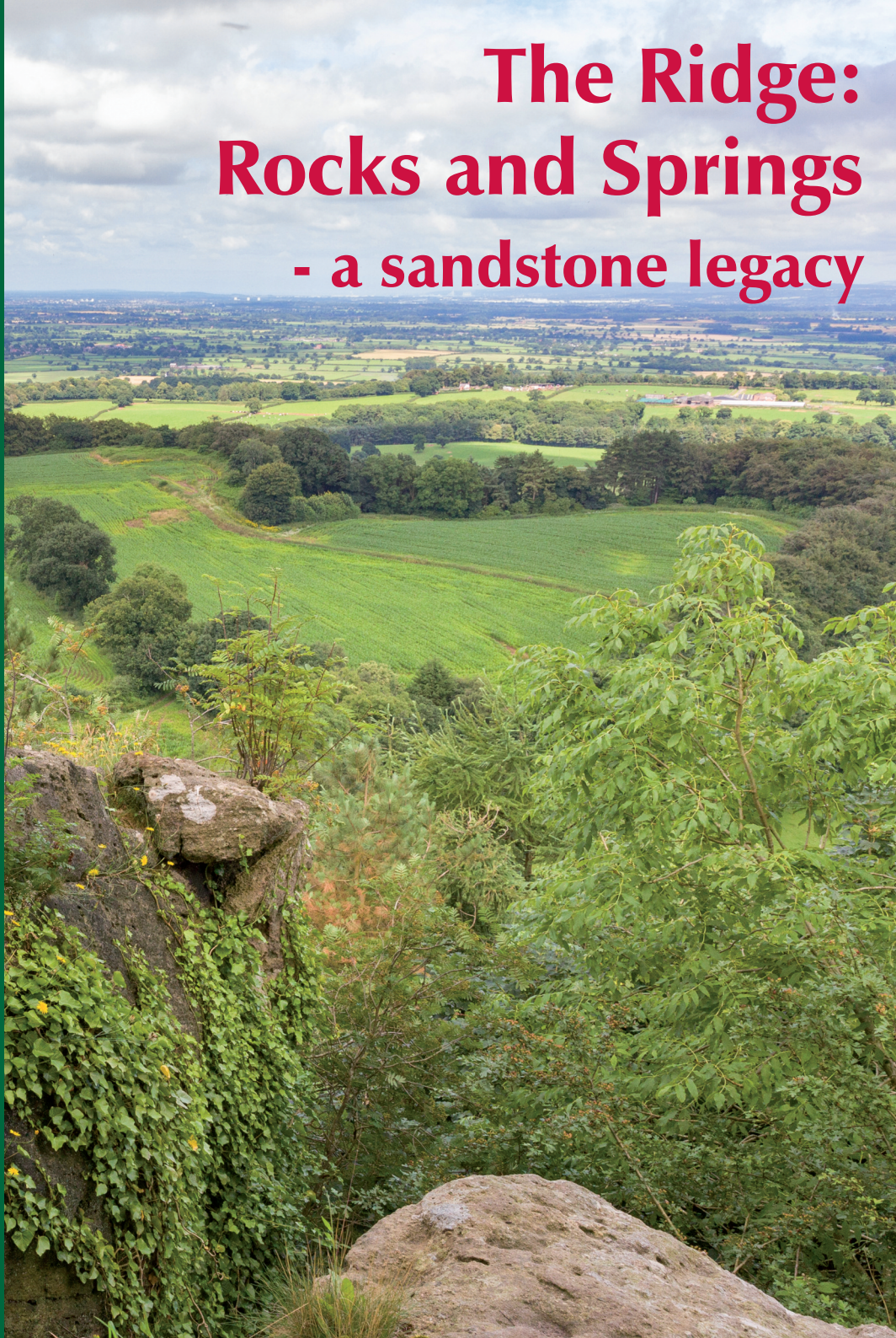
The Ridge: Rocks and Springs

- a sandstone legacy



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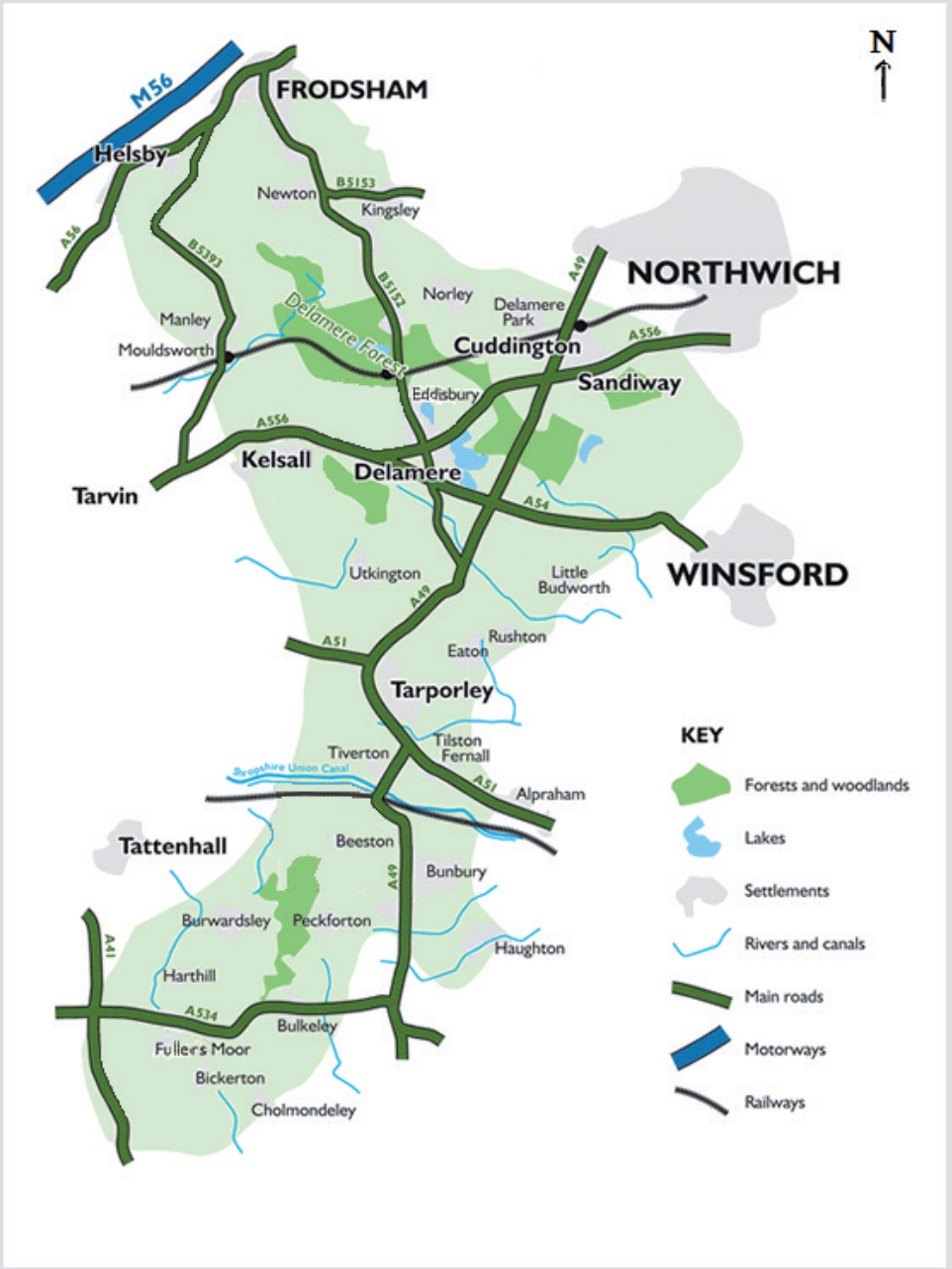
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Bulkeley
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Bickerton
Cholmondeley
KEY
Forests and woodlands
Lakes
Settlements
Rivers and canals
Main roads
Motorways
Railways

The Ridge: Rocks and Springs

a sandstone legacy

Compiled for The Sandstone Ridge Trust by the volunteers of

The Ridge: Rocks and Springs Project, 2014-2017

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Preface

This is a book about people, the landscape and their history. It tells stories and presents historical facts discovered by the *Ridge: Rocks and Springs* project, undertaken by volunteers of Cheshire's Sandstone Ridge Trust from 2014 -2017.

Ridge: Rocks and Springs was the first heritage project initiated by the Sandstone Ridge Trust. The sandstone legacy, established in 2011 is to continue the work of previous partnerships set up to conserve the special qualities of the Ridge. These included the *Sandstone Ridge ECOnet Partnership* (2005-09) and the HLF-funded *Habitats and Hillforts Landscape Partnership Scheme* (2008-12) It has been my privilege to serve as Project Coordinator for the past two years and have the opportunity to meet so many interesting and enthusiastic volunteers all willing to work towards a common objective. I am also grateful for an opportunity to work in and explore the special landscapes that make up the Ridge.

The idea to explore the changing impact of the landscape, to look anew at the cultural heritage based on the area's principal building blocks of sandstone and water pre-dates the Sandstone Ridge Trust. But ideas are, of course, the seed from which everything sprouts and funding provides the fertiliser to make the idea grow. Without the support and funding from a Heritage Lottery Fund 'Our Heritage' grant the project would never have come to fruition. If any project is to be successful nothing can take the place of unity and the respect for the dedication, enthusiasm and commitment of one's colleagues in driving forward and participating in making these ideas a reality. This I thankfully found amongst the trustees, volunteers, staff and our partners, the latter providing support, training, advice, resources, permissions and joint working opportunities throughout the Ridge

The unifying feature of the Ridge is the Sandstone Trail, a nationally recognised long distance footpath of 33 km. It journeys along and near many ancient trade routes, tracks, turnpikes and roads that have served the traveller and inhabitants for millennia. Walking the Sandstone Trail truly is to step back into history, if you know where to look and can understand how things got there.

