved grassland of negligible conservation value. The fruit trees are browsed and damaged by the
 stock and persist for only a few years.

Species of significance

Species of significance other than Badger *Meles meles* were not surveyed directly but rather an assessment of the suitability of habitats was made.

- **Badgers:** Latrines were found in many orchards, and a few setts were also found. Badger activity seems ubiquitous throughout the slopes of the river network, concentrated in the woodlands, and using a wider area, including orchards, as foraging territory.
- Bats: Pipistrelles and brown long-eared bats are likely to find the open scrub habitat provided by some orchards suitable as foraging habitat. As roost sites orchards are not suitable because fruit trees tend to be too short lived and prone to wind-throw to develop suitable holes in standing wood. Fruit trees also tend to be too short, bats prefer mature trees with holes and crevices which provide roosting opportunities.
- **Birds and insects**: Many birds and insects associated with open scrub habitats are also likely to find neglected orchards suitable habitats for breeding or foraging, particularly in late summer and autumn when there is an abundance of fallen fruit.
- Amphibians: No suitable ponds or ditches were found.

Figure 5.1a Orchard management types



Photo 1 – A typical neglected orchard dominated by ruderal vegetation and scattered scrub



Photo 2 - Intensively managed orchard where herbicide is used to control ground vegetation

Figure 5.1b Orchard management types



Photo 3 – Thicket of self regenerating Damson, lightly grazed by ponies



Photo 4 – Mature orchard managed by mowing

5.4 Evaluation of ecological resource

The nature conservation importance of the orchards is assessed by consideration and integration of the criteria for habitat appraisal defined in *A Nature Conservation Review* (Ratcliffe 1977), namely: size, rarity, species diversity, naturalness, and position in ecological unit. This is viewed in the context of the Clyde Valley by reference to the Clyde and Avon Valleys Project Survey Report and Draft Conservation Strategy of 1991.

An evaluation of individual habitat parcels at specific sites is provided in the target notes on site recording forms (see separate appendix). This provides a simple assessment. Habitat parcels of some nature conservation value have a flower symbol at the beginning of the target note. All other habitats are considered to be of negligible nature conservation value. A more detailed evaluation is not necessary because all habitats are considered to be either of local value only (akin to the non-statutory SINCs) or of negligible value (ie habitat is of no greater value than the bulk of the farmed habitats of the wider countryside). A list of orchards and their natural heritage value is given in Appendix 1.

The sites considered to be of local conservation value include the following habitats:

Semi-improved neutral grassland

These are swards of common bent (Agrostis capillaris) and crested dog's-tail (Cynosurus cristatus) on mesotrophic soils that have not been ploughed, re-seeded or had chemical fertilisers applied. These swards are not very diverse but do contain a few characteristic herbs of neutral meadows, such as black knapweed (Centauria nigra), selfheal (Prunella vulgaris), common cats-ear (Hypochoeris radicata), yarrow (Achillea millifolium), meadow vetchling (Lathyrus pratensis), common sorrel (Rumex acetosa), ribwort plantain (Plantago lanceolata) and bird's-foot trefoil (Lotus corniculatus). Such areas of habitat have the potential to be restored to species-rich grassland given suitable management.

Scrub

Successional scrub habitats with a diverse structure and with vestiges of semi-improved neutral grassland and ruderal patches are considered to be of local value because they provide a productive and undisturbed breeding and foraging habitat for a wealth of 'common' wildlife or 'matrix' species that are being increasingly squeezed out of the wider countryside due to intensive agriculture and the fragmentation of semi-natural habitats.

Woodland

These tend to be habitats associated with orchards rather than orchards themselves as by the time woodland has developed most or all of the fruit trees have usually disappeared and it can no longer be regarded as an orchard. Such woodlands are secondary and have a grassy or ruderal groundflora without many woodland species, however, they are of local nature conservation importance for the commoner matrix species and for their contribution to the local forest habitat network. Many orchards are beside mature woodlands. Only a few of these have been target noted but they are generally fairly base-rich with a diverse ground flora of woodland herbs such as bluebell (*Hyacinthioides non-scripta*), wild garlic (*Allium ursinum*), wood sorrel (*Oxalis acetosella*) and enchanter's nightshade (*Circea lutetiana*).

Marshy grassland

This is a scarce habitat within the study area with just one small patch found. This is dominated by soft rush (Juncus effuses) with frequent herds such as meadowsweet (Filipendula ulmaria), common valerian (Valeriana officinalis), common figwort (Scrophularia nodosa) and angelica (Angelica sylvestris).

5.5 Contribution of orchards to natural heritage

Most managed orchards – that is the 'tidy' productive orchards and those managed as gardens – are of limited value to wildlife. They consist of an open plantation of small fruit trees over a species-poor grassland managed by regular mowing or strimming. A few productive orchards control ground vegetation by using herbicide. The fruit trees only rarely have suitable holes for nesting birds and are unattractive to bats for roosting.

The simplicity of the physical structure and the low plant diversity of these orchards plus the effects of regular disturbance also reduce potential invertebrate diversity. Some owners of productive orchards also hang bottle traps out to catch wasps which may damage fruit: these traps kill an enormous quantity of flying insects. However, these tidy orchards are of some wildlife value to common matrix species, for instance badgers, passerines, bats and the more catholic insect species utilise these habitats for foraging, particularly when there is ripe fruit to be had; and, no doubt some passerines do find suitable nest sites in these orchards.

Some defunct orchards have been given over to permanent pasture. The wildlife value of these depends on the intensity of grazing and the extent to which scrub and rough grassland are allowed to develop or persist. Heavily grazed orchards are of similar nature conservation value as productive orchards described above, except that grazing stock damage the fruit trees and contribute to their demise.

Completely neglected or lightly grazed orchards are considerably better for wildlife as they have a more varied structure with greater botanical diversity and are less disturbed. These are essentially seral scrub habitats, mainly open scrub with rough grassland and ruderal vegetation beneath. Such seral scrub is highly productive and provides suitable habitat for a large number of the more catholic or matrix species of the wider countryside. These orchards are concentrated along the valley slopes along with other semi-natural habitats, particularly woodland. This juxtaposition means that orchards make a significant contribution to the Clyde Valley Forest Habitat Network within the study site: a major conservation priority in the area.

5.6 Future trends and management options for natural heritage

The findings of this study have shown that, leaving other cultural and landscape considerations aside, the promotion of nature conservation and biodiversity might equally be served by two divergent approaches to orchard management:

- management of existing and newly planted orchards using low impact methods, eliminating the use of herbicides and pesticides and maintaining diverse grass swards and hedges;
- allowing the continued decline of existing orchards reverting to scrub and woodland, especially close to existing woodland.

Continued decline might also lead to grubbing up of orchards for pasture or development, which would not contribute to nature conservation or biodiversity.

The future management of the orchards should be considered both in terms of the practical management of individual orchards and also within the framework of national and local policies on nature conservation and biodiversity. Ultimately the wishes of individual owners will be a key factor in future management, but their actions are likely to be swayed by policy and consequent financial or material support.

Individual orchards

Most owners consulted valued their orchards and some were specifically interested in nature conservation. However few were actively involved in promoting the objectives of conservation or in replanting orchards. Most would welcome some form of support – financial or practical – if they were to maintain or expand their orchards.

Local policy and strategies

Some local policies and initiatives on nature conservation and biodiversity may have a bearing on orchards.

