Reading the Upper Nidderdale Landscape

Upper Nidderdale Landscape Partnership

Front cover: View towards Gouthwaite reservoir.
© Iain Mann

Below: The landscape around
Studfold Farm is littered with ridges
and humps from over 1,500 years
of iron smelting, lead mining,
limestone quarrying and farming.
© Paul Skirrow

Introduction

Wherever you go in Upper Nidderdale, you can't help but notice the humps, bumps, dips, hollows and banks scattered among the fields, woods and moors. You've probably found yourself at some point wondering what they are and how they were made.

Are they just a natural part of the landscape, products of whatever mysterious long-ago processes made these Pennine uplands what they are today? Or are they relics of the lives and livelihoods of our long-forgotten ancestors? And how exactly do you tell the difference?

This booklet sets out to answer those questions.

A guidebook for the curious

The following pages are for anyone who wants to know how to decipher the Upper Nidderdale landscape. They suggest ways of interpreting not just the humps and bumps, but those other stray features that catch your eye: initials over a barn door, an unusual gatepost, a pile of stones by a moorland track.

The first part of the booklet takes us on a tour through the long and rich history of the Nidderdale landscape. We time-travel from the wind-raked tundra that emerged after the last ice age to the forested hunting grounds of the first human inhabitants; on to the huddled farms of the earliest settlers and into the Middle Ages, when the great monasteries prospered on the wool from Nidderdale sheep and noblemen hunted deer in the copses and coverts of the valley bottom; and onwards to modern times, when Nidderdale became an industrial landscape, dotted with mills and mineworkings, right up to the present day, when the landscape is still subtly changing, in ways we don't always recognise.

In the second part, we take a closer look at those humps and bumps and other landmarks. Where do they fit into the story? What can they teach us about how the land was used in the past and how it was woven into men and women's lives? How can they help us piece together an account of the wider landscape?

The third part is a case study in how close and systematic examination of a whole landscape can add a new dimension to our understanding of life in the past. It focuses on the Upper Nidderdale Landscape Partnership's *Our Farm Heritage* project.

At the back of the booklet there's a handy guide to the libraries, archives and webpages you can consult if you want to take your landscape detective work a step further.

Our Farm Heritage

This booklet takes its cue from the *Our Farm Heritage* project, an initiative run by the Upper Nidderdale Landscape Partnership.

It draws on the experience of those who worked on the project, an ambitious attempt to gain a deeper understanding of the changing landscape by identifying and recording archaeological and historical features on farmland in Upper Nidderdale.

The fieldwork was carried out by volunteers, led by the Iron Age (Nidderdale) Community Archaeology Group and with training and support from the Landscape Partnership team.

A number of sites were earmarked for further investigation and small-scale excavations took place in 2017 and 2018 with the help of professional archaeologist Jim Brightman of Solstice Heritage and archaeological consultant Debbie Hallam. A summary of the excavations can be found later in this booklet.

The story of the Nidderdale landscape

All landscapes are shaped through the interplay of natural and human influences. At the very beginning of our story, though, Nidderdale is a landscape without people, and the main players in the drama are rocks and ice.

A valley is formed

If you stand on the high ground around Nidderdale, you will nearly always be standing on top of a coarse, granular, grey rock called millstone grit. It was formed from layers of sediment deposited in a vast river delta around 316 million years ago.

Beneath the gritstone sits a layer of Carboniferous limestone, formed from the calcium-rich shells and skeletons of creatures that lived in the tropical seas that covered this area 335 million years ago. In a few places the limestone can be seen at the surface, forced up through the gritstone by earth movements around 300 million years ago. Examples are at Greenhow Hill, around Lofthouse, and most strikingly at How Stean Gorge.

Scar House Res

Angram Res

Lofthouse

Ramsgill

Gouthwaite Res

Pateley Bridge

Greenhow
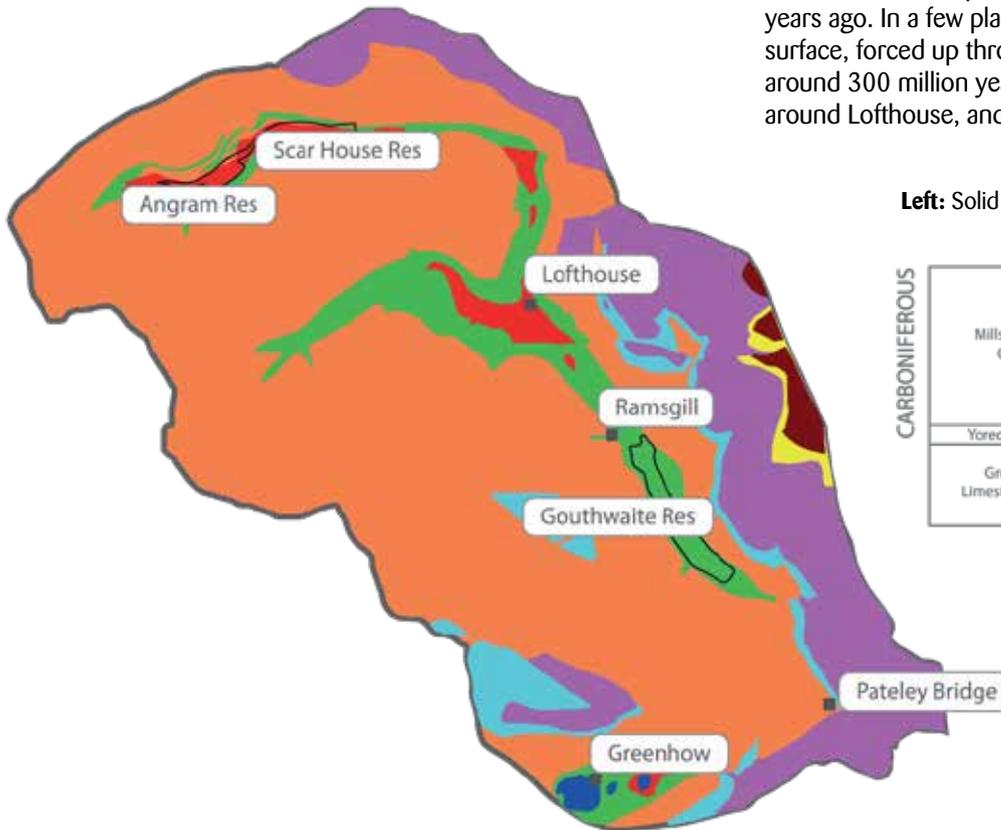
Left: Solid geology of Upper Nidderdale.

				MY
CARBONIFEROUS	Millstone Grit Group		Rossendale Formation	317
			Marsden Formation	319
			Hebden Formation	320
			Unconformity	
			Samlesbury Formation	324
			Silsden Formation	325
			Pendleton Formation	327
			Unconformity	
	Yoredale Group		Alston Formation	330
	Great Scar Limestone Group		Danny Bridge Limestone Formation	334

What moulded these rocks into the basic shape of the landscape we know today was ice. During cold periods in the earth's climate, known as glaciations, the temperature dropped to levels where snow and ice didn't thaw and instead built up into huge mobile masses hundreds of feet thick, called glaciers. Over successive glaciations lasting many thousands of years at a time, the glaciers gradually scoured their way ever deeper through the layers of millstone grit.