Our journey began in late 2014 with volunteers attending information meetings. Few of the people knew each other at those first gatherings, but many decided to work together to record, research and visit heritage sites, to learn more about

their own history and what we could discover across the Ridge. Many attended our training workshops and took part in site surveys and project meetings, and their results have far exceeded the project's expectations – we have journeyed from the quarried source of Roman grave-slabs to the cave lairs of robbers!

I sincerely hope that these journeys taken by our volunteers have resulted in the forging of new friendships united by a common purpose and interest. If so that is the greatest result of the *Ridge: Rocks and Springs* project and its greatest strength for continued volunteering. With large projects involving many people and covering large geographical areas (some 220 square km) results can be elusive if the group doesn't have a unified goal and agree on methods to reach it. For us this has meant embracing new digital means of recording our sites and using the internet to share the results. It has left us with over 700 sets of records for our data-base.

This book is the result of three years of desk-based research, peering at old maps and historic records, followed by trekking the Ridge to locate and record graffiti, rock art, caves and ancient wells and quarries. We also undertook more detailed field investigations of sites of particular interest. I hope it serves to both guide and inform the reader next time you journey along the Ridge.

Gary Ball
Project coordinator

Introduction

Cheshire's Sandstone Ridge stands proud for all to see. The rock escarpment runs in a series of distinctive hills from Frodsham in the north to Bickerton in the south. In addition to dramatic west-facing red cliffs there are secluded valleys, meres and woodlands that all contribute to the unique quality of the area. To understand how this distinctive landscape has helped shape the cultural heritage of the region we need to understand something of the importance of the principal building blocks of the Ridge: its rocks and springs (sandstone and water) - as resources to settlers, farmers and industrialists through the ages.

The Sandstone Ridge Trust's volunteers' brief was to study how stone and water supplies have influenced the histories of people and communities on the Ridge and how they have left their mark on the landscape.

Too often stone-quarries are seen as "scars on the landscape" and too frequently, the phrase "destroyed by later quarrying" appears in archaeological narratives as though quarrying is some kind of landscape disease, rather than as a legacy of important human endeavour. The heritage of water manipulation is less obvious to the eye. Although natural water sources, wells, pumps and methods of water supply have been essential to the survival of communities, their presence as components of the landscape is frequently undervalued. More of the Ridge's history may be carved on the rock itself. Stone carving has long been a local pastime and some curious carvings have been observed, including carved stone heads, benches and elaborate 'graffiti', but there has been no systematic attempt to record or date any of this. Much of our history is in danger: the rocks are eroding, quarries are being filled in, the wells are drying up and memories are fading. The *Ridge: Rocks and Springs* project has provided an important opportunity to rescue and record undervalued features of this history.

Volunteers were asked to seek out the records in libraries but also to walk the Ridge from end to end and read the rock-face itself to learn more about our heritage. We began in 2014 with a series of lecture/workshops in Library and Museum Research, Geology, Hydrogeology, Water Supplies, Rock Art, Photography, and Digital Records. Our teams set off to read the oldest maps of the region and to visit and photograph any sites of interest. A digital data-base was created with over 700 sites finally recorded. Grid references from historic maps and GPS readings in the field were processed into digital distribution maps.

Introduction

These maps allow the sites to be seen in clusters and provide clues as to how they relate to one another, the topography of the Ridge and its transport routes. The data-base is accessible via the Cheshire Historic Environment Record and, along with the maps and a *Volunteers' Handbook*, on the Sandstone Ridge Trust's own website: www.thesandstoneridgetrust.co.uk

After the initial survey the volunteers were asked to identify a series of sites that they felt merited further attention and a series of exploratory archaeological digs were conducted. These digs have highlighted areas for further research and the archaeological potential of future projects to be initiated by the Trust.

In addition to this research the volunteers also created nine circular walks intended to help our readers to visit some of the sites mentioned and enjoy the landscape that has so inspired us throughout the project. The walks are published at the end of the book.

The Ridge contains hidden clues as to the way our ancestors lived and how this part of Cheshire developed into what it is today. By delving into this history, volunteers have not only expanded their knowledge and learnt lots of new skills, but they have also contributed to a unique record of the area for others to enjoy.

The Sandstone Ridge

The story of the Ridge began some 300 million years ago with the formation of the Cheshire Basin, one of a series of ancient sedimentary basins in the west of Britain created when major rock fractures, or faulting, caused by tension in the earth's crust, provided the space to allow the accumulation of a thick sequence of sedimentary layers: Permian and Triassic sandstones, mudstones and halite (rock salt). This sequence comprises two major rock types: the Sherwood Sandstone Group and the younger Mercia Mudstone Group.

