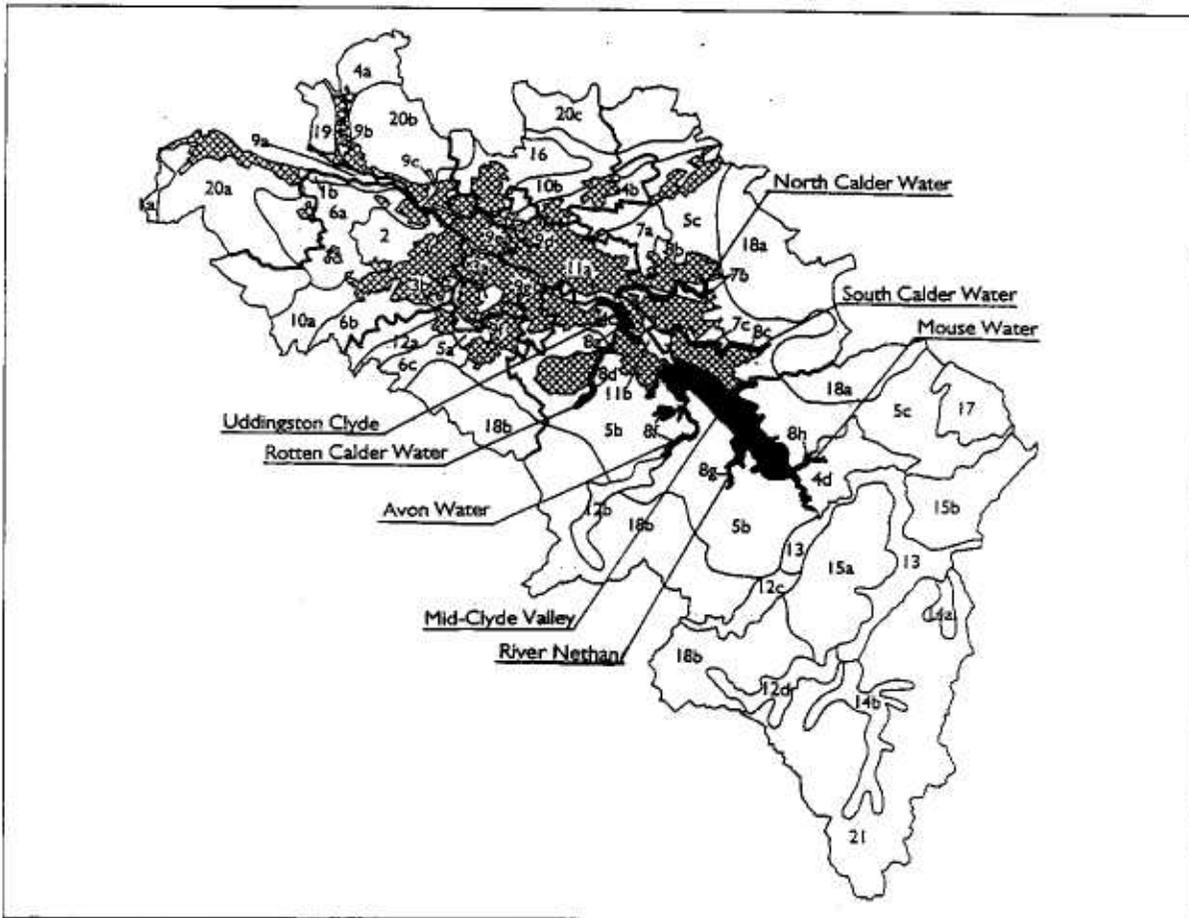


## 8 INCISED RIVER VALLEYS



5.8.1 Incised River Valley landscapes occur in the following locations:

- 8a Uddingston Clyde
- 8b North Calder Water
- 8c South Calder Water
- 8d Rotten Calder Water
- 8e Mid-Clyde Valley
- 8f Avon Water
- 8g River Nethan
- 8h Mouse Water