The most recent glaciation lasted from around 30,000 to 12,000 years ago. Its end ushered in a warmer epoch in which we still live. It also heralded the beginning of the Nidderdale landscape as we know it.

When the climate warmed and the ice melted, it left behind a steep-sided valley, bare to begin with, but soon covered with scrub and then woodland. On the high ground were crags and gritstone outcrops, which would be further sculpted by millennia of Yorkshire weather into familiar landmarks such as the enigmatic stone stacks on Fountains Earth Moor known as Jenny Twigg and her daughter Tib.

Below: Jenny Twigg and her daughter Tib rock formation.
© Paul Harris

Left: Artist's impression of the view towards Gouthwaite reservoir during the Ice Age.
© Rob Lees

The retreating ice coated the valley sides with a layer of thick boulder clay, which would one day provide grazing land. On the valley bottoms it left mounds of mineral debris known as moraines. Thousands of years later, one of them would be used by the engineers of the Bradford Corporation as the foundation for the dam at Gouthwaite Reservoir.

Over time the familiar Nidderdale scenery would be completed by the accumulation of thick deposits of peat on the poorly drained sandstone uplands, creating the conditions for moorland to develop, and alluvium (clay, silt and sand) on the flood plains of the Nidd, where wildflower meadows would one day flourish.

Few of these landscape elements would have taken the form they did, however, without human intervention. The scene is set for the first people to begin exerting their influence on the landscape.

Right: Superficial geology of Upper Nidderdale.

Gouthwaite Moraine
Alluvium
Peat
Head
Glacial Till

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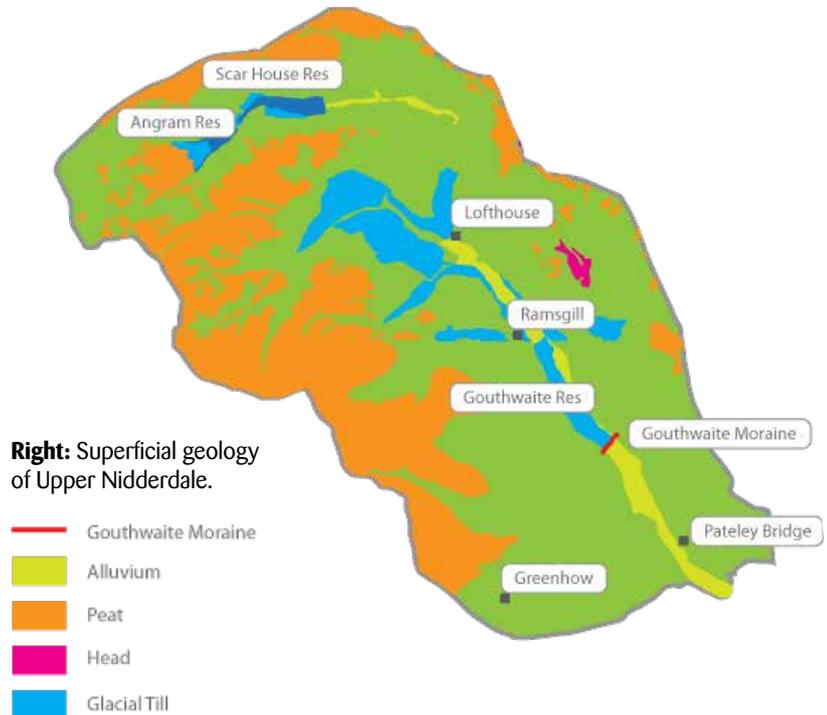
The first people in Nidderdale

How long have humans been present in Nidderdale? We can't be precise, but the answer is certainly several thousand years. Much evidence for prehistoric habitation has been found in the dale, although we still don't know much about the earliest settlers in Upper Nidderdale.

As far as we can tell, the first people appeared in Nidderdale not long after the end of the last ice age, in the Mesolithic period or Middle Stone Age, between about 10,000BC and 4,000BC.

These people were part of a nomadic culture of hunting and gathering. Their flint tools have been found on exposed peat edges on the high ground around the head of Nidderdale. A number of significant Mesolithic sites have been identified, too, though there is little on the surface to see today.

The Neolithic, or New Stone Age, began around 4,000BC with the introduction of a more settled agricultural lifestyle. Its usual archaeological hallmarks are the earliest examples of pottery and the appearance of large-scale monuments in the landscape. The Neolithic left few marks on the landscape of Upper Nidderdale, however, except for occasional features like the mysterious group of cup-and-ring marked rocks to the west of Gouthwaite Reservoir. They are thought to date from the Late Neolithic/Early Bronze Age, around 5,000 years ago. Nobody knows exactly what they signify.

Left: Artist's impression of the view towards Gouthwaite reservoir during the Mesolithic.
© Rob Lees

From the Bronze Age to the Romans

The Bronze Age, which began with the introduction of metalworking to Britain from the Continent in the mid to late 3rd millennium BC, is when we begin to see more definite signs of settlement.

Changing burial customs left lasting marks on the landscape. Bronze Age men and women buried their dead (and later the ashes from cremations) under small, broadly circular cairns. In northern upland areas, these cairns are often the earliest surviving monuments. Scattered examples can be found across the high fells of Nidderdale, although they can be hard to distinguish from later cairns.

People continued to settle and farm in Upper Nidderdale into the Iron Age (750BC–AD43) and the Romano-British period (AD43–450). Evidence of animal enclosures dating from the 2nd century BC has been found in the upper dale. Iron Age and Romano-British field systems and enclosures have been identified, concealed beneath the later walls and fields but still visible as earthworks and slight stone banks.

If the discovery of two Roman lead ingots in the Greenhow area in 1730s is anything to go by, lead mining may have been ongoing in Upper Nidderdale during the Roman period. Later mining activity has probably erased any trace of these earlier mines.

Left: Artist's impression of the view towards Gouthwaite reservoir during the Iron Age.
© Rob Lees

Anglo-Saxons and Vikings

During the centuries after the departure of the Romans from Britain, small-scale woodland clearance made room for more farmland in Nidderdale, which suggests a slowly growing population and perhaps even the arrival of Anglo-Saxon settlers.

By the end of the 6th century, an area around Pateley Bridge had been cleared – the –ley in Pateley being derived from the Old English word leah, meaning a woodland glade or clearing.

We do not know when woodland clearance began in earnest, but at this stage Nidderdale was probably still fairly heavily wooded. Beyond the farmer's diligently tended fields would have been oak woods with thickets of alder and willow.

The 9th and 10th centuries saw the arrival of new waves of settlers, first Danish and then Norse. Place-names with Scandinavian roots, like Bouthwaite and Ramsgill, point to the presence of Norse settlers in Upper Nidderdale.

Into the Middle Ages

Everything changed in the years after the Norman Conquest in 1066. When the northern barons rebelled against the new regime, the Normans carried out a series of brutal reprisals known as the Harrying of the North (1069–70).

Farms were burnt, crops destroyed and people slaughtered. Widespread famine followed. By the end of it, the population of a huge area north of York, including Nidderdale, was all but wiped out.

