

The Landscape Character of Derbyshire

PART SIX - CASE STUDIES IN THE APPLICATION OF LANDSCAPE CHARACTER

Introduction

Since 'The Landscape Character of Derbyshire' was first published in 2003, there have been many examples where new development across the county has successfully applied the principles of landscape characterisation. When these principles have been applied it follows that development is generally more successful in contributing to the European Landscape Convention objectives of 'Protection', 'Management' and 'Planning' of the landscape resource.

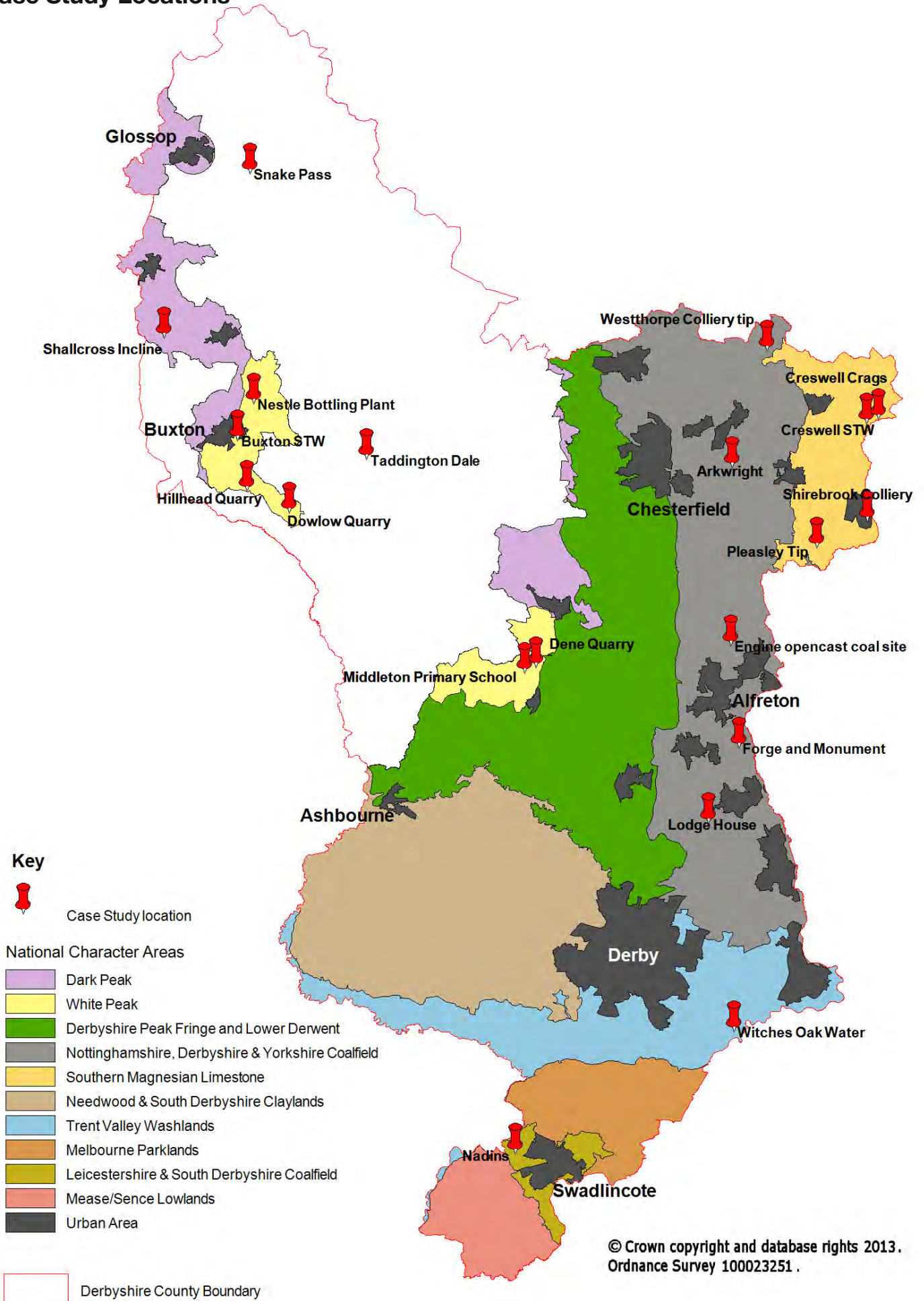
In order to continue the promotion of good design, this section of the document highlights best practice through the use of case studies. The main case studies highlight large strategic developments that have used a range of landscape characteristics in their design to successfully integrate the site with its surrounding context and mitigate against any adverse effects associated with the development.

Other case studies have been included as good examples that address key characteristics or local distinctiveness under the headings of:

- Geology and landform
- Soils and land-use
- Ecology
- Tree cover
- Enclosure
- Transport
- Built environment

It is intended that this section should be used as a guide to design quality and provide pointers to the appropriate considerations that need to be made to achieve a successful development.