5.8.2 This landscape type occurs in the following local authority areas:

- North Lanarkshire
- South Lanarkshire

- 5.8.3 The incised river valley of the Clyde passes through the underlying carboniferous coal basin of central Scotland and south eastwards into a band of carboniferous limestone. The Falls of Clyde are created by a nickpoint where the bordering areas to north and south of old red sandstone meet the softer carboniferous rocks of the river valley.
- 5.8.4 Incised River Valleys were entrenched during the last Ice Age. At this time, a fall in sea level sparked a major phase of erosion and downcutting. Although this has now ceased, erosion is still very active in the valleys and subsidence is a frequent issue. While the valley sides are generally steep and well defined, there are also gorge areas where the burns and rivers have cut through harder rocks to create vertical cliffs. Waterfalls and rapids are a frequent feature in these river valleys. An example of these is the Falls of Clyde, which historically powered the textile mills at New Lanark, Robert Owen's model settlement on the edge of the Clyde at Lanark.
- 5.8.5 The Incised River Valleys are bounded by a series of smaller water courses which run perpendicularly into the larger course creating a 90<sup>o</sup> lattice effect, which is often echoed by shelterbelts and road patterns in the landscape.
- 5.8.6 The land in the Incised River Valleys is predominantly arable on the fertile flat valley bottoms if they are large enough (e.g. the floor of the Clyde Valley). In the narrower tributary river valleys, land cover tends to be predominantly deciduous woodland - in some cases, this is ancient woodland. This is due to the relative inaccessibility of these valleys, prohibiting agricultural use. These older woodlands have considerable conservation value and there are a number of SSSIs, SACs and SINCs within their limits. Elsewhere, pasture and arable land is hedged with beech or hawthorn and there are remnants of field boundary tree structure, often in decline and over-mature. Hedges, also, are being lost to post and wire fencing. The wider incised valley of the Clyde has traditionally been used for orchard fruit production and market gardening. Orchard remnants, often in considerable decline, make up a significant percentage of land cover. In the more confined incised river valleys, e.g. the Nethan Valley, coppicing of woodland was undertaken as a croppable resource. This practice has died out in the last 50 years.
- 5.8.7 Agriculture tends to comprise arable cultivation or market gardening on the flatter valley floors in fairly small fields (larger in the main Clyde Valley). Orchards (both managed and derelict) are found on valley slopes in parts of the main Clyde Valley, particularly around Kirkfieldbank. Shelterbelts define fields in some areas but are more prevalent on the valley slopes where they emphasise the 90<sup>o</sup> lattice of the hydrology. Farmsteads are spread out along the river valleys in a linear pattern controlled by the landform and by transport links.
- 5.8.8 Small villages occur in the incised river valleys, often in a linear form along roadlines (e.g. Kirkfieldbank in the Clyde Valley). Their relation to main communication routes means that these villages are a dominant feature in the landscape. Larger towns lie generally outwith this landscape type, favouring less constrained and more accessible sites on surrounding plateau farmland. A number of these settlements, for example Lanark, Hamilton and Motherwell are visible from within the valleys.
- 5.8.9 Transport routes tend to run along the valley floor with steep and sinuous connecting routes down the valley sides. Again, a 90<sup>o</sup> lattice effect is created. In the Clyde Valley, there was also a tourist rail route, now defunct. The roads are often subject to subsidence due to the erosion caused by river action in the incised river valleys.

- 5.8.10 Industry in the Incised River Valleys tends to be predominantly agricultural, although tourism in the Clyde Valley plays a major role in the local economy. Hydroelectric power also exists on the Clyde, and there are a few more urban fringe type activities around the edge of towns, for example, a caravan site on the Mouse Water just outside Lanark.
- 5.8.11 The Incised River Valleys created strong defensive locations and historically housed a variety of towers and castles (e.g. Craignethan Castle on the River Nethan). Other common historic features include remnants of policy landscapes such as woodlands, walls, and bridges, a number of large houses, castles and designed landscapes. A number of these, for example Lee Castle and Dalzell, are listed in *An inventory of gardens and designed landscapes in Scotland* (Land Use Consultants, 1987). Others are under consideration for inclusion in the extension to this inventory. New Lanark, Robert Owen's model settlement, has been nominated for recognition as a World Heritage Site.
- 5.8.12 The valleys of the Calder Water (flowing along the eastern edge of East Kilbride) and the North Calder Water (south of Coatbridge and Airdrie) exhibit similar physical characteristics, but are subject to urban fringe pressures. The North Calder Water valley, in particular, represents an important surviving corridor of undeveloped land in an increasingly pressured area. A number of these valleys provide a recreational resource. The North Calder Heritage Trail, for example, combines access and interpretation.
- 5.8.13 The combination of physical features (incised valleys, gorges), woodland, characteristic patterns of land use and settlement (particularly the history of fruit growing and horticulture) has created a distinctive and high quality landscape. As a result the area has been designated as an AGLV.