In the years that followed, Upper Nidderdale became a royal hunting chase or forest. As part of the Honour of Kirkby Malzeard, it was owned from around 1110 by the Mowbray family. The Mowbrays had strong links to the growing Cistercian religious order, and between 1143 and 1181 Roger de Mowbray granted rights to farm and extract stone and minerals in most of Upper Nidderdale to Byland and Fountains Abbeys.
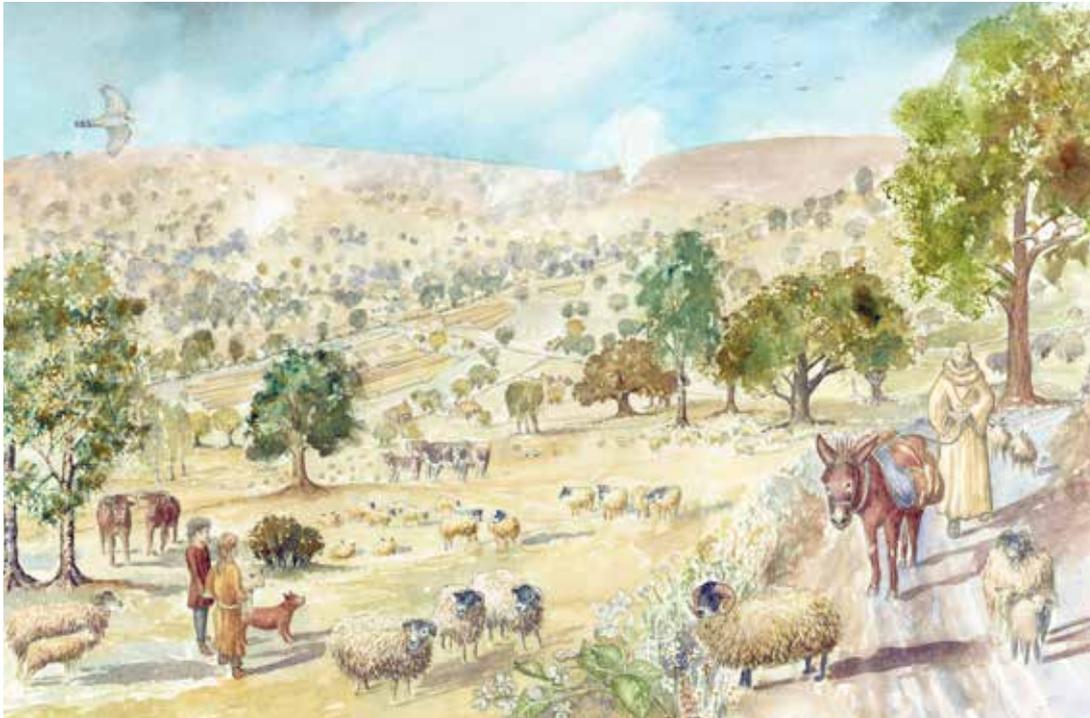
Left: Artist's impression of the view towards Gouthwaite reservoir during the Medieval period.
© Rob Lees

The presence of the great abbeys had a lasting impact on Upper Nidderdale. They repopulated the valley, establishing thirty-two granges – monastic farms run on behalf of the abbeys by lay brothers – between Bewerley, near Pateley Bridge, and Angram, at the top of the dale.

Many farms on the sites of former monastic granges still survive, such as those at Studfold, Gouthwaite and Raygill House, all established by Byland Abbey, and Brighouse and Covill, established by Fountains Abbey. The pattern of settlement established in the Middle Ages largely continues today.

Although the granges in Nidderdale were established by monks and lay brothers, by the early 15th century they were mostly let to secular tenants. This tenancy system proved long-lasting, and it led to the development of the large landowning estates that covered most of Upper Nidderdale for centuries.

Pateley Bridge began to develop as the main settlement in the valley during this period, gaining a market charter in 1320 and a chapel a year later.

Land ownership after the monasteries

The Dissolution of the Monasteries between 1536 and 1541 caused a short period of turmoil in Upper Nidderdale as the monastic estates were broken up and sold off.

While a few farms were sold to their tenants, most of Upper Nidderdale ended up by the start of the 17th century in the hands of two main landowners: the Yorke family, who bought the former Byland Abbey townships of Stonebeck Up and Stonebeck Down at the top of the dale; and Sir Stephen Proctor, who owned Fountains Earth and the mineral rights in Bewerley, both former Fountains Abbey townships.

The main change came in the nature of tenancies. Most of the granges were already occupied by tenants, and fresh terms were set out by the new landowners. Some former granges were also split between a number of tenants, and pastureland became held in common.

Stinted and unstinted pastures (stinting was the practice of restricting the number of animals that could be grazed) were created, with grazing rights shared between the occupiers of each new farm.

This had an impact on the settlement pattern in Upper Nidderdale. The growing number of tenants meant that former granges sited near water crossings and on the junction of two or more routeways tended to become small villages. Examples are Middlesmoor, Lofthouse, Ramsgill and Bouthwaite.

The new private landowners were keen to develop the lucrative local lead mining industry. In the 17th century Sir Stephen Proctor pioneered new smelting techniques, built a smelt mill on Greenhow Hill and invested in new drainage technology in order to dig deeper shafts.

A completely new village of miner's cottages was established around the lead veins at Greenhow. Proctor signed an agreement giving the miners grazing rights on common land so they could supplement their incomes by farming smallholdings.

The Yorke Family, who had mining interests on the western side of Greenhow Hill and at Stonebeck Down, built a smelt mill at Heathfield in around 1620.

These agricultural and industrial developments fuelled an increase in population. Domestic industries sprang up to meet the growing demand for goods and services.

As the large former grange farm holdings were split up, some tenants found they couldn't survive on farming alone and took up secondary occupations like building, quarrying or producing textiles.

The industrial era dawns

In the late 18th and early 19th centuries the industrial revolution reached Nidderdale. The valley's natural assets – fast-flowing watercourses to power machinery, plentiful stone and mineral resources – meant it was ripe for investment.

The smart money quickly found its way to the lead mining industry. Demand for lead was on the rise and the development of new technology and means of finance gave the local mining interests the opportunity to expand.

Entrepreneurs like John Lupton and George Barker abandoned the old system of partnerships between landowners and miners and invested in exploration to find new veins, drain existing shafts and build new smelting mills.

Further expansion in mining and smelting took place at various places on Greenhow Hill and further up the valley near Lofthouse. In 1841 around 50 people worked on the Ashfoldside site, and by the 1851 census over 230 people living in Pateley Bridge, Bewerley and Greenhow Hill worked in the lead mining industry.

While the lead industry was already well developed when the industrial revolution took hold, textile production remained mostly a domestic affair in Upper Nidderdale. However, by the late 18th century linen dominated textile manufacturing, replacing woollen cloth as the main product. Local businesses began importing flax, the raw material for linen, via Hull from the Netherlands, Russia and the Baltic.

The enclosure movement

Farming was changing, too. The greatest change during this period arrived with the large-scale enclosure of common land, part of a movement that was taking place across Britain.