South Lanarkshire Council (SLC) are in the process of producing a Core Biodiversity habitat survey with an orchard component, attracting various European funding including LIFE and Natura 2000. SLC are putting in an application for Lottery Funding, which could include the orchard component in the Local Biodiversity Action Plan (BAP) from more of a social and cultural perspective. The Clyde Valley is a key Special Area for Conservation.

The Central Scotland Countryside Trust (CSCT) forestry policy includes a landscape character assessment which refers to the Clyde Valley:

LF7 (Lowland Fringe) Clyde Valley "The Clyde Valley meanders through a steeply-sided narrow valley incised by a number of burns or "gills". These upper valleys, being difficult to cultivate, retain semi-natural woodlands of considerable nature conservation importance and visual appearance. The farmed slopes still include orchards, for which the Clyde Valley was renowned. The narrow floodplain is cultivated with areas of market gardening and nurseries and is also the focus for settlements and roads."

The woodland expansion programme at the local level states that regeneration and management of the seminatural, commercial and policy woodland of the Clyde Valley on a more sustainable basis would retain their integrity and their conservation and amenity value. As part of CSCT's Natural Heritage Strategy Policy LF7 identifies the key opportunities along the Clyde Valley as being to "introduce orchard restoration programme to conserve existing orchards and their encourage new planting." CSCT are in the process of updating their policy document and envisage that the orchards of the Clyde Valley will play a more central role.

Policy and strategy from other regions

A number of English counties, and governmental bodies, have adopted policies for nature conservation and biodiversity which specifically include orchards.

Worcestershire County Council has produced a Biodiversity Action Plan (BAP) which includes policies to protect traditional orchards by the following means:

- including habitat policy in Local and Structure Plans;
- securing changes to TPO legislation to conserve orchards;
- designating some orchards as SSSI's;
- securing changes to the Common Agricultural Policy systems and funding to meet the objectives of the orchards action plan.

Worcestershire County Council's BAP objectives (and targets) for orchards are as follows:

- encourage conservation and enhancement of existing traditional orchards, especially those associated with unimproved grassland and individual fruit trees in hedgerows;
- encourage the creation of new standard orchards of local fruit varieties on land of low existing conservation value in parts of the country where orchards are a traditional element in the country (100ha by 2005);
- encourage a network of contacts to maintain markets for and enable identification of rare varieties of fruit, in order to conserve the range of Worcestershire fruits;
- increase knowledge and awareness of wildlife value of traditional orchards;
- collate all information on orchards in order to determine the total resource of traditional orchards (by 2001).

Kent BAP (1996) was the first to have a separate section on orchards. It outlines 10 year targets which will work towards the doubling of old orchard areas under traditional management and the creation of one new community orchard every year.

The Essex BAP (1999) aims to restore orchard coverage in the county to its 1970 levels by planting new Community Orchards, school orchards and encouraging the restocking of private orchards.

Tree Preservation Order Legislation was strengthened by the DETR in 1999 to protect fruit trees which are not in commercial cultivation.

Common Ground advise that vulnerable old orchards with wildlife and habitat value may be designated as Local Nature Reserves. English Nature have a grant scheme for LNR's in England, SNH have a general grants scheme which can provide for LNR's in Scotland.

6 ECONOMIC AND CULTURAL VALUE

6.1 Business and economic context

The orchards and soft fruit industries of the middle Clyde Valley have featured in historical and statistical accounts over the past centuries. In the nineteenth and early twentieth century the industry reached its peak in terms of planted area and volume of production. Commercial production of orchard fruit still persists, but at a much reduced scale and many orchards no longer sell fruit. Other fruit and vegetables such as tomatoes, strawberries and lettuce are grown, but generally on a small scale compared with the past and with modern agribusiness. Instead the economic mainstay of the valley has switched from production to sales, with a number of garden centres and garden plant producers catering for the day trip market from central Scotland. Nevertheless, the orchards have in the past been an integral element of the cultural and economic wealth of the valley, and this study has investigated what contribution they still make.

6.2 Reporting from orchard owners and other consultees

As part of this study extensive consultations were carried out with orchard owners, commercial and private, as well as public and commercial organisations with an interest in the valley and orchards.

Orchard owners

The only commercial crop is the plum, the bulk of which are the Victoria variety. Apples, pears and damsons are rarely sold and usually left to fall from the trees with a small percentage taken for personal consumption.

Only 14 out of 60 owners exploit their orchards commercially. This is because of a number of reasons:

- the orchard is not a commercially viable size/condition;
- the owners are employed elsewhere or too old to manage;
- the orchards are inherited as part of the property, rather than having been purchased as an end in themselves.

The non-commercial orchards are either garden-sized or are being allowed to run down due to lack of maintenance.

Of the few owners that do exploit their crop, none regard the orchard as a significant source of income, with the costs of growing, picking and selling the fruit making it commercially unviable. Sales often tend to be informal, with roadside signs up in the season, but some is also sold wholesale.

Other growers and traders

Other growers in the valley have experienced similar problems, despite growing potentially more reliable crops due to controlled conditions and longer seasons growing under glass.

• The Clydeside Trading Society (formerly the Clydeside Fruit and Tomato Growing Society) was established in 1920, originally set up by three men who realised that by buying produce collectively

they could get a better price. It was run as a co-operative, but is now run as a limited company. Now out of the business of production, it supplies chemicals, fertilisers, pots and other merchandise to pot plant, tomato and bedding plant growers across Scotland and as far south as North Yorkshire. The nature of the business has changed significantly as traders would come to the Clyde Valley to buy their equipment, now they have to deliver.

- The Clyde valley was a strawberry growing area a few decades ago and people travelled there to pick their own. This business is now largely redundant, although strawberries are grown as a commercial crop elsewhere in Scotland (mainly in Perthshire and Tayside). Other soft fruit such as gooseberries and blackcurrants were also grown under the orchard trees, but are no longer.
- The valley was also a leek and lettuce growing area: the Clydeside Trading Society used to receive approximately 8,000 boxes of lettuce a week from the growers whereas more recently they trade approx 8,000 a year. Only one lettuce grower remains in the Clyde Valley.
- There are only three main tomato growers left in the valley. Children of tomato growers and other fruit and vegetable producers are not taking over the family business and therefore the industry is dying out.
- Normandy geese and pigs were bred under the orchards and fed off the windfalls. There is currently no commercial grazing under the trees.

The Clyde Valley is effectively a residential and retail valley, known as an attractive place to live and visit rather than a growing area. Families with orchards are selling them off for housing or letting them go derelict. The plant nurseries and garden centres bring in much more revenue than the trading in fruit and vegetables and the owners are considered to be relatively prosperous.

Commercial outlets

The main commercial outlets within this part of the Clyde Valley are the Garden Centres. Most sell plants and goods that are not grown or manufactured in the local area. Some outlets sell a small amount of local produce but most fruit is sold through roadside sales and wholesale.

Overton Farm sells fruit through its farm shop and garden centre. The Rosebank Garden Centre sells a small amount of local produce including strawberries, tomatoes and home made fruit jam.

Local authorities and governmental bodies

Worcestershire County Council suggested the following reasons for the decline of orchards:

- gradual decline through neglect as old trees are not replaced;
- traditional orchards can be threatened with destruction for infill development;
- traditional orchards are threatened by agricultural intensification;
- conflict between commercial and conservation objectives in the management of traditional orchards, as some of the features which are most beneficial to wildlife, particularly deadwood, can be damaging to fruit production.