Case Study Locations



Dowlow Quarry, Sterndale Moor, Buxton

White Peak: Plateau Pastures

A gently rolling, upland limestone plateau characterised by nucleated villages, dry stone walls, a pastoral land-use and open, expansive views



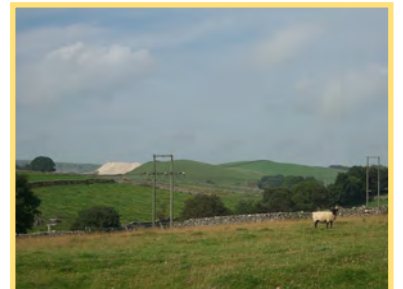
Dowlow Quarry is a large limestone quarry located adjacent to the A515 to the south-east of Buxton.

Design Considerations

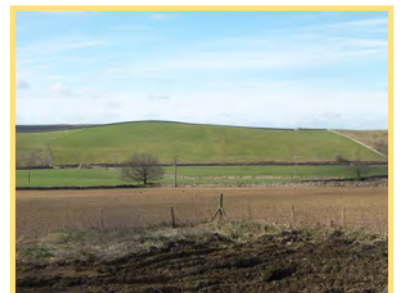
The principle design considerations were how to accommodate a large quarry waste tip within an essentially open landscape, use the tip positively to help mitigate against the adverse visual impacts associated with a large modern quarry, and restore the tip so that it sits sympathetically within the surrounding landscape character.

Key Characteristics Employed in the Design

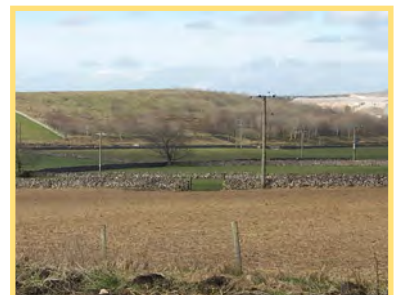
- Remodelling the tip to create a gently rolling landform
- Spreading of soils to establish a pastoral land-use
- Enclosure of the tip using dry stone walls allowing the grassland to be managed by sheep grazing
- Planting of small-scale plantation woodland to help break up the tip landform and add to the visual mitigation of the quarry



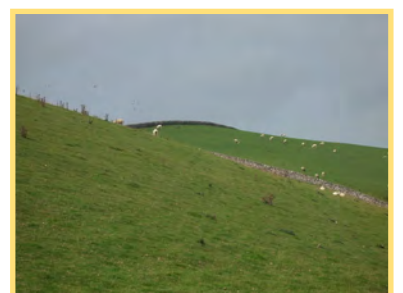
Gently rolling landform



Pastoral land-use enclosed by dry stone walls



Small plantation woodland



Tip managed by sheep grazing

Dene Quarry, Cromford

White Peak: Limestone Slopes

A landscape of small, nucleated limestone villages and dispersed farmsteads nestling within moderate to steeply sloping limestone slopes. Distinctive dry stone walls enclose former open fields and semi-regular fields with a pastoral land use



Before and after - Face and bench restoration creating roll over slopes and calcareous grassland.



Turf translocation to protect important grassland habitat

Dene Quarry is a modern limestone quarry near Cromford being restored in phases to assimilate the site with the surrounding landscape character and reduce visual impacts.

Design Considerations

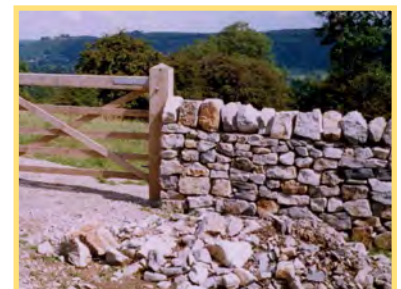
The principle design considerations include the reshaping of the landform to minimise the visual impact associated with a large modern quarry, the introduction of appropriate landscape features, establishing a sustainable land use, and creating habitats that link to the adjoining Site of Special Scientific Interest (SSSI).

Key Characteristics Employed in the Design

- Upper quarry bench remodelling to create 'rollovers' - gently rolling fields enclosed by dry stone walls
- Leaving some quarry faces as limestone outcrops
- Managing small shelter belt plantations
- Turf translocation of calcareous species rich grassland
- Repair of isolated field barn and historic lime kiln
- Removal of tipped material to reveal the former dale (Dene) and reuse the material for restoration elsewhere
- Repair of traditional dry stone walls



Before and after - Restoration of lime kiln and barn



Dry stone wall repairs

Shirebrook Regeneration Scheme

Southern Magnesian Limestone: Limestone Farmlands

A gently rolling, agricultural landscape, characterised by large scale open farmland, estate woodlands and limestone villages



The Shirebrook Regeneration Scheme involves the reclamation of the former Shirebrook Colliery buildings, yard and tips for economic redevelopment.