The sediments forming the bedrock were laid down within the basin as it was gradually subsiding along a series of north-south faults. Predominantly northward-flowing rivers brought sediment into the Basin from as far away as northern France, with the sands periodically reshaped, for example as sand dunes, by the effects of the prevailing (at the time) easterly winds. Alternating environmental conditions during the Triassic period resulted in a series of variations in the rock type, so that much of the succession consists of 'red beds': sediments laid down in generally hot, arid or semi-arid conditions either in deserts or from rivers and lakes. Their

characteristic red-iron colouration attests to the highly oxidising conditions under which they were deposited. When they were deposited by winds in the deserts the grains of sand were smoothed round and formed a crumbly, easily eroded rock. When deposited by water, the sandstone grains were left more coarse and angular, resulting in the stone being of a denser texture and consequently better for building material. There are, however, many places where layers of the red stone have had the iron minerals leached out, leaving an almost-white stone that has been highly prized for building material.

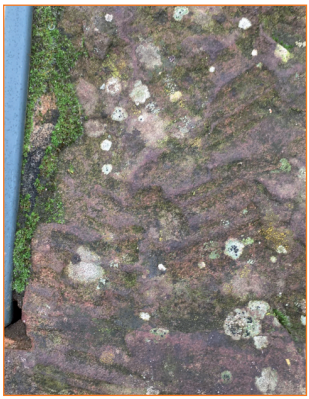
Helsby Sandstone (part of the Sherwood Sandstone group) forms the bulk of the Sandstone Ridge, from which much of Cheshire's building stone was quarried. An overlying Mercia Mudstone Group is represented by the Tarporley Siltstone which is exposed in places along the Ridge and forms the summits of such hills as Eddisbury and the Old Pale. This group consists of a mixture of mudstone, siltstone and sandstone that contrasts with the coarser-grained Sherwood Sandstone.

Both red and white sandstone blocks used in an out-building on the site of Manley Quarry

Further movement along the north-south faults crossing the Cheshire Basin has taken place over the last 200 million years since the Triassic Period, along with other geological processes (e.g. crustal uplift and erosion). It was the combination of these processes and the relative resistance to erosion provided by the Helsby Sandstone that led to the creation of the Sandstone Ridge that we see today: a distinct topographical feature, rising up from the Cheshire Plain and running north – south from Frodsham to Bickerton.

Although the sandstones of the Ridge appear barren of fossils, this is partly a function of the poor preservational qualities of the rock, rather than the absence of plants and animals at the time. In addition, the mass extinction of life on earth which occurred just prior to the Triassic Period, along with prevailing desert-like conditions may also have contributed to the paucity of fossils within the rocks of the Ridge. Although sandstones are the most visible rock type, thinner mudstone layers can preserve the traces of long dead animals, often in the form of fossilised footsteps. Examples of these can be seen above the porch door at Christ Church, Bebington, where reptilian footprints (from a nearby quarry) are on display. Also,

on the right-hand corner of the National Trust's information stone at Maiden Castle are the tiny footprints and trails of large centipedes. These marks record how the creatures' feet sank into soft mud as they walked across perhaps a muddy riverbank or lake edge.



Fossil centipede trail at Maiden Castle

About 20,000 years ago, during the last major Ice Age, a vast and thick ice sheet spread across much of the Cheshire Plain, carrying debris and rock from mountainous areas to the north. Glacial Till (commonly referred to as Boulder Clay, and left behind following the retreat of the last ice sheet) covers most of the bedrocks of the basin, so that only something like 3% by area of solid Triassic rock is now exposed, chiefly in the fault-bound escarpment of the Ridge. During that time the Ridge may have acted as a barrier to the movement of the ice as its hills are cut with numerous glacial meltwater channels, many of which formed under the ice itself. One example is to be seen at Urchin's Kitchen in Primrose Hill Woods.

The Sherwood Sandstone Group forms the second most important aquifer in the UK and the Ridge, where it is free of Glacial Drift cover, provides an area of recharge to this aquifer which is critical to maintaining water supply for public and private use, for springs, flows in streams and rivers and water supplies to wetlands.

The geology of the Cheshire Basin and its Sandstone Ridge has had, and still has, a major economic influence on the county. There has been extensive salt extraction in the lower-lying parts of the basin around Northwich, Middlewich and Nantwich, copper mining on the Ridge itself (e.g. at Gallantry Bank), sand and gravel extraction on the eastern slopes of the Ridge and quarrying of building stone throughout the length of the Ridge. The dramatic beauty of the Ridge of course also attracts tourism.

The entrance to Urchin's Kitchen

Quarrying the Ridge

The Ridge has been deliberately quarried for building stone throughout history. But Cheshire's sandstone varies along the Ridge in its nature and quality depending on the size of the sand grains and degree of mineral cementation. The finest hard, pale building stone from quarries at Manley was used for Roman memorial stones, and at Chester Castle while stone from King's Chair in Delamere Forest was transported along the old Roman road to build Vale Royal Abbey in the thirteenth century. Victorian Peckforton Castle was constructed with sandstone dug from a dedicated ridge-top quarry, mimicking its medieval ancestor at Beeston on the opposite hill.