The underlying cause of most destruction and neglect is the loss of the commercial value of traditional orchards.

The Countryside Commission undertook a study of the Weald AONB in Kent and Sussex. The Kentish High Weald is identified as the commercial orchard area which is suffering from significant decline (over 30% since 1961). The reasons for decline are similar to those identified by Worcestershire Council but also include comment that the British climate is not well suited to orchard cultivation and that traditional orchards cannot provide cheap, identical apples and pears that sellers demand. The loss of orchards has affected the landscape in four ways:

- loss of features including pink and white blossom;
- loss of tall sheltering hedges;
- redundant and decaying buildings formerly associated with orchards;
- diversification of land use in former orchard sites including other crops, pasture and development pressure.

6.3 Economic value of fruit sales

One of the largest growers in the valley estimated his gross annual income from his plum harvest to vary between £2,000 and £5,000 depending on the success of the harvest. A substantial proportion of this would be set against the direct costs of picking, transporting and selling.

For instance, in 2001, which was a bumper crop year, the grower made £5,000 gross from his plum crop, with a £3,000 net profit, as illustrated in Table 6.1 overleaf.

Table 6.1 Example of earnings from a Clyde Valley orchard

Crop Size:	6 tonnes Victoria Plums
Wholesale Prices:	£0.60-£0.80/lb for eating plums $£0.35-£0.40$ /lb for jam plums
Gross Earnings:	£5,000
Direct Costs (labour, transport etc):	£2,000
Net Profit:	£3,000

However, when annual overheads are taken into account (eg maintenance, fuel, insurance etc) the profit is mostly lost. There are also years in which the crop is much poorer. The owner estimated that he had not made a clear profit for nearly 10 years.

Most owners did not give figures (see recording forms in separate appendix) but did confirm that their orchards were not commercially viable and that they only continued their business for personal reasons or tradition.

The reasons for the lack of commercial viability of the traditional orchards of the Clyde Valley are numerous:

- traditional standard tree orchards have greater overheads than modern intensive orchards due to maintenance and harvesting costs;
- lack of reliability of the crop which is subject to the influence of weather during the spring, where the blossom can be damaged by frost and during the summer (ripening) and early autumn (wind and rain);
- the nature of plums as a glut crop, the last ripening within a month of the first and storage being limited due to the softness of the fruit;
- the availability and reliability of large quantities of foreign fruit, either fresh or as a pulp, at prices which undercut the cost of producing local fruit;
- lack of a local market for the local fruit due to current commercial practices including supermarkets and wholesalers who tend to buy on the basis of cost and reliability of sources;
- the priority given to the appearance and size of produce rather than its flavour.

Even local fruit wholesalers buying from worldwide markets are coming under commercial pressure due to competition from supermarkets.

6.4 Tourism and the Clyde Valley orchards

The Clyde Valley is recognised as an important tourist destination and is identified as the 'Garden Valley' by the Greater Glasgow and Clyde Valley Tourist Board. This is based principally on the presence of the nurseries and garden centres between Lanark and Wishaw, however, the local tourist signage makes no mention of orchards.

South Lanarkshire Council are in the process of producing an access strategy and a heritage interpretation strategy. The villages of Crossford, Kirkfieldbank and Hazelbank are recognised as important nodal points for the access strategy. The key themes of the access strategy are tourism/economic regeneration and landscape value/conservation. The heritage interpretation strategy will include an outdoor events diary, which could include orchard events.

6.5 Current and future initiatives

There are many current and proposed initiatives involving orchards and orchard produce. The following sections summarise the results from research and the consultations with individuals and organisations throughout Scotland and the UK. Not all are directly relevant to the Clyde Valley but some may provide part of the raft of measures that could help to reverse the decline in the local fruit growing industry.

Orchard fruit and produce sales

It is clear from the experience of orchard owners that the growing and selling of fresh fruit in current commercial climates has a very limited potential for generating income. The key to enhancing the income generated from fresh fruit sales is in its marketing as local produce of high or distinctive quality.

To further enhance the potential for income it is necessary to diversify beyond the sale of fresh fruit and into products based on or made from fruit. Again the key to this will be in marketing as a locally distinctive, high quality product. Potential products include jams, conserves, preserves, cordials, wines and cider as well as the use of local produce in cooked foods in both shops and restaurants.

The outlet for the produce would initially be in the local garden centres within the valley and in local towns such as Carluke and Lanark, where visitors can make a direct connection between the product and the Clyde Valley.

Further outlets could include the following:

- New Lanark Mill Hotel and Mill Pantry Cafeteria menu;
- the "Scotland on a Plate" Food Festival is held twice a year (September and March) at New Lanark this could enhance the promotion of local produce;
- organic Box Schemes or Farmers' Markets (Soil Association lists are available);
- lanarkshire Farmers' Market held in Hamilton held twice a month (fruit, meat and vegetables);
- museum of Scottish Country Life Wester Kittochside, East Kilbride organise special events, in which local agricultural produce could feature.

In a similar vein, the Clyde Valley Tomato Growers Initiative was funded by Scottish Enterprise Lanarkshire with the aim of improving employment and local tourism in conjunction with tomato growers. One of the outputs of a follow-up study in 1995 was to pursue the joint promotion of producers in Lanarkshire called the "Lanarkshire Larder", featuring all the known local products in niche markets. The idea is fairly common throughout England, for example "A Taste of the West", and follows a similar French initiative.

The Countryside Agency in England has an initiative called "Eat the View" stimulating the market for products, which support the countryside through the following measures:

- more information to inform consumers about the impact of their decisions on the rural environment;
- development for the marketing, distributing and selling produce;
- development of standards and accreditation systems;
- development of local marketing and branding initiatives which utilise unique features such as production systems, locality, breed, landscape and local customs in the promotion of products;
- development of new supply chain partnerships between retailers, processors and producers which will
 increase the proportion of locally sourced, sustainable products;
- an increase in the proportion of produce sold through alternative markets to large retailers and bulk caterers, including direct selling and local collaborative marketing arrangements;
- an increase in the number of local and community-led food initiatives which will create stronger local markets for produce and strengthen links between producers and consumers.

Diversification of orchards

The study recognises that the future of the Clyde Valley Orchards is dependant on the diversification of the resource. The following are potential opportunities to diversify the management and outputs of the orchards, which were identified through the research:

- Instead of concentrating on fruit production and products, one course of action being pursued in the Clyde Valley and elsewhere is to use orchards as a genetic resource, conserving and promoting fruit varieties. One Clyde Valley orchard owner is in the process of establishing a reserve of Scottish varieties (or varieties suited to Scotland) of all types of fruit trees. The owner plans to sell specialist trees to enthusiasts, garden centres and orchard owners. The project will return derelict orchard land to productivity and create local employment opportunities.
- The Gloucestershire Museum Orchard has recently been planted with the aim of including all of Gloucestershire's 157 varieties of apple. The hope is to create a public bank of trees for future budding and grafting. Once the trees have matured it will be possible to graze the ground beneath them as well as cropping the apples. The owners are of the view that there is a selected growing market for organic produce. The venture is seen as a move towards diversification, which could encourage other farmers to follow suit as well as safeguarding the distinctive landscape character and biodiversity habitat value.
- Another Clyde Valley orchard owner is considering the possibility of using his orchard as an environmental demonstration project, managed by a local charity, to provide a training and educational resource.
- School initiatives at Gartmore near Stirling, and at Auchencairn, Kirkcowan, Wamphray and Torthorwald Primary Schools in Dumfries and Galloway, have received funding to establish gardens with orchards in the school grounds. These are planted and maintained by the children for use as a recreational resource.
- Orchards developed in conjunction with community woodlands or as community orchards, owned, used
 or looked after by people living near them. A number of orchards have been planted in England to mark
 the Millennium.
- The Centre for Environmental Initiatives in London has set up a community Orchard, planted and maintained by the local community, funded by the Landfill tax credit system.