One of the most conspicuous effects of the enclosures could not be more visible today. Whereas in lowland areas the land was parcelled out with quickset hawthorn hedges, in upland areas like Nidderdale miles and miles of drystone walls were built.

These enclosure walls – as distinct from walls around earlier, piecemeal enclosures – are easy to spot. They're often

ramrod straight and proceed with a complete disregard for local geography, the result of having been drawn on a map with a ruler by an enclosure commissioner.

The enclosures benefited the larger landholders, who could meet the cost of enclosing land more easily and were less affected by the loss of rights to resources such as turf, stone, firewood and rabbits.

Some smaller tenant farmers were bankrupted by the additional cost and their land was bought by the larger farm holders. Much of Upper Nidderdale's moorland, however, remained as common land, and even today farms retain grazing rights in the form of 'sheep gaits' (which refers to the fixed number of beasts each farmer is allowed to graze on the moor).

The coming of the railways

The growth of industry brought a rapid improvement of the local transport network.

Turnpike trusts were set up by acts of Parliament to improve and maintain the road network by administering parish resources and charging tolls. The road from Pateley Bridge to Ripon was improved in 1756 and the road to Grassington and Knaresborough in 1759.

The coming of the Nidd Valley Railway to Pateley Bridge in 1863 provided much quicker access to the rest of the country. It revolutionised local industries – quarrying, for instance. On a small scale to supply local needs quarrying had taken place for centuries, but the railway made bulk haulage possible. In the second half of the 19th century existing quarries in the gritstone beds, such as Scot Gate Ash above Pateley Bridge and Moorhouses in the Middle Tongue valley, expanded rapidly.

Scot Gate Ash produced a hard-wearing flagstone used in many railway platforms nationwide, including Victoria Station in London. At its height in the 1880s it was the largest quarry in the West Riding of Yorkshire.

Above: Scot Gate Ash quarry as it survives today with enclosed fields on the other side of the valley.
© Louise Brown

The Nidd Valley Reservoir scheme

By the end of the 19th century Upper Nidderdale's long period of economic growth was fizzling out.

But in the 1890s, as industry was falling into general decline, an ambitious public works scheme to provide water for Bradford breathed new life into the area.

In 1892 Bradford Corporation was granted powers to build three reservoirs in Upper Nidderdale to supply water to the city by an Act of Parliament. The scheme began the following year with the construction of a temporary reservoir at Haden Carr, before Gouthwaite (completed 1898), Angram (completed 1917) and Scar House (completed 1936) changed Nidderdale's appearance forever.

The reservoirs wrought many other changes to the landscape. Temporary villages were built for the workers at Scar House and Angram, the foundations of which can still be seen today. New quarries were opened up to supply the works with huge quantities of stone.

The railway was extended from Pateley Bridge to the head of the dale to supply materials for the scheme. Although it has since been dismantled, the Nidderdale Light Railway's cuttings and embankments mean it remains conspicuous in its absence. The trackbed itself is a constant, if ghostly presence as you travel up the dale towards Lofthouse and on to Scar House.

Overground sections of the 32 mile (51 km) aqueduct taking water from Scar House reservoir to the water treatment plant at Chellow Heights on the edge of Bradford can still be seen spanning the tributary valleys on Nidderdale's western slopes.

Below: Artist's impression of the construction of Scar Dam.
© Rob Lees
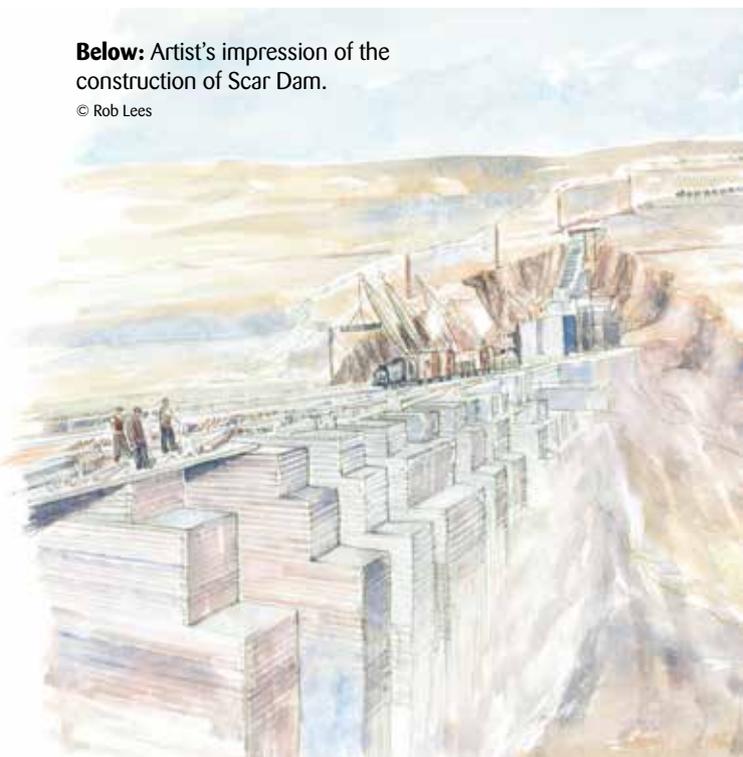
Lodge, a tiny hamlet on the northern bank of Scar House Reservoir that had begun life centuries before as a Byland Abbey grange, was one casualty of the reservoir scheme. Bradford Corporation bought all the land on the watershed for the reservoir and asked the residents to leave.

The ruins of buildings left at Lodge provided a fascinating site for the Upper Nidderdale Landscape Partnership 'Big Dig' community archaeological excavation in 2016. Other than the flooding of land and dwellings, however, the reservoirs had little impact upon farming, which carried on much as it has before.

A century of change

If the reservoir scheme provided a period of respite for the local economy, its completion left a void which was never filled.

Even when the quarries supplying the stone for the scheme had been in full swing during the early years of the 20th century, the Nidderdale stone industry elsewhere had begun to falter. Scot Gate Ash quarry closed when building work was halted during the First World War, and the Moorhouses quarries could not survive the depression of the 1930s.

Demand for limestone has since proven more durable, and Coldstones quarry on the top of Greenhow Hill continues to produce stone for roadbuilding.

Lead mining, meanwhile, was entering the doldrums. As early as the 1860s all the accessible lead veins were reaching exhaustion, and cheap imports from abroad were hitting the industry hard. Nidderdale's mine owners attempted to attract new sources of finance, but the slump could not be averted.

Most of the Greenhow mines and smelt mills had closed by the 1890s. The mines around Lofthouse survived a couple of decades longer, mostly through the interests of Joseph Cradock who owned the Old Gang Mining Company in Swaledale. He bought the rights to mine at Lolly Scar and Limley near Lofthouse and brought his miners across from Swaledale, some of whom stayed in Nidderdale after work in the mines ran out.

The market for linen cloth also fell sharply in the 1870s, marking the beginning of the end for the Nidderdale textile industry. Wath Mill, which spun flax and turned bobbins for periods in the early 1800s, reverted to grinding corn in the 1850s before closing in the 1930s. Only Foster Beck Mill carried on spinning flax for linen cloth, but it too closed down in the 1960s. It later became a public house before being converted into flats.