All are now abandoned, but interesting quarries along the Sandstone Trail can be seen at Manley Knoll, Helsby, Frodsham, high on Stanner Nab at Peckforton, below Rawhead Farm, and near Maiden Castle. Numerous smaller local quarries on the Ridge also supplied cottages, farms, walls, field boundaries and gate-posts which were built with large, hand-cut sandstone blocks, especially on the Peckforton and Bickerton hills.

Quarries are interesting to archaeologists because discovering the sources of raw materials tells us how far people in the past could and would go for specific purposes, or what their trade networks might have been like. Evidence at a quarry might also reveal the available technology in the form of tools left behind and cut marks in the walls of the excavation pits. Stone has great potential to help understand economic and social issues of the past. Our ancestors who worked such places also have a tale to tell.

The *Ridge: Rocks and Springs Project* recorded the location of historical quarries along the Ridge from the map records, the modern Ordnance Survey and the series of historical maps available online, notably the Tithe maps for 1836 – 51 and the Ordnance Survey 1875 and 1910 editions.

There are 107 quarry sites identified in our records, as enumerated by parish in the table below. With the project area divided geographically there appears to be an increase in the total number of quarries as we progress from North to South; however, it should be recognised that the total count does not reflect the size of each individual working, the number of years it was worked or for what particular purpose the stone was quarried.

Parishes Northern sector	No. of records	Parishes Central Sector	No. of records	Parishes Southern Sector	No. of records
Alvanley	**3**	Delamere	**12**	Beeston	**3**
Frodsham	**10**	Kelsall	**5**	Bickerton	**3**
Helsby	**10**	Rushton	**7**	Broxton	**13**
Manley	**5**	Tarporley	**5**	Duckington	**1**
Mouldsworth	**1**	Tiverton	**2**	Harthill	**5**
		Utkinton	**5**	Peckforton	**16**
		Willington	**1**		
Total	**29**		**37**		**41**

Data from the project

The Nature of Quarries

By their very nature quarries consume the evidence of their earliest form and the oldest worked rock faces vanish with each generation of quarrymen. What we see today is a landscape formed when the last shift finished and the quarrying stopped. What is important is that many of the quarries, prior to the twentieth century, had a human scale due to the continued practice of age-old methods reliant on hand tools, human strength and a specialist skill to hew the stone from the rock face. The underlying geology determines the location of quarries according to the nature of the stone: its hardness, its different colours and susceptibility to the hammer and wedge. The quarried rock faces are an indelible record on the landscape of men seeking specific resources for specific purposes. Building stone, with its cut blocks, decorative stone with its varying colour and hardness and rubble infill went for construction, and road stone or aggregates came from the broken or crushed stone. The quarries' locations were influenced both by the geology and topography of the Ridge, being cut into a cliff or hilltop, into a hill or valley side or amongst the summit rocks of a hilltop.

Stone has been extracted wherever it is found, from surface stones gathered locally, from within shallow pits or small to large quarries. The quarrying process creates a number of features that can be looked for and recorded such as the removal of the overburden and its tip, waste disposal in further tipping sites, extraction and quarrying marks on the stone face, evidence of further splitting or processing on the site, again in the form of waste tips, and the remains of footings for site buildings and machinery. It has been estimated that more than three tonnes of stone have to be quarried to produce one tonne of principal stone products. The remainder is sorted for sale as rubble, road stone or 'shivers' (chippings) or rejected as spoil. Rubble was used extensively during the nineteenth century for the back walls, gables and internal walls of tenements and other buildings. You may observe clues to the buildings that were once present in and

around quarries: carved sockets in stone faces to take the end of a beam or a post hole, for example. They might have supported anything from part of a smithy, cottages or offices constructed for the workers to powder stores for storing explosives.

The men working the quarries were often organised into 'lots' or 'sets' and each separate gang was bound by a 'bargain' or terms of employment. This practice can be traced from the medieval period through to the early 20th century and may reflect the irregular pattern of extraction evident on the quarry faces defining these separate areas of work.

Types of tools and tool marks

The equipment and methods used to work sandstone have changed little over the centuries and the longevity of these techniques usually makes dating problematic. Mattocks, hoes, shovels, rakes and spades were used for uncovering the stone and removing the topsoil or 'overburden'. Stone was then shaped with hammers of various shapes and weights which were also used to drive in the drills. The stone was levered from the rock-bed with crowbars or picks so that it could be lifted with a crane. It is these simple tools which are most often mentioned in early records. Modern development has seen the use of mechanical equipment for moving the stone. From the earliest times cranes were used, first operated by muscle-power (human or horse) then powered by steam, diesel and electricity. Mechanical methods of stripping the overburden (either glacial drift or useless strata) were introduced during the twentieth century.