Orchard activities and events

Common Ground and other environmental organisations organise events and activities throughout the country based around orchards and fruit harvests. Similar activities and events along the Clyde Valley could be adapted to include the orchards. Examples of such activities and events are as follows:

- In Scotland trees standing beside certain wells are known as "clootie" trees and are hung with rags. A similar tradition takes place in India, where bayan and pipal trees are painted with vermillion and turmeric on annual celebration days.
- The Southwest (Scotland) Community Woodlands Trust is running a series of work days at Taliesin, Castle Douglas. The Trust has built a willow shelter and a pond and is raising money to buy the site so that it will operate as a woodlands centre.

- A "Healthy Kids Day" planned at Mabie Forest Park near Dumfries in May 2001, which is essentially a fun day including orienteering run by the ranger service.
- Apple trees have been planted on a site in Mabie Forest Park in collaboration with the Health Promotion
 Department of Dumfries and Galloway Council as part of the Food Futures programme. Educational
 aspects of orchards and Government initiatives to encourage "Healthy Living" could be based around
 orchards and fruit tree plantings.
- A recent healthy eating initiative in Edinburgh (called 'Snack Attack') included apple days at primary schools in which fruit types were tasted and trees planted in school grounds.
- Drawing up of "Apple Maps", or a local apple register.
- Ideas from Common Ground include running community orchards; 'wassailing' orchards on Twelfth Night; 'blessing' the blossom in Spring; locally distinctive art works/sculpture, seats, game boards, ladders etc; playing apple games; open air plays; barbecues, picnics and feasts; picking and tasting; open air classrooms; and the twinning of orchards with other European countries.
- "Apple Day" on the 21 October was initiated in 1990 with the aim of drawing attention to the loss of orchards and domestic seasonal fruit. It has been a vehicle for an enormous increase in the celebration of orchards and learning at a local level in England. Activities include poetry readings, pruning and grafting classes, bee keeping demonstrations, games and guided walks, school based activities and cooking sampling, or a "Tree Dressing Day".

There is a wealth of ideas and events which form part of the countryside activities events calendar throughout England which could be established in the Clyde Valley. Currently, the Scottish Wildlife Trust (based at Falls of Clyde Reserve based at New Lanark) hold all year round events such as bat, butterfly and peregrine walks, badger watches, a dawn chorus walk and insect expedition, a waterfall day, children's environmental extravaganza, fungal foray, Halloween walk, plant sales, wildflower walks and organises a Falls of Clyde watch group. Some of these walks could be extended to include the orchards at different times of the year.

Orchard and woodland networks

Orchard and woodland networks aim to link together owners and areas to combine resources and share ideas. This may work in more than one way:

- mutual support, pooling of resources and circulation of information and advice;
- the land ownership and woodlands/orchards may be contiguous allowing a more co-ordinated approach to conservation management and planting.

Such a network has been set up in Central Scotland as part of a project for the Millennium Forest for Scotland Trust. With 70–80 contacts, the "Central Core" was launched at a community orchard planting ceremony in Cupar in March 2001, offering information, activities and events inspired by orchard fruit. The network produces a newsletter and has run a number of events including a plant sale. The network aims to bring together groups, schools and individuals interested in heritage fruit varieties, orchard management (private orchards, garden trees and schools orchards) and the arts. Events and surveys are planned and a CD-ROM has been produced called "A Taste of Fruit".

The establishment of networks within geographical areas such as the Clyde Valley should be a key strategy in the conservation of this rapidly fragmenting resource. A forum for change and discussion amongst Clyde Valley land owners is crucial to the future of the orchards. The Clyde Valley Woodland Initiative, funded though the Millennium Forests of Scotland initiative, played such a role. However, the funding period for this initiative came to an end in July 2001.

Policy initiatives

Some councils have specific orchard policies in their Local Plan, other documents offer a non-statutory commitment on behalf of a council to protect and conserve orchards in its area. By making room for old orchards within the system, plans can take into account their importance for wildlife, local landscapes or as places that people value. Orchards can and have been written into policies and plans in the following ways:

- Biodiversity action plans: After the Rio Earth Summit in 1992, all nation signitories to Agenda 21, including Britain, agreed to work to stop the loss of any more species, to live sustainably without jeopardising the needs of future generations and to enhance the quality of life of their citizens through environment, economic and health improvements. Some first steps towards achieving these aims are being drawn up within Local Biodiversity Action Plans. Orchards feature in Essex, Herefordshire, Gloucestershire, Kent and Worcestershire BAPs.
- Local plans: Few local authorities make any special recognition of orchards within their planning guidance. However, Devon, Exmoor National Park, Hereford County Council and Taunton Deane in Somerset outline the type of planning control individual councils will impose.
- Landscape strategies: These are non-statutory statements that outline council policies on the local landscape. Orchards have been included in a number of these and some councils such as Somerset, Gloucestershire and Worcestershire have grants to conserve and replant traditional orchards.
- Areas of Outstanding Natural Beauty: AONBs are nationally designated areas in England and Wales which have special planning restrictions relating to them. Recent administrative changes mean that AONB officers are obliged to prepare Management Plans of their areas. This can be beneficial for orchards (eg Tamar Valley AONB).
- **County designations:** Some counties, such as Kent and Herefordshire, have established their own designations relating to wildlife which include orchards for their lichen, bird or invertebrate interest.
- Local Nature Reserves: Only one orchard, a Community Orchard in Lingfield, Surrey, has been awarded LNR status as part of a larger reserve. There is much scope for making the most of this designation and grants are available for help with LNR management.

Funding and advice

A large number of government funded and charitable organisations provide grants and advice for agricultural and environmental businesses or projects and orchards could be considered under either heading. There are no grants specific to orchards, nevertheless funding and grants are available through more general agricultural and environmental grant schemes, covering aspects of orchard planting and management. The following grant schemes/organisations could provide funding:

- CSCT provide grants to plant woodlands on local farmland in Central Scotland, which could be extended to include orchard restoration.
- Rural Stewardship Scheme encourages low impact farming and acts by 'topping up' income lost due to
 adoption of management regimes. Although there is no specific category for orchards, grants may
 include grass management beneath orchards and restoration and care of historic and archaeological
 sites, which might include old orchards.
- Small Business Gateway is a locally based organisation, which could give assistance to an orchard based business.
- The Woodland Grant scheme is funded through the Forestry Commission, however the grants are usually awarded for the planting of woodland rather than orchards. The WGS is currently under review, so the situation may change.
- BTCV has a new grant called "People's Places" for community groups wishing to create or improve a
 green space and involve the community in sustainable development. Orchard planting or maintenance
 could attract funding under this heading. Grants of up to £10,000 are available. This is funded by the
 New Opportunities Fund run in partnership with English Nature and currently may only be available in
 England.
- BT Countryside for All provide grants of between £250 and £1,500 for projects to improve access to the countryside for people with disabilities.
- Shell Better Britain Campaign Community Projects Fund provide grants of up to £2,000 to support local community-led environmental projects.
- The Tree Council Community Trees Fund provide grants for community and school groups undertaking small tree planting projects.
- Scottish Natural Heritage run a Community Grant Scheme designed to help local people benefit from and improve their natural heritage. Grants may be given to enhance the natural heritage of a local area, stage community events, provide for technical advice and purchase equipment.
- The Local Heritage Initiative, launched in February 2000 by the Countryside Commission, Nationwide Building Society and the Heritage Lottery Fund encourages people to explore, celebrate and conserve the small 'details' of a place which make it special. There are no grants particular to orchards but grant aid could be given on the basis of the cultural heritage value of the orchards.