In the 1920s the last of the major landowning families in Upper Nidderdale, the Yorkes, sold their estates. Some tenants were able to buy their farms, but large sections of the Yorke estates remained intact and were purchased by industrialists from West Yorkshire and Lancashire.

One of the main attractions for the new landowners was the grouse moors. Grouse shooting had become widespread on the moors around Upper Nidderdale in the 19th century. In the beginning, shooting was the preserve of the gentry. By the end of 20th century it had become more commercialised. With the decline in employment opportunities in farming, it grew into an important part of the local economy.

Significant changes in farming came later in the 20th century. Mechanisation cut back on the workforce and the lack of alternative employment in the upper dale forced people to leave.

Traditional farming practices waned. Haymaking, for instance, fell victim to its brusque younger rival, silage-making, as new machinery led farmers to expect increased yields. The wildflower meadows which had been a familiar part of the scenery for hundreds of years began to fade from view. So did many of the distinctive old stone hay barns, which have been abandoned and left to fall down or converted into housing.

Nidderdale at the end of the 20th century was very different from the Nidderdale that started the century. In 1900 it was a working landscape where farms, textile mills, quarries and a few remaining lead mines employed most of the population. By the year 2000 these industries had all but disappeared. Only a small proportion of the population continue both to live and work in the dale.

How to read the landscape

This section of the booklet is a ready reference for when you are out and about in Upper Nidderdale. The first part offers some tips on how to distinguish natural features from the artificial and the second is an A-Z of landscape features you might see in the field. It also makes a useful glossary if you're doing any further reading.

Natural vs artificial

It's not always possible to be absolutely sure whether a landscape feature is natural or fashioned by human hand.

In some cases we can only tell the difference by excavating, and even then the results can be inconclusive. But that's not to say that we can't find clues above ground that allow us to make at least an educated guess.

To start with, it's worth listening to your instincts. Natural features usually seem somehow to 'fit in' with the surrounding landscape; artificial ones tend to stand out from their surroundings and just look or 'feel' different.

After that, turn your attention to the following factors.

Humps and bumps

*   Do mounds of stone and soil look out of place, as if they have been dug up from underground or discarded as waste from some form of human activity? Could they be the result of quarrying, mining or smelting?

*   Do they seem to form distinctive shapes? Could they be the remains of a hut circle or enclosure boundary?

*   Look more closely at the soil or stone: is it different from that of the surrounding area? Could it have been brought from somewhere else, perhaps for building purposes?

*   Are some surface stones marked in unusual ways?

Location

*   Where something is to be found – a pile of stones, a hollow or any other unusual feature in the wider landscape – is often a clue to what it might have been.

*   Does it provide shelter, maximum exposure to the sun or advantageous views? Could it have been deliberately placed there? Does the feature align with any other prominent landmarks, stones or trackways? Could it be a ritual site or part of a routeway?

*   Are there other features close by which could have been linked in some way? Is the feature close to a valuable natural resource such as water? Could it be part of an early settlement or a farmstead with enclosure boundaries nearby? Could it be a site for smelting ore, close to pit shafts and mounds of waste?

Vegetation and erosion

Vegetation can hide features on the ground, but if you know where to look it can also accentuate them.

*   Are there unusual patches of vegetation that stand out from their surroundings? Nettles thrive in phosphates from waste materials like ash and bones. Could a clump of nettles in an otherwise grassy field mark an area where human activity took place?

*   Is there an area where vegetation has difficulty growing? Could there be something under the surface – the foundations of a building, for instance – impeding root growth? Conversely, a patch of vegetation that is growing better than surrounding vegetation may indicate the presence of a ditch.

*   Have you seen rocks, unusual patches of soil, debris such as charcoal or other objects that have been revealed by erosion or animal burrows? Could they be signs of settlement or industrial activity?

Winter, when the vegetation has died back, may still be the optimum is time to look for ground features. Light snow and low sunlight can highlight slight undulations in the ground which are otherwise hard to spot. Perhaps the best advice is to repeat the survey at different times of year when at all possible.

Make sure you get the farmer or landowner's permission beforehand and resist the temptation to remove vegetation to get a better look. You may be disturbing the archaeology before you've had a chance to study it.

Above: The prolonged dry summer of 2018 revealed the outline of some of the bungalows that formed 'The Crescent' at Scar Village. Buried features such as walls are covered by a shallower soil than the area surrounding the feature. In dry weather, the vegetation growth here suffers, resulting in parch marks.
© Louise Brown

An A–Z of landscape features

The changes in agriculture, industry and settlement that shaped life in the Upper Nidderdale landscape over the last 3,000 years have left behind an array of archaeological features, from field boundaries, roundhouses and enclosures to lead mines, quarries and smelt mills. Here's a rundown of the ones you're most likely to encounter.

Adit: A mine shaft, sometimes lined with stone, driven horizontally into the hillside. Adits were used to recover ore and transport it to the surface. Another purpose was to drain vertical shafts that had reached the water table, which is why they usually slope gently downhill towards the entrance.
SEE ALSO: Mine shaft; Quarry

Barrow: An earthen mound marking a prehistoric burial site. Barrows are usually found in prominent positions in the landscape. There is often concealed stonework which is occasionally exposed by erosion. **SEE ALSO:** Cairn; Earthwork

Possible barrow. © Solstice Heritage

Bield: A shelter for livestock. Bields are usually short lengths of drystone wall, built side-on to the prevailing wind. In exposed positions, they are sometimes built in the form of a cross. They may be purpose-made or the remnants of an earlier wall.
SEE ALSO: Drystone wall

Bield. © Iron Age (Nidderdale) Community Archaeology Group

Boundary stone: Standing stones used to mark the edges of an area of land. Sometimes the landowner's initials are carved into the stones, e.g. the Yorke family in Nidderdale. Stones were also used to mark parish or county boundaries or the extent of areas under other forms of administrative control, such as the Forest of Knaresborough boundary stones that can be found on Greenhow Hill. **SEE ALSO:** Carved stone

Boundary stone. © Iron Age (Nidderdale) Community Archaeology Group

Cairn: A pile of stones, usually circular or oval in shape. Cairns can mark prehistoric burial sites or simply be piles of stone gathered up when the land was cleared for farming. Distinguishing between the two can be tricky. Often the visible section is only a small part of the cairn, the rest having been overlain with earth and vegetation. **SEE ALSO:** Earthwork

Cairn © Solstice Heritage

Carved stone: A stone with patterns or motifs carved or pecked into the surface. Carvings can include grooves, rings and circles found as individual markings or together in a group or pattern. The most common prehistoric motifs are cup marks, circular depressions chipped out of the stone, and cup-and-ring marks, where a circle has been carved around the cup.
SEE ALSO: Boundary stone

Carved stone. © Richard Stroud

Culvert: An artificial channel above or below ground that takes water from a natural watercourse to somewhere else it's needed, e.g. for industry or farming. It might provide water for livestock or feed a millpond. Underground culverts are usually lined with stone or bricks. Their presence can often be inferred from a difference in vegetation – a corridor of wetland plants like rushes is a giveaway. **SEE ALSO:** Ditch; Trough