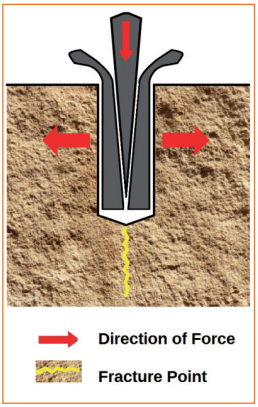
In all stone quarry situations the extraction phase is based on one or combinations of three fundamental principles:

1. Levering: expanding open fractures by inserting levers, crowbars or stones;
2. Splitting: creating fractures, preferable planar, by strokes (i.e. sledge hammer), wedging, heating or blasting with explosives;
3. Channelling (carving): making channels in the rock by carving with hammer and chisel, pickaxe or stone tools, heating with fire, sawing or drilling.

These principles leave tell-tale tool marks as defined in the table (below), however in practise it can be difficult to identify them amongst the remaining quarry faces.

Principle	Process	Tools	Tool marks
Levering/extraction of fractures	Crack expansion	Logs, Crowbars Stones	Hardly any
Splitting	Percussion	Stone hammers/pounders Chisel Pick Sledgehammer	Percussion marks, plumose markings on cracks
	Wedging	Simple iron wooden wedges Plug and feather wedges	Wedge marks of various shapes
	Heating	Fire	Surface parallel flaking
	Blasting	Explosives	-
Channelling	Carving	Chisel Pick Axe Stone tools	Straight parallel Curved parallel Pointed grooves
	Sawing	Blade Wire	Sawn surfaces, straight grooves Sawn surfaces, curved grooves
	Drilling (mainly modern)	Drill or drift	Occasional vertical shaft revealed in section

Three principles of extraction from bedrock: A) levering, B) splitting and C) channelling



Iron wedges and shims used in 'plug and feather' stone splitting.

When there is no natural jointing in the bed of stone to yield a manageable block it has to be split. For small blocks of stone, splitting is effected by hammering in wedges. The 'plug and feather' method is used for larger pieces. In the latter method, a row of

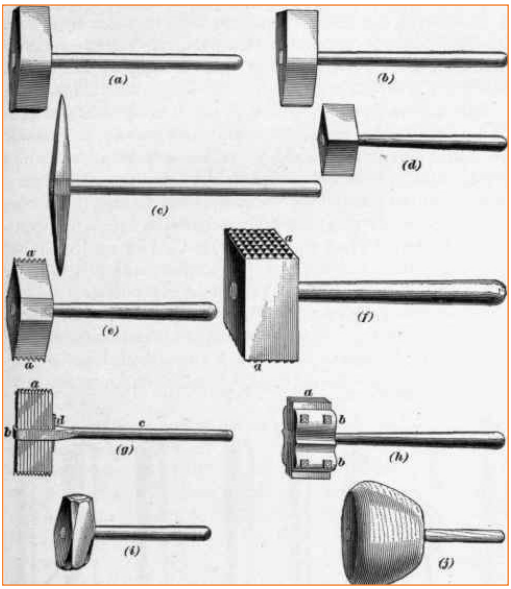
shallow vertical holes is drilled along the line of the intended split at intervals, the distance of which depends on the hardness of the stone. Often, an interval of about 23cm is chosen. Split iron rods (feathers) are dropped into the holes and iron wedges (plugs) are driven into the split. This produces a clean break a few metres deep. The same plugs and feathers are further used to shape the block so produced.

Another method is to make a 5 to 8mm deep groove along the desired fracture within which a row of holes for the feathers can be drilled. The grooves and holes can be cut with a hammer and chisel but for deeper holes a pneumatic drill is used. When the great quarries of Helsby and Eddisbury were in operation holes were drilled with a 'jumper': a bar of iron, steel-tipped and forged into a chisel-shaped wedge. Sometimes this bar was used as a percussion drill, being driven into the sandstone by one man under its own weight. Alternatively, the drill was struck with an iron-headed hammer known as a 'mash'. Used in this way, two or three men were required, one sitting holding the jumper vertically between his knees and rotating it slightly between strokes which were delivered by one or two hammer men. In the first method, also known as 'churn drilling', when a 30cm hole had been made, water was usually poured into the borehole and a leather collar or washer made of straw placed on the drilling rod to stop the water spilling out. The muddy material would be removed from the borehole with a scraper which consisted of a thin iron rod with a disc at the end.

When the quarry shows strong vertical joints, wedges are hammered in horizontally to cleave a suitably sized block from the face, enough to allow the attachment of a chain. A crane at the quarry head can then be used to pull the block free. Sometimes a small charge of black powder is used to split a stone. Whatever the nature of the stone it is essential that it be carefully handled both during and after quarrying. Large charges of explosive are rarely used when regularly shaped building stone is required. The use of excessive explosive produces minute cracks in the rock into which water may enter to accelerate the decay of the stone. Even a dropped or knocked stone may develop scaling at the site of the shock when the stone is exposed to weathering. In their heyday, most of the Ridge's sandstone quarries used little blasting powder. When the powder was used it was generally to bring down the stone to be used for rubble work.