Design Considerations

The principle design considerations were how to accommodate a large industrial redevelopment within an essentially open landscape, use the tips positively to help mitigate against the adverse visual impacts on Shirebrook Town Centre, restore the tip so that it sits sympathetically within the surrounding landscape character and introduce features and habitats within the development that accord with the established character of the wider landscape, as part of an enhanced Green Infrastructure.

Key Characteristics Employed in the Design

- Former tips remodelled to reflect a gently rolling landform
- Large scale woodland planting with some coniferous species to reflect estate woodland
- New hedgerows with hedgerow trees used as boundaries within the site
- Creation of calcareous grassland to meet Biodiversity Action Plan targets



Gently rolling landform



Large scale woodland planting



Hedgerow boundary



Creation of calcareous grassland for Dingy Skipper butterfly

Creswell Crags, Creswell

Southern Magnesian Limestone: Limestone Gorges

Incised river corridors, characterised by steep rocky cliffs, overhanging woodland and grazed meadows



Reinstated scree slopes



Locally distinctive dry stone walls



Crushed magnesian limestone surfacing and simplified access arrangement



Retention of exposed geology adjacent to new road with species rich grass verge

Creswell Crags is one of the natural valleys carved through the magnesian limestone plateau to the east of Creswell that defines the Limestone Gorges Landscape Character Type and is subject to a bid for World Heritage Site status.

Design Considerations

The principle design considerations were how to reinstate the natural character of the area following the relocation of the highway from the gorge, accommodating the new road in the surrounding landscape, improving access to the site for visitors and introducing locally distinctive features that enhance landscape character.

Key Characteristics Employed in the Design

- Reinstatement of scree slopes at base of rocky cliffs
- Localised use of dry stone walls adjacent to settlement
- Use of crushed limestone surfacing and reduced access clutter
- Retention of exposed geology adjacent to road

Witches Oak Water, Shardlow

Trent Valley Washlands: Riverside Meadows

Broad flat floodplains, containing meandering rivers and streams with scattered trees along riverbanks. A pastoral landscape of generally large hedged fields with trees scattered along boundaries



Witches Oak Water is a former sand and gravel quarry near Shardlow, adjacent to the A50.

Design Considerations

The principle design considerations were how to restore the site given the lack of fill material to return it to agriculture, how to visually integrate large open waterbodies, enhancing the site for wildlife, whilst facilitating the site owners requirement to retain the site for long term water storage.

Key Characteristics Employed in the Design

- Remodelling of water bodies to create a more natural organic shape with shallow margins
- Planting of marginal vegetation including reed beds
- Use of scattered watercourse trees to emphasis the line of the River Trent
- Re-planting of thorn hedgerows to create a traditional green lane crossing the floodplain
- New wet woodlands to screen large open water bodies and providing additional habitat



Newly created reed beds



Established reed beds



New hedgerows adjacent to green lane



Wet woodland adjacent to lakes

Application of Key Characteristics

Geology and Landform

A57, Snake Pass

Dark Peak: Open Moors

A Derbyshire County Council highway improvement scheme in the Peak District National Park slackened road bends leaving exposed sandstone, natural rock bluffs and verges which were restored with patches of local moorland grasses and heather.



Westthorpe Colliery Tip, near Killamarsh

Nottinghamshire, Derbyshire and Yorkshire Coalfield: Wooded Hills and Valleys

As part of the Park Brook surface mining scheme the former Westthorpe Colliery tip was re-graded to create a landform that responded to the broadly undulating topography of the wider landscape and allowed for the opening up of the Park Brook, which was previously in culvert under the tip.



Engine, Former Opencast Coal Site, near Blackwell

Nottinghamshire, Derbyshire and Yorkshire Coalfield: Coalfield Village Farmlands

The restoration of the Engine Opencast Coal site near Blackwell provided the opportunity to revisit a former mineral railway branch line that had been partially restored in the 1980s leaving an artificial and unsympathetic landform. High railway embankments were removed and land remodelled, reinstating the flat floodplain, to allow Normanton Brook to return to its former meandering course. The scheme reinstated gentle valley slopes and provided the opportunity for planting small woodlands, streamside and hedgerow trees.



Application of Key Characteristics

Soils and Land-use

Arkwright, Former Opencast Coal Site, east of Chesterfield

Nottinghamshire, Derbyshire and Yorkshire Coalfield: Estate Farmlands

Prior to opencast coaling, large parts of the site comprised of unrestored colliery spoil tips and disused railway lines. Existing soils were replaced to restore an appropriate mixed farming land-use with a semi-regular field pattern, whilst medium to large scale woodland and low fertility, species-rich grasslands were created where soil cover was more limited.