Culvert. © Louise Brown

Ditch: Ditches are usually cut for drainage, but they may be used to mark field boundaries or monuments. They are sometimes accompanied by banks of earth removed when they were dug. **SEE ALSO:** Earthwork

Drystone wall: Most drystone walls in Nidderdale date from the enclosure acts of the 18th and 19th centuries. They are often straight and uniform in pattern and appearance. More irregular drystone walls commonly indicate older enclosures dating from the 16th and 17th centuries. You can see them on Greenhow Hill, where lead miners were given permission to enclose small holdings in the early 17th century. Some drystone walls even represent the boundaries of ancient field systems.
SEE ALSO: Enclosure; Orthostat

Drystone wall. © Iron Age (Nidderdale) Community Archaeology Group

Earthwork: Catch-all term for earthen mounds, banks or lynchets. **SEE ALSO:** Mound; Lynchet

Earthwork. © Iron Age (Nidderdale) Community Archaeology Group

Extractive pit: A hollow or pit left from surface quarrying or mining. The context can offer clues as to its specific nature – nearby industrial buildings, surface deposits and spoil heaps, etc. **SEE ALSO:** Mine shaft

Extractive pit. © Iron Age (Nidderdale) Community Archaeology Group

Enclosure: An area of land surrounded by a boundary. The boundary may be marked by a drystone wall or a bank and ditch. **SEE ALSO:** Drystone wall; Ditch; Earthwork

Field system: Ancient field systems dating to at least the Iron Age are known in Nidderdale. They are often difficult to identify and interpret as they may have been overlain by modern field systems. They are sometimes marked by embankments from a build-up of soil after years of ploughing or low stone-and-earth banks that can run for some distance across the landscape. **SEE ALSO:** Lynchet

Isolated field system © Solstice Heritage

Gateway: Gateways can tell us a lot about the purpose of a wall. Look at the width of the opening and the sturdiness of construction. Walled-up gateways indicate past changes in access or land use. **SEE ALSO:** Drystone wall; Gatepost

Gateway. © Iron Age (Nidderdale) Community Archaeology Group

Gatepost: Early gateways had stone posts with holes carved in them through which wooden poles were slotted. They are sometimes referred to as stang stoops, the stangs being the wooden poles and the stoop being the gatepost. The poles have long since disappeared, but many of the stone posts have been reused in later gateways, often with the addition of metal gate hooks embedded in lead. **SEE ALSO:** Dressed stone; Drystone wall; Gateway; Sheep creep

Gatepost. © Iron Age (Nidderdale) Community Archaeology Group

Hollow: A noticeable depression in the ground – possibly natural, but check for signs it was dug out. **SEE ALSO:** Barrow; Ditch; Earthwork

Hollow. © Solstice Heritage

Hut circle: A circular or oval arrangement of stones and/or an earthwork, sometimes with a visible entrance, indicating the site of a prehistoric dwelling. **SEE ALSO:** Earthwork

Hut circle. © Iron Age (Nidderdale) Community Archaeology Group

Kiln: An oven or furnace used for firing, drying or hardening materials. They were used to roast limestone to produce hydraulic lime for building. A fine example is at Toft Gate on Greenhow Hill. **SEE ALSO:** Lime kiln

Lime kiln. © Iron Age (Nidderdale) Community Archaeology Group

Lynchet: A lynchet is a bank of soil or a ridge formed on the downside of a slope by earth movement and erosion. It is often caused by years of ploughing, but sometimes has been deliberately created as a terrace to grow crops on. Where there is a group of lynchets, they often occur as parallel banks running along the contours of a slope, creating a 'staircase' effect on the hillside. **SEE ALSO:** Earthwork; Field system; Mound

Mine shaft: Mine shafts are usually indicated by a circular or oval depression with a doughnut-shaped mound or 'rim' around them. Some also have a platform or 'apron' to one side. They are often found in groups. Different types of shaft include bell pits, ventilation shafts and deeper, more substantial shafts that are often lined with stone. **SEE ALSO:** Adit; Mound

Mine shaft. © Iron Age (Nidderdale) Community Archaeology Group

Mound: A feature formed either by the accumulation of earth and stone as a byproduct of some other activity (e.g. stone clearance, mining) or deliberately created for some purpose – burial, defence. **SEE ALSO:** Barrow; Earthwork

Orthostat: Very large free-standing stones, or orthostats, have been built into a number of drystone walls across Nidderdale. They may denote ancient enclosure boundaries or stone rows that have been incorporated into later walls.
SEE ALSO: Drystone wall

Orthostat. © Iron Age (Nidderdale) Community Archaeology Group

Platform: A clearly defined level area. It may show where a building once stood.

Platform. © Iron Age (Nidderdale) Community Archaeology Group

Quarry: Areas of quarrying are often clearly identifiable and include large areas of exposed stone beds. Larger quarries were often exploited for commercial markets. Small quarries which produced stone for local use can be less easy to identify. Look for odd-shaped depressions and grassed-over spoil heaps.

Quarry. © Iron Age (Nidderdale) Community Archaeology Group

Revetment: A retaining wall or bank, often built of stone, stabilising an earthen edge. **SEE ALSO:** Lynchet; Mound

Revetment. © Iron Age (Nidderdale) Community Archaeology Group

Ridge and furrow: These long linear banks and ditches run parallel and close together, often along the hillside, and may not respect modern field boundaries. They are commonly the legacy of a system of ploughing used during the medieval period. Ridge and furrow is often easy to see from a distance, and shows up particularly well in aerial photographs.
SEE ALSO: Field system; Lynchet

Rabbit smoot: Similar to a sheep creep but smaller. These holes were built into the bottom courses of drystone walls to let rabbits to pass between fields without causing damage by burrowing. They may have had a surprise on the other side, though: traps were often set to catch them at the other side of the smoot. **SEE ALSO:** Drystone wall; Sheep creep

Rabbit smoot. © Iron Age (Nidderdale) Community Archaeology Group

Re-used stones: Dressed stone or mullions from buildings that have been abandoned and fallen down are sometimes reused in drystone walls, as is stone which previously had a completely different use, such as querns (grindstones), boundary markers and carved prehistoric rock art. **SEE ALSO:** Boundary stone; Drystone wall

Semi-natural feature: Sometimes what appears to be a natural feature is actually the product of human intervention and is of archaeological or historical interest. An example would be a coppiced wood, where people have managed the trees to enhance their yield of wood for building, manufacture and fuel.