From correspondence relating to Manley dated 1797, we have a description that the stone would be 'scappled' at the quarries. To scapple is to work roughly or shape without finishing the stone before leaving the quarry or to dress in any way

short of fine tooling or rubbing. It is in the finishing of building stone that the main cost lies. Until quite recently the roughly shaped stone which left the quarry was hand-dressed. Sometimes it was left rough on the exposed surface ('rock-faced') or 'droved', tooled or polished with special equipment. The principal stone lifted from the quarry is often 'blocked' (cut to roughly rectangular shape) for immediate sale or transported to dressing sheds.



Stone cutting and finishing tools

Seasoning Stone.

In order to evaporate the quarry water, which most sandstones contain when freshly quarried, they should be exposed to the air for a considerable time before being used, as this seasoning makes the stone harder, and more durable under the action of frost. It is supposed that the quarry water contains in solution considerable cementing material, which is deposited when the water evaporates, firmly binding together the particles. It can readily be seen that such kinds of stone should have all necessary cutting, or carving, on them, done as soon as possible after quarrying.

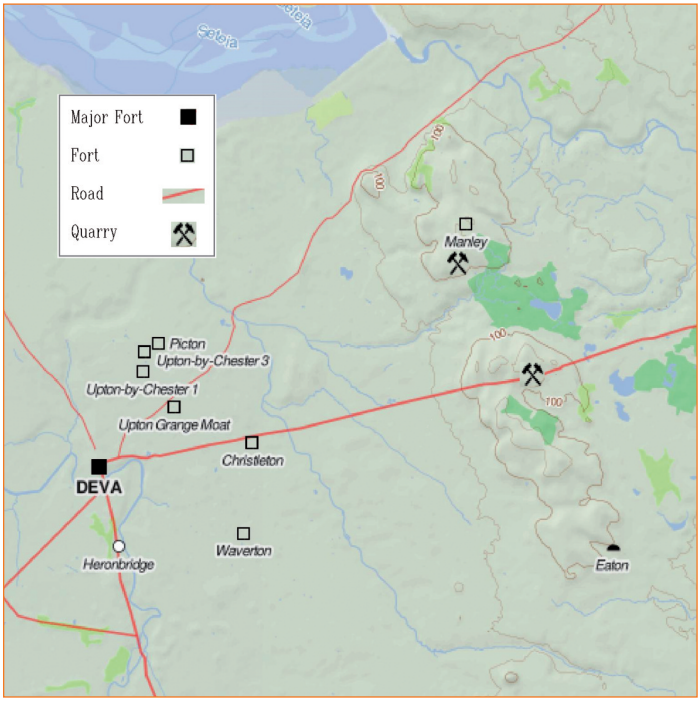
Ancient Quarries

There is evidence from excavations at Eddisbury and at Maiden Castle on Bickerton Hill that late prehistoric communities used the local stone to revet the earth ramparts of their hill forts. This was small-scale surface extraction, using what was easily at hand, but we must not dismiss the idea of prehistoric stone removal on a more industrial scale. Even though no written records of such activity exist and a considerable communal organisation of labour and transport would have been required, you only have to consider the building of Stonehenge to realise that prehistoric peoples were certainly up to the job. Elsewhere stone was being used for civil structures such as causeways. The Shardlow Bronze Age logboat had 5 shaped pieces of sandstone aboard when it sank in the river Trent. Similar large-scale ancient workings included the digging of 'marl pits' to extract subsoils for use as a fertilizer and soil conditioner. The use of marl by Celtic tribes

was described in A.D. 70 by Pliny the Elder but became widespread in the twelfth century and marling teams were well paid. In the 1880s marl was considered as one of the most important manures to improve soil fertility as it is a deposit of clay with a high lime content. This improves water retention on the sandy soils of the Ridge, adds minerals and lowers the acidity of the soil. The practice declined in the nineteenth century due to the increased use of bone-meal, ash and guano and later of chemical fertilizers and lime.

Roman Quarries

The Romans were probably the first people to exploit the sandstone from the Ridge on a large scale, quarrying it for their roads and buildings. The quarries themselves are difficult to detect and documentary or monumental references are rare. A short section of Watling Street, the Roman road that ran from Chester to Manchester, was excavated in 1885 and declared one of the most remarkable sections of Roman road in Britain. It crosses the Sandstone Ridge at Kelsall where it may well have been built with stone quarried nearby, possibly at King's Chair, within Nettleford Woods, just to the north of Gresty's Waste. The *'ford'* part of Nettleford means track or way. With only one other tentative reference to a Roman quarry on the Ridge (at Manley) and archaeological evidence being from elsewhere in the county, notably at Alderley Edge and the Minerva Shrine quarry in Chester, the Roman roads seem the best clues to locating potential Roman quarry workings.



Roman roads and possible quarry sites

Manley is some 4.3 kilometres from the Roman road and 12

kilometres from the Legionary fortress of Deva (Roman Chester). It is recorded that Chester Castle sourced stone from Manley, and as late as 1867 even the new wing of Chester Castle utilised Manley quarries, but nearly two millennia before that had the Romans also used this stone?