Funding initiatives in many counties in England in the last ten years include orchard conservation grant schemes, the inclusion of traditional orchards in Stewardship grants and the inclusion of old orchards in Biodiversity Action Plans.

- Worcestershire County Council gave Environmental grants and had a recent (1998) initiative to give a
 Worcester Black Pear to each school in Worcester for the school children to plant, involving 90% of the
 city's schools.
- Bio Regional Development Group support small-scale industries such as charcoal production, local fibres and local paper schemes.

 Money from the Landfill Tax credit scheme has been used to fund environmental projects, including orchard projects.

Common Ground have produced a series of advice notes for orchard owners. The following are a number of the titles:

- traditional orchards and the planning system;
- grants;
- community orchards as Local Nature Reserves;
- arts and crafts in orchards;
- small-scale cider making;
- infant tree care the first five years;
- nature notes.

Future initiatives

There are a number of local initiatives which may be directly or indirectly relevant to the conservation of the orchards. These were discussed at a workshop held at the end of the study. A key conclusion of the workshop was that although publicly-funded initiatives might initiate and support an orchard project, the long term future of the orchards required local grass roots support and collective organisation amongst orchard owners themselves.

- The Heritage Lottery Fund application for the Clyde Valley Forest Habitat Network aims to manage
 existing woodlands for biodiversity and link up remnant woodlands, forming a woodland network
 throughout the area. The orchards are an element in the strategy. The bid includes provision for a three
 year Officer post, who could potentially provide information to orchard owners, assist with grant
 applications and coordinate any initiatives.
- A separate Heritage Lottery Fund application should be considered for the orchard restoration, to the Cultural Landscapes Fund.
- The European LIFE project led by SNH for improving special areas of conservation, which has funding
 until June 2004. The partners of this initiative would lead the Clyde Valley Forest Habitat Network if the
 HLF application were successful. The partners are SNH, the Forestry Commission, South Lanarkshire
 Council, North Lanarkshire Council, CSCT and Scottish Wildlife Trust.
- South Lanarkshire LEADER+ could be used as a mechanism for encouraging small orchard businesses. LEADER+ is a European Community funded initiative for assisting rural communities in improving the quality of life and economic prosperity in their local area. LEADER+ stands for Liason Entre Actions pour le Dévelopment de L'Economie Rurale (links between actions for the development of the rural economy). It funds local partnerships (known as local action groups) to develop and implement bottom up innovative and sustainable solutions to local rural development issues. The LEADER+ Programme funds 3 areas of activity called "actions", which have been defined by the EU:

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- Action 1 Integrated, pilot rural development plans This action assists local action groups in rural
 areas in developing and implementing high quality, innovative and sustainable development plans.
- Action 2 Co-operation between rural areas. Local action groups are required to work on joint projects with other groups in the UK, European Union or other countries, by pooling skills and resources to achieve the objectives set out in their development plans.
- Action 3 Networking. All local action groups exchange ideas and share good practice through a national LEADER+ network.

Subsequent to the workshop, one orchard owner proposed the setting up of the 'Clydesdale Orchard Restoration Enterprise' (CORE), which would be an informal owner-led network acting as a forum for discussion, dissemination of ideas and providing guidance on grants. It was felt that there is the will to set up such a network and that there is sufficient local support and interest for it to be beneficial.

7 CONCLUSIONS

This study has confirmed that the Clyde Valley Orchards are of both historical and cultural significance and probably unique in Scotland today. Whilst small in comparison with orchard areas in England, the Clyde Valley is the only significant area of orchards in Scotland still producing fruit commercially. It has also demonstrated that the resource has declined enormously since its zenith at the turn of the 19th and 20th centuries and that the decline is still rapid due to lack of commercial viability and the demise of family traditions.

As a landscape element the orchards and fruit trees still give some sections of the middle Clyde Valley a distinctive character, particularly around Hazelbank and Crossford. In particular the display of blossom in early May is an impressive and delightful seasonal event. Nevertheless, the general decline in orchards may further deplete this to the point at which it will no longer characterise the landscape anywhere in the valley.

As a natural heritage asset the orchards are only of local interest. The managed orchards tend to be of uniform structure with a poor ground flora due to fairly intensive management. More wildlife/habitat value is found in the less intensively managed and semi-derelict orchards where a more diverse ground flora and incipient scrub/woodland growth has developed. Perhaps the greatest natural heritage value of the orchards is as part of the network of woodlands (semi-natural and plantation) that prevails on the valley sides of the Clyde. They could play a part in the development of a woodland network around the Clyde Valley that is to be the subject of a Heritage Lottery Fund grant application.

One important biodiversity and agricultural asset is however the existence of over 50 varieties of plum, apple and pear within the valley.

Interviews with orchard owners and fruit wholesalers have indicated that traditional fruit sales from the orchards are not commercially viable, although many growers still continue for reasons of tradition. There also seems to be very few other outlets for orchard produce at present. Other industries, specifically garden centres and garden plant sellers, have taken over as the local economic mainstay and many people living locally commute to places of work outside the valley.

The prevailing picture is one of decline, as the necessary resources and incentives for maintaining the orchards are not in place. The continuation of this decline would lead to the loss of a unique cultural landscape in Scotland and the end of a centuries old tradition in the Clyde Valley. A small compensation might be a slight increase in local biodiversity following development of scrub woodland in abandoned sites.

Nevertheless, there are some signs of optimism. Most orchard owners still value their heritage and whilst many do not have the resources or incentive to do more than manage their existing resource, some owners are actively managing and increasing their resource. There now exists a number of schemes, organisations and policy commitments that, if not always specifically for orchards, can certainly encompass them as community and biodiversity resources. Furthermore current trends for organically produced food, local distribution and distinctive quality produce would favour the conservation and diversification of traditional orchards. Finally the promotion of healthy eating and lifestyles is often focused around fruit, with many communities and schools specifically planting fruit trees. These schemes are more prevalent in England due to the vastly greater number of orchards and existence of organisations such as Common Ground which is currently funded by the DETR, the Tedworth Charitable Trust and other charitable organisations.

The Clyde Valley Orchards stand in a cusp. If concerted and significant action is not taken in the next decade a unique cultural landscape of centuries will be lost, becoming a remnant of fragmented small orchards. The sentiment and will to halt or even reverse this trend is present but needs the support of policy makers and resources as well as innovative thinking in the promotion and diversification of orchards for the 21st century.

The workshop held at the end of the study focused on the how future initiatives might arrest or reverse the decline. It was concluded that whilst currently planned initiatives such as the Clyde Valley Forest Habitat Network and the South Lanarkshire LEADER+ might provide initial short term support, there had to be 'grass root' will and coordination for initiatives to succeed in the long term. Subsequent to the workshop a local orchard owner has suggested the foundation of a local forum: 'Clydesdale Orchard Restoration Enterprise' (CORE), involving a network of local owners. This could be the local 'cornerstone' which is required to make a future orchard scheme work.