### **Key landscape issues**

- 5.8.14 Key landscape issues affecting this landscape type 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;
  - decline of field boundaries - hedges, walls and trees;
  - the visual and landscape impact of inappropriate development, (e.g. certain suburban housing developments), particularly given much of this landscape type's designation as an AGLV;
  - potential responses to subsidence and erosion along watercourses, 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;

- the visual and landscape effects of urban fringe activities and of residential and recreational development pressures close to urban areas.

## MANAGING LANDSCAPE CHANGE

### Key characteristics

5.8.15 The key characteristics, features and qualities of this landscape type are:

- 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 pastures, arable, market gardens and orchards;
- 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.

***Landscape planning and management should aim to conserve and enhance the distinctive combination of landform, land cover and settlement features that distinguish the Incised River Valleys within Glasgow and the Clyde Valley. Conservation and appropriate management of woodlands, together with the sensitive control of development are central to this objective.***

### ***Trees and woodland: sensitivities and forces for change***

- 5.8.16 Woodland comprises a critical component of this landscape type, with broadleaf woodland clothing many of the steeper valley slopes. The landscape would be very sensitive to any loss of woodland cover, either as a result of clear felling, or due to poor management or neglect. Most of the woodland in this landscape type is currently unmanaged. In some cases, the semi-natural woodland which has survived is best left with minimal management. In many cases, however, positive management is required to prevent the continued decline of this important landscape feature. A notable exception is the SWT reserve at the Falls of Clyde where management is being undertaken to restore components of the designed landscapes and enhance nature conservation values. Similar initiatives elsewhere in this landscape would greatly benefit its woodlands.
- 5.8.17 Although there are some areas of coniferous woodland, particularly those associated with major estates and designed landscapes, the landscape would be very sensitive to any replanting of existing broadleaf woodland with conifers. The Forestry Commission's Broadleaf Policy is intended to prevent this kind of change from occurring in the future. Similarly, the landscape would be sensitive, therefore, to large scale plantations which 'infilled' field blocks, obscured valley slope field patterns and which severed the visual

relationship between the valley floor and its upper slopes.

- 5.8.18 Woodland makes a significant contribution to the farming landscapes along the valley floor and on shallower valley slopes. Tree cover comprises a combination of farm woodlands and field boundary trees, together with sections of riparian woodland. Many of these trees are poorly managed and are in decline. The landscape will be sensitive to the loss of trees that will occur as existing trees become overmature and are either felled or fall of their own accord.
- 5.8.19 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.
- 5.8.20 Within this landscape type, the Central Scotland Forest Strategy places an emphasis on encouraging regeneration and more sustainable management of woodlands, with the aim of increasing their conservation and amenity value.