Shooting stand or grouse butt: A position for shooting game. It may be a simple wooden windbreak or a more elaborate stonebuilt hide with turf-capped walls. In Nidderdale the latter type is either square or circular, with an entrance point, and is usually one of several stretching out in a line across the moor. **SEE ALSO:** Drystone wall

Shooting stand / grouse butt. © Iron Age (Nidderdale) Community Archaeology Group

Sheep creep: A knee-high rectangular opening in a wall, topped with a lintel. It was designed to be big enough to allow sheep to pass between pastures, but too small to let cattle or horses through. **SEE ALSO:** Drystone wall; Rabbit smoot

Sheep creep. © Iron Age (Nidderdale) Community Archaeology Group

Spoil heap: Accumulated waste from mining or mineral processing, usually found in mounds. Spoil heaps left from industries such as lead mining can remain barren because of toxic chemicals in the waste. Calaminarian grassland which establishes itself on lead-mining spoil can be home to metal-tolerant plants like the spring sandwort. **SEE ALSO:** Mound

Spring sandwort. © Louise Brown

Sheepfold: An enclosure for penning in sheep, rectangular or curved and usually made from stone. Adjacent walls or earthworks can sometimes be found that were used to channel the sheep into the fold. **SEE ALSO:** Field system; Drystone wall

Sheepfold. © Solstice Heritage

Trough: A long, low-sided container usually made from stone and used to hold animal feed or water. **SEE ALSO:** Boundary stone; Drystone wall

Trough. © Iron Age (Nidderdale) Community Archaeology Group

Waterway hole: An opening in wall with a lintel designed to let a small stream through a wall without damaging it. Sometimes it is on two levels to cope with heavy rain. Small holes at the base of walls are drainage holes and large streams require full gaps in the wall. **SEE ALSO:** Sheep creep

Waterway hole. © Iron Age (Nidderdale) Community Archaeology Group

The *Our Farm Heritage* Excavations

Left: Volunteers carried out archaeological fieldwork at 16 farms as part of the *Our Farm Heritage* project.

© Robert Light

The *Our Farm Heritage* project revealed a rich history of human activity in Upper Nidderdale stretching back thousands of years and opened the way to some exciting new discoveries.

Beginning in 2014, a team of volunteers surveyed over 1,080 hectares of land across 16 farms. By paying close attention to surface features like those listed in the A–Z in the previous section of this booklet, they were able to single out a number of sites for further investigation by geophysical survey and excavation.

A remarkable picture began to emerge of life in the dale during the five centuries that overlap the Iron Age and Romano-British periods, roughly from the second century BC to the fourth century AD. These dates were confirmed by radiocarbon dating from the excavations.

Discoveries and questions

What the *Our Farm Heritage* project found was a string of settlements from the late Iron Age and Romano-British periods along the western slopes of Nidderdale, all at around 230m to 270m above sea level.

Each location offered shelter from the prevailing westerly weather, along with a nearby watercourse and a supply of stone, wood and thatching materials to construct enclosures and roundhouses.

Three different types of enclosure were distinguishable. This in itself raises some interesting questions. Were the different types contemporaneous with other, meaning that different ways of using the land were practised at the same time? Or do they come from different periods in time, representing a process of evolution, addition or re-use over a number of centuries?

The Knott's Gill complex

At Knott's Gill, west of Gouthwaite Reservoir, the surveys found six interlinked large irregular enclosures, probably for livestock, and one smaller 'settlement' enclosure containing two hut circles.

This 'honeycomb' arrangement of enclosures is seen as typically Iron Age and can be found elsewhere in Yorkshire – for example, at nearby Fortress Dyke on Kirby Malzeard Moor.

Radiocarbon dates from the site suggest two main phases of activity at Knott's Gill. The first was during the late Iron Age in the 1st century BC and the second was during the Roman period, probably in the late 3rd century AD. These results suggest that the Knott's Gill complex is an Iron Age settlement that fell out of use before being re-occupied and further developed in the Romano-British period.

Colt Plain

At Colt Plain, further south from Knott's Gill, a mixture of enclosures was investigated, with a distinctively different layout to those excavated at Knott's Gill.

Some of the enclosures appear to represent dwellings and others are more probably agricultural. Two detached settlement enclosures and a number of other hut circles and features were found within a system of coaxial field boundaries running up and down the hillside and stone-revetted lynchets running along the slopes.

This style of field system is found across the Yorkshire Dales, and further afield, with particular concentrations in Wharfedale and Swaledale. Radiocarbon dating from different structures within the field system suggests it saw prolonged use during the Romano-British period, through at least the 2nd and 3rd centuries AD.

Blayshaw Gill

Excavations at Blayshaw Gill, south-west of Lofthouse, focused on a smaller site than at Knott's Gill and Colt Plain, consisting of a single enclosure with up to three roundhouses.

Environmental evidence from the site showed that it had been used for both arable and pastoral agriculture and that its inhabitants had gathered wild resources. As with the other sites investigated, radiocarbon dates from the site suggest that

Right: Knotts Gill – Aerial view looking north-north-east over the excavations (foreground), with the orthostats defining the rear of the larger roundhouse beyond the larger trench. Towards the back of the photograph, the northern wall of an enclosure sweeps in from the left of shot forming the funnel or droveway along with the west wall of another enclosure.
© Richard Stroud

Left: Colt Plain – The front wall of the roundhouse to the right of shot sits on the lip of the stone-revetted lynchet, and the rougher rear wall can be seen set into the back of the scooped cut.

© Solstice Heritage

it was inhabited in the Romano-British period, most likely in the 2nd century AD.

Clues from vanished buildings

Comparison of the different building types found at the three sites can give us a glimpse of what life was like in Nidderdale 2,000 years ago.

Notwithstanding the different layouts of the enclosures and field systems in which they were built, the stone structures fell into two broad types. One was small and quite roughly built, the other larger and more sophisticated in design.

The smaller of the two roundhouses at Knott's Gill appears to have been built initially with turf walls before being rebuilt in stone. It's possible it was intended for agricultural or storage rather than domestic use. The location of a roundhouse of similar size and construction away from the main settlement enclosures at Colt Plain reinforces this view. These buildings in many respects resemble the isolated field barns familiar in Nidderdale today.

Turf walls leave few surface remains. Isolated groups of scooped platforms found elsewhere during the surveys may indicate the sites of similar roundhouses of which every

other trace is gone. So the small, roughly built, non-domestic roundhouse may have been a common building type in Upper Nidderdale.

In contrast, the larger roundhouses found at Knott's Gill and Colt Plain were probably built for domestic use. They had well-built walls often including orthostats and/or facing stones. Another possible distinguishing feature of the domestic roundhouses was that they were paved inside, whether across the front third of the platform, as at Colt Plain, or with a rough spread of stone across much of the interior like at Blayshaw Gill.

Hearth, home and beyond

Features inside the enclosures and roundhouses tell us more about how the people who built these farmsteads lived and worked.

Hearth pits and other evidence of burning were found at each site. Analysis of the charred remains found in a clay-lined hearth close to the enclosure wall at Blayshaw Gill were the most revealing. The presence of grains and chaff from wheat and barley suggest the people who lived here grew crops and processed grain. The remains of hazelnut shells show that wild food was part of their diet.

Above: Two pieces of pottery dating to the Romano-British period were found during the excavations at Blayshaw Gill. Black-burnished ware was mostly made in Dorset and the Thames Estuary but was widely imitated and used across Britain.
© Louise Brown

Above: Blayshaw Gill – One of the excavated roundhouses.
© Solstice Heritage

Not all the evidence found in the hearth pits was of a domestic nature. Weed seeds and grass stems found among the debris may be the residue from burnt hay bedding or manure. Study of the remains of charcoal opened a window onto the inhabitants wider land management practices. Counting the growth rings in charcoal showed that the wood it was made from was cut after two or three years. That suggests woodland had been coppiced to produce fuel.