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Appendix 1 Orchards data spreadsheet

Мар	Site	Number/Name	Grid Reference	Status	Orchard Area (m ²)	Number of Trees	Site Area (m²)	Conservation Value
11	01	Chapelknowe	NS838446	Present	30099	006	151111	Local
-	02	Orchardville	NS836447	Present	24384	1040	29030	Negligible
11	03	Watson	NS837446	Present	7433	300	12866	Negligible
11	04	Broom House	NS835447	Present	3074	52	4096	Negligible
11	05	Cumming	NS836449	Present	1430	12	1954	Negligible
-	90	Clydebrae	NS834449	Present	16847	400	18399	Negligible
11	07	Poplarbank	NS835447	Present	1538	46	2358	Negligible
11	80	Hurlywell	NS835446	Present	8857	81	10573	Negligible
11	60	Anning	NS836446	Present	1978	40	2799	Negligible
	10	Byrewood Nursery	NS839445	Present	26546	460	55892	Local
-	11	Stonebyres	NS843442	Present	18368	100	35961	Local
-	12	Lammas Knowe	NS834453	Present	15447	290	64045	Local
-	13	Poplar Park	NS843443	Present	5066	16	52791	Local
11	14	Howith	NS836450	Present	1058	14	1437	Negligible
11	15	Riveside Cottage	NS836451	Present	823	26	2457	Negligible
11	16	Arnmore	NS846441	Present/Denied	0	0	77629	Unsurveyed
Ξ	17	Cairniepark	NS849441	Present/Denied Access	0	0	50696	Unsurveyed
11	18	Upper Cairniepark	NS849439	Present	23689	324	30294	Local
11	19	Oak Orchard	NS846438	Present	24645	174	27806	Negligible
13	20	Woodye#	NS848433	Present/Scattered Trees	0	12	13956	Negligible
13	21	Clyde Valley Kindergarten	NS851439	Present	2659	25	3472	Negligible
10	22	Underbank House	NS831456	Present	15353	22	68370	Local
10	23	Brodiehill	NS828459	Present	7010	120	62066	Local
10	24	Lye Cottage	NS830459	Present	9969	100	2708	Negligible
8	25	Flatt Farm	NS826465	Present	1100	32	29296	Negligible
8	26	Hut on Clyde	NS827467	Present	10297	107	10096	Negligible
0	27	Carfin	NS832461	Present	15686	80	146212	Local

Appendix 1 (continued)

Мар	Site	Number/Name	Grid Reference	Status	Orchard Area (m ²)	Number of Trees	Site Area (m²)	Conservation Value
∞	28	Braehead House	NS830470	Present	21962	140	49369	Local
∞	29	Mashock Cottage	NS830469	Present	19946	110	65356	Negligible
Ξ	30	Ashdean	NS833449	Present	811	21	22674	Negligible
11	18	Quarry Park	NS833451	Present	30248	157	32946	Local
0	32	Birkhill Farm	NS836466	Present	15756	25	48084	Local
6	88	Burnbank	997688N	Present	17007	140	37701	Local
/	34	The Dales	NS841471	Present	19695	50	24633	Negligible
6	32	Milnwood	0.2839470	Present	8781	47	10466	Negligible
7	36	Briarneuk	NS836473	Present	6946	50	80287	Local
_	37	Catcraig	NS833471	Present	13928	80	52561	Local
/	38	Cozieglen	NS833474	Present	7023	46	7414	Negligible
_	39	Gowanglen	NS832475	Present	9894	56	24001	Negligible
2	40	Orchard Knowe	2277883N	Present	6253	40	65348	Negligible
/	41	Gillfoot Nursery	NS828476	Absent	0	0	292349	Negligible
11	42	Alderbank	NS835448	Present	11697	160	13853	Negligible
7	43	Newlands Nursery	867708SN	Present	5202	30	69855	Local
4	44	The Orchard	NS804498	Present	5412	22	7440	Negligible
11	45	Victoria Cottage	NS835450	Present	2603	30	10122	Local
5	97	Overton Farm	NS813486	Present	2532	53	352588	Negligible
8	<i>2</i> 7	Nethanfoot	NS822471	Present	11867	41	15456	Local
8	87	Watchknowe	1977783N	Present	3722	45	63382	Local
7	67	Hill of Orchard	NS831476	Present	4767	24	15418	Local
8	09	Ellenjack Woodland	NS833465	Present	17496	200	51278	Local
5	15	Overton Wood	NS808489	Present	14408	17	120302	Local
3	25	Stewart Gill	205262SN	Present	21304	280	45024	Local
3	53	Garrionhurst	NS794509	Present	7376	92	12068	Negligible
2	54	Pathhead Orchard	NS790524	Present	20257	83	37244	Local
2	55	Orchard Bank	NS793521	Present	28650	80	82770	Local
2	56	Stewartbank	NS794519	Present	8257	140	25331	Local

Appendix 1 (continued)

Мар	Site	Number/Name	Grid Reference	Status	Orchard Area (m²)	Number of Trees	Site Area (m²)	Conservation Value
7	25	Hallbar Tower	NS839471	Present	7356	82	19807	Local
13	58	Stonebyres Linn	NS853439	Present	1992	7	13895	Unsurveyed
13	29	Beechwood	NS862437	Present	0	24	22083	Local
13	09	Linnville	NS856439	Present	8915	88	11485	Negligible
13	61	Ashvale	NS858435	Present/Scattered Trees	0	29	41150	local
13	62	Council Orchard	NS857436	Present/Scattered Trees	0	23	5163	Negligible
-	63	Douglas	NS834449	Present/Unsurveyed	0	0	7040	Unsurveyed
=	64	Springbank	NS834447	Present/Unsurveyed	0	0	6365	Unsurveyed
14	92	Sunnyside Estate	NS865440	Present/Unsurveyed	0	50	116098	Unsurveyed
1	99	Linnmill	NS853438	Present/Unsurveyed	1090	40	12801	Unsurveyed
6	<i>2</i> 9	St. Oswalds Chapel	NS845468	Present/Unsurveyed	0	0	58679	Unsurveyed
8	89	Vida Ventura	NS820475	Present/Unsurveyed	7681	50	9428	Neglibible
8	69	Orchard Farm	NS829474	Present/Unsurveyed	0	0	39351	Unsurveyed
	02	Gillfoot	NS829477	Present/Denied Access	0	0	25027	Unsurveyed
9	71	Waygateshaw House	NS824485	Unknown/ Unsurveyed	0	0	266140	Unsurveyed
					644190	7515	3453235	

Appendix 2 Landscape survey form

LANDSCAPE CHARACTER ASSESSME	NT		6133/GW
Surveyor:	Date:	Time:	
Character Area:		Viewpoint:	
Direction of View:		Photographs/ Sketches:	
Weather:			
LANDSCAPE DESCRIPTION/CHARAC Describe the main elements and features in the vegetation, land use and landscape features	e landscape and the way in w	hich they are orgo	nised. Consider landform,
N. J.			
Note any potential seasonal differences			
Do adjacent character areas enhance or de	tract from this character area?		
MANAGEMENT What measures that may be required to co condition of the landscape and its compone Woodland and trees (including orchards)		ape character of t	he area (note the general
Agriculture			
Buildings and Structures			
Boundaries			
Other			