***Trees and woodland: planning and management guidelines***

- 5.8.21 Woodland is a critical component of the landscape of the incised valleys, clothing many of the steeper slopes and creating a strong contrast with the more open plateau landscapes above. Management should aim to:
- encourage the preparation of historic management/conservation plans for designed landscapes which make a significant contribution to the landscape, and encourage their use to guide woodland and tree management;
  - give strong support to the conservation of broadleaf woodlands within the incised river valleys, particularly those of ancient or semi-natural origin or otherwise of natural heritage importance;
  - encourage the development and implementation of woodland management strategies to bring broadleaf woodland back into management where this is compatible with nature conservation objectives; where there is evidence that it has occurred in the past, support the reintroduction of coppice management;
  - conserve and encourage the positive management of policy woodlands and landscapes within the incised river valleys;
  - encourage the restructuring of existing conifer plantations to create more organic and varied patterns of woodland with a more varied species and age profile; this should help reduce the contrast with softer shapes of natural woodland;
  - new deciduous or mixed woodland planting should be supported as a means of integrating and screening more recent developments on the valley sides; new woodland may provide a woodland framework for prominent houses, infrastructure such as sewage treatment plants, or larger urban areas such as the south western edge of Lanark;
  - encourage the retention of the open, generally unwooded character of floodplains where they occur; encourage the positive management of riparian woodlands and trees.

### ***Agriculture: sensitivities and forces for change***

- 5.8.22 Agriculture in the broader sections of incised valley has experienced considerable change, particularly with the decline of horticulture and fruit growing. Initial phases of diversification are reflected in the presence of large areas of glasshouses, many of which now stand empty and derelict. The landscape is sensitive to the continued decline of these structures, and the dereliction that results. Other farming enterprises have diversified into garden centres and other forms of retailing and recreation. Taken together, these developments are having a significant adverse effect on the sensitive and valued landscape of the Clyde Valley. It is particularly sensitive to the continued development and expansion of these activities.
- 5.8.23 Arable and silage cultivation is found on some broader areas of floodplain and on the shallower slopes. In some areas (e.g. south of Motherwell) this has resulted in a combination of field enlargement and decline or loss of hedges and woodland. This has created a more open landscape which contrasts with the enclosure provided elsewhere within these valleys. The landscape would be very sensitive to any further loss of field boundaries, or the decline or loss of farm woodlands and field boundary trees.

### ***Agriculture: planning and management guidelines***

- 5.8.24 Agriculture within the Incised River Valleys comprises a mixture of pastoral farming, arable cultivation and fruit and vegetable growing. These activities are concentrated on the valley floor and the gentler valley slopes. Landscape planning and management should aim to:
- discourage the further enlargement or amalgamation of arable fields and the resultant loss of hedges;
  - encourage the positive management, and where opportunities arise, the restoration, of hedges within the arable and pastoral parts of the valleys; allow new hedgerow trees to grow out;
  - examine ways of supporting the fruit industry with the objective of encouraging management and restoration of orchards within the larger valleys, particularly along the Clyde;
  - discourage patterns of farm diversification which introduce inappropriate retail or leisure developments or activities;
  - explore mechanisms to address areas of derelict or disused glasshouses.

### ***Minerals: sensitivities and forces for change***

- 5.8.25 Parts of this landscape type are underlain by coal deposits. Historically, these have been worked on a small scale, creating a number of spoil tips, railway lines and viaducts. Following many decades, these sites have often become important cultural and landmark features, and many are of ecological interest. Although there may be instances where reclamation is preferable, the landscape would be sensitive to any significant loss of these features.
- 5.8.26 Present day coal working takes the form of open-cast mineral extraction, often on a large scale. This type of activity is incompatible with the small scale character of the incised

valleys, particularly since effective restoration would be impossible. Open-cast mineral working could also have an adverse effect where extraction sites are located within close proximity to the valleys.

***Minerals: planning and management guidelines***

5.8.27 The incised river valleys have the potential to be affected by open-cast coal extraction in neighbouring plateau areas, and by pressures for the extraction of sands and gravels. Some of the valleys also contain small-scale remains from earlier periods of coal working. Landscape planning and management should aim to:

- resist mineral working in neighbouring areas which would have a visual impact on the valley landscapes;
- resist extensive working of sands and gravels on the valley floors since this could introduce activities that are out of scale with the landscape type and could result in features such as flooded pits being created in the longer term;
- strike a balance between the restoration and enhancement of areas damaged by earlier phases of coal working, and conserving locally significant parts of the cultural heritage.