Nidderdale's acidic soils have ensured that the objects that once occupied these homes have perished apart from fragments of black-burnished-ware-type pottery, recovered close to the enclosure wall at Blayshaw. These could indicate that pottery was manufactured locally in the Romano-British period or that Upper Nidderdale was connected to wider trade networks stretching across Britain.

Summary

During this period (c.150BC–AD350) different approaches to land management were emerging, with contrasting styles of enclosed farmstead for agriculture and settlement that exploited features in the landscape, often adapting the remains of previous activity.

Construction techniques were being developed. While structures with hearths and paved floors were built for people to live in, buildings of more basic form may have been used to house livestock and/or store crops. Crops were grown and processed, livestock was reared and woodland areas were managed to increase the yield for fuel.

The full excavation report can be downloaded from uppernidderdale.org.uk/wp-content/uploads/2018/05/500-Years-of-Continuity-and-Change-Lo-Res.pdf

Researching the Landscape

Research using historical documents can help us to identify archaeological features in the landscape and understand their significance.

Visiting archives or libraries is time-consuming but hugely rewarding. Old documents have a special allure, and the guidance of knowledgeable archivists and librarians is always valuable. If you don't have the time or means to visit the archives in person, however, much material is now available in a digital format and can be accessed and searched online.

Useful addresses

Archives

Many relevant documents, including maps, estate sale catalogues, parish records, and manorial records, are held by the North Yorkshire County Record Office at Northallerton, which can be searched online. The best way is to go to the National Archives website, which also allows you to search national collections and local archives elsewhere in the UK.

North Yorkshire County Record Office: www.northyorks.gov.uk/county-record-office

National Archives: discovery. nationalarchives.gov.uk

Online resources

Heritage Gateway provides online access to a whole host of records including local Historic Environment Records (HERs) and some of Historic England's databases, e.g. the National Heritage List and Pastscape (National Record of the Historic Environment).

Use the 'advanced search' option and either enter co-ordinates for the place you are interested in or select it on the map and set the radius you want to search.

For example, within 1km of the village of Ramsgill 19 features are listed, ranging from a post-medieval slate quarry to a site where a number of prehistoric arrowheads were found in the 1920s.

Heritage Gateway: www. heritagegateway.org.uk

More information on geology can be found on the British Geology Survey website: www.bgs.ac.uk/GeoIndex/wms.htm

Maps

Perhaps the most useful archival documents for researching archaeological sites or landscape history are plans and maps.

Over the centuries these have been produced for many reasons, such as tithe or enclosure agreements, land auctions and mining plans.

Modern Ordnance Survey maps identify a variety of features including cairns, ancient field systems and some ruined buildings. Historic maps are a richer resource still. They can help us identify buildings, industrial sites and field boundaries that have long since been abandoned.

The National Library of Scotland provides free online access to a selection of historic maps covering the whole of the United Kingdom. These include various editions of Ordnance Survey maps, beginning with the first 6 inch and 25 inch editions from the 1840s and 1850s when industrial activity in Upper Nidderdale was reaching its height.

Among many other things, the first edition OS maps provide a fascinating record of lead mines, smelt mills, quarries and textile mills in the area that are long since gone. They also provide a view of the dale before large parts of it disappeared under the reservoirs.

National Library of Scotland: maps.nls.uk/http://maps.nls.uk

Place-names

A dimension of maps which is a fascinating avenue of research in its own right is place-name evidence.

The origins of the names of villages, roads and general features in the

Left: Comparing maps can reveal many changes in the landscape. Here, the 1910 Ordnance Survey map has been overlain on the modern 1:25,000 Ordnance Survey map to show the extent and nature of the area that was flooded to create Scar House reservoir.

landscape can provide clues as to when and by whom they were named. Many of the names for settlements and features in the landscape we use today originated in the thousand years before the Norman Conquest.

Names such as Nidd (a Celtic word meaning 'brilliant' or 'shining'), Pateley (Old English for a path through a woodland glade) and Lofthouse (Norse for houses with lofts) tell us about the waves of settlers who came to Britain from Scandinavia and various other parts of Europe during the first millennium.

Other place names suggest a merging of cultures as diverse groups of settlers learned to live alongside each other. Woodale, for example, which is at the top of Nidderdale, takes its name from an Old English word for wolf and a Norse word for valley.

Aerial photographs and satellite images

Aerial photographs are widely used by archaeologists. They can reveal humps and depressions in the landscape that are not easily visible from the ground, especially when accentuated by sunlight and shadows or melting snow.

Google Earth provides the most comprehensive and easily accessible source of satellite imagery, but historic aerial images are also available online through projects such as Historic England's Britain from Above.

Google Earth: www.google.co.uk/intl/en_uk/earth

Britain from Above: britainfromabove.org.uk/en

Archives in practice

Researching historic documents and maps was an integral part of the *Our Farm Heritage* project. While documentary evidence for specific farms in the valley was fairly scarce, especially before the 1800s, one exception was the Hearth Tax records.

The Hearth Tax was imposed by Parliament in 1662 to raise money for Charles II following the Restoration of the monarchy two years earlier. Two shillings a year were to be paid for every fire, hearth or stove, in all dwellings, houses, edifices or lodgings.

Initially, no distinction was made between the property owner and occupier, and there were no exemptions for the poor. Later amendments made poorer households exempt and placed responsibility for payment on the occupiers.

Above: An image of Scar House dam and the area that was Scar Village taken from Google Earth. The image clearly shows the remains of the mens hostels (bottom right).
© Google Earth / 2018 Infoterra Ltd & Bluesky

As a historical source, the Hearth Tax provides useful information about population change and wealth and poverty across Britain between 1662 and 1689, when it was abolished.

Reading the Hearth Tax returns

For the 1672 West Riding of Yorkshire Hearth Tax returns, the township of Bishopside, which included Pateley Bridge, returned 169 hearths, the greatest number out of the five townships in Upper Nidderdale.

These hearths were distributed among 94 householders, 46 of which had modest means and only recorded one hearth each. A similar picture could be found elsewhere. Stonebeck Up returned 71 hearths amongst 46 householders, Stonebeck Down 103 hearths among 72 householders, Bewerley 89 hearths among 57 householders and Fountains Earth 72 hearths among 41 householders.

Extreme poverty was relatively low. Only six householders were exempt from paying the tax in Bishopside. Stonebeck Down returned two exemptions, and no exemptions were returned in Stonebeck Up, Bewerley and Fountains Earth.

Upper Nidderdale Landscape Partnership

The *Our Farm Heritage* project was one of a number of initiatives carried out by the Upper Nidderdale Landscape Partnership.

Between 2014 and 2018 this £1.8 million scheme, managed by Nidderdale Area of Outstanding Natural Beauty, brought together a partnership of a wide range of organisations who worked with land managers, farmers and local communities under a collective vision:

Upper Nidderdale will continue to be a remote and special place, where the quality of the natural environment is an inspiration to all, where heritage features are cherished and displayed, where visitors will find a welcoming local community who are immensely proud of their surroundings and are full of stories that bring the landscape to life.

The principal funder was the Heritage Lottery Fund.

Find out more about the wide and varied work of the Upper Nidderdale Landscape Partnership on our website: uppernidderdale.org.uk