Appendix 2 (continued)

LANDSCAPE/ELEMENTS & FEATURES - OBJECTIVE CHECKLIST

Record what is present by marking the relevant words.

o inconspicuous * evident ** conspicuous *** dominant

+ positive effect - negative effect

Landform

flat plain open/broad valley undulating rolling lowland enclosed valley rolling hilly upland narrow valley steep escarpment deep gorge vertical cliff other

River/Water Features Land Cover

rock/scree reservoir moorland pond/pool stream/burn bracken river marsh slow water rough pasture meander improved pasture fast water/rapids arable waterfall scrub

weir deciduous woodland canal coniferous woodland other mixed woodland

Landscape Elements

farm buildings walls glasshouses fences mill buildings hedges churches banks ruins woodland masts/poles plantation shelter belt pylons road tree clumps

road tree clumps
railway isolated trees
bridges hedgerow trees
tracks/paths river
other pond
lake/reservoir

other

industrial buildings commercial buildings

offices shops/pubs walls

orchard

parkland

gardens

cemetery

industry

road

other

Urban

houses

bare ground built up

mineral working

derelict land/dump

fences/railings roads/lanes car parks lighting footpaths traffic other

SUBJECTIVE CHECKLIST

Record your immediate impressions by circling round or nearest to the most appropriate word.

AESTHETIC QUALITIES

SCALE intimate small medium large vast **ENCLOSURE** tight enclosed semi enclosed open exposed **DIVERSITY** uniform simple varied diverse complex irregular FORM rectangular geometric rounded LINE straight angular curved sinuous **TEXTURE** smooth textured rough very rough coloured **COLOUR** monochrome muted colourful garish BALANCE balanced neutral discordant chaotic harmonious MOVEMENT vacant calm active busy frantic PATTERN formal regular indistinct irregular random

PERCEPTIONS/IMPRESSIONS

RARITY unusual ordinary rare unique **SECURITY** comfortable safe unsettling threatening WILDNESS domestic/urban managed semi-natural wild **BEAUTY** unattractive interesting attractive inspiring MANAGEMENT derelict neglected managed manicured **PLEASURE** unpleasant delightful neutral pleasant

Appendix 3 Orchard survey form

Clyde	valley orchard Survey, 2001.
SNH Project Code: 6133	SNH Nominated Officer: Liz Buckle/Martin Twiss
Site Ref. Nº : 1	Date: 31 / 8 /2001

Site Ref. N°.: 1	Date: 31 / 8 /2001	
Site Name: Chapelknowe	Surveyor's Name: Stuart Smith	
O.S. Grid Reference(Centre): NS 838 446	Area: 3.0Ha	
Orchard Status: Present ✓ Absent □	Access: Denied ☐ Permitted ✓	

Ownership
Name: Jeremy Gilchrist
Address: Chapelknowe Hazelbank Lanark ML11 9XN
Telephone N°.:(Home) 01555 860319

Orchard Details	
Varieties & Rootstocks Present (Please number unknown varieties also)	N°. of Trees
Victoria Plum	c.800
Other modern plums	40
Whitcorn Plum	6
Damson	20
Bramley Apple	20
Other apples (inc. Friar's Pippin)	6
Conference Pear	2
Hassel Pear	6
Total N°. of Trees:	c.900
Quality of trees: (% of Total)	
Healthy: 70 Poor: 30 Dead: 0	
(Removed)	
Age of trees: (% of Total)	
Young: 70 Mature: 30 Over-ma	ture:

Fruit Sold: Yes ✓ No Value/year: £0-5K
Do you want to maintain orchard?: Yes ✓ No
Do you value the orchard?: ✓
Does orchard form an integral part of your agri business? Is sole agri-business. In what way?
Perceived concerns: - Low prices - Irregular harvests (Glut years)
Future management proposed: Proper maintainance & re-planting.
Future management you are willing to consider: - Community management Small cattle
Do you have any future development plans for the area of the orchard?: - Sustainability - Rural Stewardship Scheme.
Are there any rare varieties presently within orchard?: Friar's Pippin Apple & Whitcorn Plum.

Questionaire

varieties grown in past, but no longer present.
Don't Know.
Current Tree Management: - Semi-organic - Pruning - Re-planting
List of requirements to maintain productivity/health of orchards:
Investment
Marketing

Threats & General Comments:

Current tourist development is not sustainable - local nurseries/garden centres do not buy local produce.

Appendix 3 (continued)

	Phase 1 Habitats & Boundary Feature Pre	sent
TN N°.	Habitat/Boundary Feature	Code
1	Mixed Plantation	A1.3.2
2	Broadleaved semi-natural woodland	A1.1.1
3	Semi-improved Neutral grassland (under orchard)	B2.2
4	Broadleaved Plantation	A1.1.2
5	Marshy Grassland	B5
6	Hedge	J2.1.2
7	Conifer Plantation	A1.2.2
8	Arable	J1.1

Target Notes:

(Including Current Management, Other Features of Natural Heritage Value, Species of Significants) (❀ = Habitat of conservation value)

TN1: Mixed Plantation dominated by Scots Pine *Pinus sylvestris* poles to 25m frequent Norway Spruce *Picea abies*, Beech *Fagus sylvatica*, Sycamore *Acer pseudoplatanus* and occasional Wild Cherry *Prunus avium*. Ruderal groundflora.

TN2: *Semi-natural broad-leaved woodland along the steep banks of the Clyde. Oak *Quercus* spp. dominant, frequent Ash *Fraxinus excelsior* and Hawthorn *Crataegus monogyna*, occasional Beech *Fagus sylvatica*, Bird Cherry *Prunus padus* and Wych Elm *Ulmus glabra*. Groundflora: abundant Dog's Mercury *Mercurialis perennis*, Great Woodrush *Luzula sylvatica*, Ivy *Hedera helix*, Raspberry *Rubus idaeus*, frequent Wood Avens *Geum urbanum*, Sanicle *Sanicula europaeus*, Male Fern *Dryopteris felix-mas*, Herb Robert *Geranium robertianum*, Enchanter's Nightshade *Circea lutetiana*, Wood Sorrel *Oxalis acetosella*, and occasional Angelica *Angelica sylvestris*.

TN3: Semi-improved neutral grassland overplanted with orchard, frequently mown but rank in places. Abundant Common Bent Agrostis capillaris, Yorkshire Fog Holcus lanatus, Red Fescue Festuca rubra and White Clover Trifolium repens, frequent Cocksfoot Dactylis glomerata, Creeping Buttercup Ranunculus repens, Meadowsweet Filipendula ulmaria, False oat-grass Arrhenatherum elatius and Nettle Urtica dioica. Occasional Common Sorrel Rumex acetosa, Angelica Angelica sylvestris, Meadow Vetchling Lathyrus pratensis, Water Avens Geum rivale, Silverweed Potentilla anserina, Marsh Woundwort Stachys palustris, Selfheal Prunella vulgaris and Lady's Mantle Alchemilla vulgaris agg. (See additional sheet)

Map:Orchard & Environs:

Appendix 4 List of consultees (excluding orchard owners)