Shirebrook Regeneration Scheme

Southern Magnesian Limestone: Limestone Farmlands

Agricultural soils and subsoils stripped as part of the tip remediation work were reapplied to the finished tip to provide different soil conditions for woodland planting and habitat creation. Topsoil was applied to provide greater depth for tree growth whilst subsoils were applied to create nutrient deficient conditions to promote the establishment of calcareous grassland.



Application of Key Characteristics

Ecology

Buxton Sewage Treatment Works

White Peak: Limestone Dales

Relocation of Buxton Sewage Treatment Works has led to the removal of the original filter beds and associated infrastructure, and allowed for the reinstatement of daleside, upland, ash woodland and the opening up of the previously culverted River Wye.



Nadins, Former Opencast Coal Site, near Swadlincote

Leicestershire and South Derbyshire Coalfield: Coalfield Village Farmlands

As part of the restoration of the Nadins opencast coal site, some former lagoons were reshaped to provide a pond for nature conservation. Sections of the berms between the lagoons were retained to create small islands and the edges were gently shelved to create seasonally flooded areas that support a range of marginal vegetation.



Application of Key Characteristics

Tree cover

Buxton Sewage Treatment Works, Dukes Quarry

White Peak: Limestone Dales

At Buxton Sewage Treatment Works, amenity tree planting adjacent to the entrance using appropriate species has helped in screening the site from motorists and pedestrians using Duke's Drive. The use of dark recessive colours for the building and the extension of the dry stone wall further assimilate the building with its immediate context and contribute to local distinctiveness.



Forge and Monument Opencast Coal Site, west of Codnor

Nottingham, Derbyshire and Yorkshire Coalfield: Coalfield Estatelands

As part of the Forge and Monument surface mining scheme near Codnor, existing important woodland and historic landscape features were identified and protected during the works. This included the existing Foxholes Plantation, Forge Monument and the ruins of Codnor Castle.



Pleasley Pit Country Park

Southern Magnesian Limestone: Limestone Farmlands

The successful reclamation of the former Pleasley Colliery Tip has been achieved through large scale woodland creation characteristic of woodlands in the wider landscape. Extending the arable land-use up one flank of the tip, enclosed by hedgerows, further assists in integrating the site with the surrounding landscape.



Application of Key Characteristics

Enclosure

Hillhead Quarry, near Harpur Hill, Buxton

White Peak: Upland Limestone Pastures

Restored limestone walls at Hillhead Quarry provide a locally distinctive boundary and enclose sheep grazing on bunds designed to screen views of the site, helping to reduce the residual impact of quarrying on the surrounding landscape and provide a sustainable land-use.



Lodge House Opencast Coal Site, Smalley

Nottinghamshire, Derbyshire and Yorkshire Coalfield: Coalfield Estatelands

Mature hedgerows affected by the surface mining scheme have been carefully excavated and translocated to donor sites immediately adjacent to the workings to bring about enhancements to the wider landscape and maintain an important ecological resource.



Application of Key Characteristics

Transport

Shallcross Incline Greenway, Whaley Bridge

Dark Peak: Settled Valley Pastures

When the former railway line at Shallcross Incline was upgraded to a multi-user greenway, great care was taken to retain as many trees as possible to contribute to the wooded character of the wider landscape. Appropriate detailing of the access points using dry stone walls and simplified gates helps to reduce visual clutter and create a locally distinctive feature.



A6 Taddington Dale, near Buxton

White Peak: Limestone Dales

During the works, undertaken by Derbyshire County Council, to slacken the road bends along the A6 through Taddington Dale and create two arrester beds, great care was taken to minimise the disturbance to the existing ancient woodland. The verges were successfully reinstated using on-site rock debris and soils to promote the natural regeneration of local grasses and ground cover supplemented by small amounts of native woodland planting.



Application of Key Characteristics

Built environment

Nestlé Waters Factory, Waterswallows, Near Buxton

White Peak: Plateau Pastures

An architecturally designed building using vernacular materials in a contemporary style with dark recessive colours has helped assimilate this large modern water bottling factory within this open and visually exposed landscape. Extensive swathes of grassland sweeping up to the building frontage help to link the site with the surrounding pastoral land-use.



Middleton-by-Wirksworth Primary School

White Peak: Plateau Pastures

This modern classroom extension at Middleton Primary School has been architecturally designed to complement the vernacular materials associated with the original school buildings. The exterior has been clad with cedar wood panels that with time will weather to take on the grey hues associated with the traditional limestone building materials. A grass roof has been used to visually integrate the building with the surrounding pastoral land-use and wooded backdrop to the site.



Creswell Water Treatment Works

Southern Magnesian Limestone: Limestone Farmlands

The use of vernacular building materials including pantile roof tiles for the new pumping station at Creswell and traditional boundary walls helps to reinforce local distinctiveness.