***Transport: sensitivities and forces for change***

5.8.28 These incised valleys are often narrow and winding, a characteristic reflected in the road system. Motorists travelling through the valleys engage actively with the landscape as the roads swing around the lower slopes of the valleys, or climb steeply up the valley sides. Rising traffic levels, together with the application of common design standards, have increased the pressure, both for incremental improvements to alignment or sight lines, or more substantive schemes. The landscape of these valleys is very sensitive to both forms of change since they could result in the loss of important local features, the imposition of engineered solutions in the rural landscape, and the continued growth of traffic.

5.8.29 The steep sided and narrow character of these valleys means that they can present an obstacle to modern road development. Although major elements of infrastructure tend to be concentrated in the plateau areas, the need to cross incised valleys can result in a significant landscape impact and severance. This is of particular concern in relation to the upgrading of the A8 to motorway standard in the vicinity of the North Calder Water.

5.8.30 The active erosion within some of the tributary valleys in particular, means that many minor roads are subject to subsidence and deterioration. The landscape of these small scale valleys would be particularly sensitive to the use of major engineering solutions to remedy these problems.

***Transport: planning and management guidelines***

5.8.31 Roads which wind their way along the sides of the floodplain, and which climb steeply up the valley sides are a characteristic feature of the incised river valleys. They are typified by tight radii, steep gradients and substandard sight-lines. There is a concern that minor or major roadworks, designed to address these shortcomings, could have a significant impact on the intimate character of these valleys.

Landscape planning and management should aim to:

- discourage road engineering schemes which would result in:
  - the loss of characteristic landscape features such as steep and dissected valley sides resulting in twisting and often steep road alignments, allied to areas of extensive woodland;
  - adverse visual impacts;
  - changes in the way that motorists perceive the landscape through which they are passing;
- where improvements are required, alternatives such as traffic calming should be considered as alternatives to major infrastructural projects;
- encourage new road schemes or improvement proposals to follow the approach set out in the Scottish Office document entitled *Fitting roads* (Scottish Office, 1995);
- the incremental use of urban features such as signage, road markings and concrete kerbing should be resisted;
- in cases where subsidence is affecting the stability of minor roads, explore alternatives to major reconstruction works, including the use of weight limits or further road closures.

***Development: sensitivities and forces for change***

- 5.8.32 This landscape type is sensitive to the encroachment of settlements located in surrounding Plateau Farmland areas, particularly where they have expanded onto the upper valley slopes and are consequently visible from within the valley.
- 5.8.33 The Incised Valley Landscapes are also sensitive to the recent pattern of dispersed suburban residential development which has taken place throughout the area, introducing buildings of inappropriate design and materials in often prominent locations.
- 5.8.34 The landscape is sensitive to the continued development of retail and recreation schemes within the rural landscape, particularly where this introduces new buildings, car parks and prominent signage.
- 5.8.35 The landscape is sensitive to the introduction of tall structures such as pylons and masts, either within the valley or in locations visible from within the valley.
- 5.8.36 Rivers comprise a central and formative element in these landscapes. The character of these areas would be very sensitive to any measures which resulted in the loss of natural river landscapes, or the introduction of modern, engineered structures.

***Development: planning and management guidelines***

- 5.8.37 Although these areas are predominantly agricultural in character, development has affected them in a number of ways including:
- construction of modern housing;

- introduction of retailing, garden centre and leisure activities to compensate for the decline in horticultural incomes;
- the expansion of settlements from neighbouring plateau areas onto the upper valley slopes.

5.8.38 Landscape planning and management should aim to:

- discourage further incremental residential development within the incised valleys;
- examine the use of new screen planting to reduce the visual impact of some of the more prominent dwellings on valley slopes;
- encourage the use of traditional materials such as stone and slate in preference to prominent shades of brick and tile;
- consider the preparation of a design guide addressing issues of siting, design, materials and landscaping;
- control strictly further development of retail and leisure activities in former agricultural and horticultural buildings. Discourage inappropriate signage associated with existing enterprises;
- discourage further settlement expansion onto the upper slopes of the valleys where this would introduce further urban influences in the rural landscape;
- conserve natural river landscapes by discouraging schemes which introduce engineered features or structures.