Ann Lolley & Catherine Lloyd, Central Core Orchard Network

Mike Batley,

Central Scotland Countryside Trust

Archie Wilson,

Clyde Valley Wholesale Business

Dan Keech & Jane Kendal,

Common Ground

Countryside Agency

Graham Newport,

Clyde Valley Woodlands Initiative

Keith Motherson & Mary Macllwraith, Dumfries & Galloway Orchards Project

Phil Bradley,

East Cumbria Countryside Project

Mike Cuthbert,

Food Trust for Scotland

Hugo Rankine,

Forestry and Agricultural Consultant

Marketing Department,

Greater Glasgow & Clyde Valley Tourist Board

Becky Russell, Lanarkshire FWAG

Jane Leitch,

Marcher Apple Network, Hereford

Museum of Scottish Country Life,

Wester Kittochside

Lorna Davidson,

New Lanark Conservation Trust

Brian Thompson, Greening Manager,

North Lanarkshire Council

Cathy Johnston, Strategic Planning,

North Lanarkshire Council

Reforesting Scotland

Renshaw Scott, Carluke

Ben Jump,

Scottish Agricultural College

Graeme Walker,

Scottish Natural Heritage

Ian Cornforth,

Scottish Wildlife Trust

Alistair Hackston, Economic Development,

South Lanarkshire Council

lan Angus, Planning Officer, South Lanarkshire Council

John Batchelor, Economic Development,

South Lanarkshire Council

Malcolm Muir, Ranger Service, South Lanarkshire Council

Simon Pilpel, Access Officer, South Lanarkshire Council

Chris Melling, Tweed Horizons

John Butterworth

Rachel Datlen,

Worcestershire County Council

Robin Thomson,

Annieston Farm, Nr. Biggar

Scottish Tourist Board, Lanark

SERAD, Rural Affairs

Steve Luker,

Scottish Enterprise Lanarkshire

Trevor Landsfield,

Centre for Environmental Initiatives

Trevor Rodgers,

Northern Fruit Group, Harrogate

William Young,

Overton Farm, Clyde Valley

Willie MacSporran,

Clydeside Trading Society

Appendix 5 Note of workshop meeting (20.02.2002)

CLYDE VALLEY ORCHARDS WORKSHOP

February/6133/JCA

Wednesday 20th February 2002, 10.00am to 1.00pm at SEL Offices

Attendees:

Martin Twiss (Scottish Natural Heritage)
Steve Luker (Scottish Enterprise Lanarkshire)
Alistair Hackston (South Lanarkshire Council)
Stephen Corcoran (SLC)
Leslie Arnott (SLC)
Graham Taylor (Forestry Commission)
Chris Parkin (Small Business Gateway)
Brian Duffy (Small Business Gateway)
Shirley Graham (SERAD).

Alan Mitchell (Central Scotland Countryside Trust)
Ian Cornforth (Scottish Wildlife Trust)
Becky Russell (Lanarkshire FWAG)
Ann Steele (National Trust for Scotland)
Lindsey MacInley (NTS)
Stuart Smith (Heritage Environmental Limited)
Guy Wimble (Ironside Farrar Ltd)
Jane Anderson (Ironside Farrar Ltd)

Presentation

Guy Wimble of Ironside Farrar gave a presentation on the study findings, setting the orchards in their historical context, describing the current status of the orchards, the landscape assessment, economic and cultural value. The results of the orchard owners survey were summarised, with details of fruit varieties, orchard character and the natural heritage value of the orchards.

The conclusions of the study presented are that the orchards are of limited natural heritage value but do represent the remains of a cultural tradition of centuries and a landscape that is unique in Scotland. However, they are not currently economically viable and are in continuing decline. Nevertheless their unique character and the 'backdrop' they give to the valley makes them worthy of conservation. Local enthusiasm and potential initiatives exist but none have been implemented to effect.

Discussion

The presentation initiated discussion about the study findings and possible outcomes of the project. The discussion was loosely focused on the following topics:

Orchard network

All agreed that no orchard support scheme would work unless there was a local 'grass roots' organization to support it in the long term. It is recognised that group activity is the best way of sharing problems/advice and improving management and output. A business support role could be provided by the public sector but such support could only be for a limited period. It may also be possible for the local authority and orchard owners to work together with the plant nurseries and garden centres. (Subsequent to the meeting, a local orchard owner has had the idea of setting up the Clydeside Orchard Restoration Enterprise or 'CORE').

Demonstration orchard

Other ideas that have arisen during the study include a demonstration orchard, which could be used to educate and inspire other landowners. A link could be made with Wester Kittochside, the Museum of Scottish Country Life, based in East Kilbride. Labour and a training element could be supplied by SWT. This attraction could be extended through the promotion of orchard tours and income could be supplemented by a café or specialist shops to sell the produce. All agreed that the focus should be on orchard products (eg jam, cider etc) and not just the fruit.

Appendix 5 (continued)

Funding packages

All agreed that the orchards are not financially viable as businesses, therefore the benefits should be seen in terms of cultural heritage and visual quality/landscape conservation. Other benefits could include environmental/educational training activities. Orchards are currently not designated as woodlands and therefore do not qualify for most grants. All agreed that the current trend for orchard management is towards hobby farming and therefore the future of the orchards is uncertain.

CSCT currently fund their woodland planting through a mixture of funding packages and combined grants. As the Clyde Valley is within the CSCT boundary the organisation could be involved with the Clyde Valley Forest Habitat Network initiative.

Funding schemes such as the Rural Stewardship Scheme were not considered to be sufficient for the orchards as grants for grass management under trees would bring in £100/ha/annum over 5–10 years. As many of the orchards are only a few hectares, this form of funding would not bring in much capital.

The Clyde valley Forest Habitat Network is an initiative being developed for potential Heritage Lottery funding. It is run by a partnership of local organizations, including many attending the Workshop. There is potential for including the orchards in the network and this could be a source of funding/support should the HLF bid prove successful.

All agreed that a commitment from funding bodies is needed to launch an orchard initiative and to sustain its growth. South Lanarkshire LEADER + could be a mechanism where small orchard businesses could be encouraged. SNH could play an important role in terms of coordinating funding initiatives.

(LEADER+ is a European Community funded initiative for assisting rural communities in improving the quality of life and economic prosperity in their local area. LEADER + stands for Liason Entre Actions pour le Développement de L'Economie Rurale (links between actions for the development of the rural economy). It funds local partnerships (known as local action groups) to develop and implement bottom up innovative and sustainable solutions to local rural development issues).

Partnership commitment

All agreed that the orchards would play an important role in the Clyde Valley access strategy. Currently, there is no orchard with public access. SLC own a small orchard at Kirkfieldbank, which may provide an appropriate site. A focus of the access strategy may be to use nurseries as a pull to get people into the valley and for car parking, from which visitors can gain access to the path network, which could include orchards, subject to owner agreement.

One idea involved the establishment of community orchards, relating to training programmes, youth development programmes/volunteers and linked to economic development. The orchard owners survey revealed that several owners would be open to establishing community orchards. The South Lanarkshire LEADER + programme could assist with setting up pilot projects.

Next steps

The workshop highlighted the need to approach the situation from a number of angles, including business, cultural, social, training and conservation.

Approach the Clyde Valley Woodland Partnership to get the orchards included in the HLF bid and other funding initiatives:

- target individual orchard owners, thus disseminating information;
- encourage community groups to get involved with restoration/designation of community orchards;
- heighten funding potential for of the orchards through designation as woodland;
- lobby funding agencies to include orchards within their funding remit;
- aid establishment of local support/networking group (eg 'CORE') to start the process of regeneration;
- work to include orchards in initiatives such as the Clyde Valley Forest Habitat Network;
- explore the role of LEADER + in supporting and developing the orchard businesses.