The use of the harder, whiter looking Manley stone for Roman tomb markers was recorded in a nineteenth century newspaper article on the discovery of Roman grave slabs, described as Manley stone, during a historic repair of a section of Chester city walls. A *Ridge: Rocks and Springs* project volunteer discovered this newspaper article in the Cheshire Archives and Records office and the Project found six possible candidates for these 'Manley Stones' in the Cheshire West Museums Service collection. If confirmed, this is one of the earliest records of stone being quarried and then transported for use elsewhere beyond the Ridge.

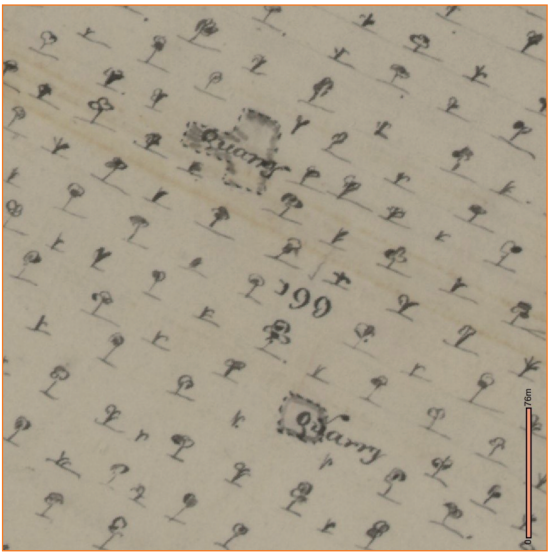
Medieval Quarries

Owing to the difficulty and expense of transporting stone it has always been desirable to establish a quarry close to a building site. Many building sites on the Ridge could produce their own lower grade stone for rubble infill and floors but many did not possess suitable stone for dressed blocks and details such as door jambs. Patrons sometimes provided quarries for this work, or relied on stone merchants for a supply, or the mason himself may have owned the source of his materials.

Medieval quarries often exploited the edge of hillsides (such as at Eddisbury) where the first task was to remove the overburden of topsoil to expose the top layer of stone, often of lesser quality close to the surface. This could be easily removed with picks and bars and as it came away in small pieces would be used for rubble infill, trackways, floors etc. The higher quality, harder stone was below and this required a more specialist extraction technique to remove whole blocks suitable for buildings, especially for window and door details that could be embellished with carving and architectural features.

Prior to the Norman Conquest, there is very little direct evidence of quarrying as a specialist or separate activity. There is evidence for Anglo-Saxon buildings and even roads in stone but none are known on the Ridge. The Doomsday Book also has few references to quarries (only 7 across the country), but as many would have been associated with specific building projects (mostly for the monasteries) and remained in private ownership, their economic value went unrecorded. It was not until 1239 that a council decided that tithes should be paid for quarries,

which implies that previously they were not seen as revenue-producing enterprises. The feudal ownership of a Forest such as Delamere often granted the rights to extract stone and from the thirteenth century a mass of documents show the expansion of quarries on a commercial scale. They were now an asset to be traded and gifted (often to the Church) and the rights to extract stone granted accordingly. By the fifteenth century stone was being widely traded, no doubt fuelling the quarry industry. However, overproduction resulted in third-party sales of surplus materials and often we find the master mason acting as stone merchant as well.



Rectangular medieval quarries are shown on a nineteenth century tithe map
(Cheshire Archives and Records Office)

Medieval quarries have been called 'Hills and Holes' due to the resulting landscape which comprises a number of shallow pits surrounded by spoil heaps. This landscape was produced by the medieval quarrymen clearing the overburden (the overlying earth) from a strip or rectangular excavation down to the bedrock, then quarrying it to a limited depth within the confines of the hole they first dug.

Bulkeley Hill has a fine example of medieval quarries creating such a landscape. The quarries have been located by means of the early nineteenth century tithe maps that show their location and rectangular form. Stone may have been quarried there into blocks and then lifted by a crane built at the edge of the excavation or removed via steps or an access ramp. Sledges would have played a part in removing the stone from the hill without having to haul it, and no doubt the steepness of the slope and gravity aided its removal from the hilltop.

The quarries of our medieval ancestors often employed the same occupations as were involved in the actual construction industry. Thus we find 'rough layers' who did much of the less skilled building work in stone, such as working on rubble wall infill. They were also called 'hand hewers' and they were accompanied by

Medieval crane in quarry 1484-1485

labourers (operarii) in large numbers who pushed barrows and worked hoists, loading and unloading the stone. The actual extraction of the stone was, however, a specialist occupation which was carried out by the 'quaretores' or 'quarerarii' and sometimes overseen by the masons themselves. The presence of or ownership of a quarry by a mason would suggest that the blocks were being shaped on site prior to being transported, either in carts or sledges to the nearest waterway and onto the building site.

Quarries at Eddisbury

At Eddisbury, close to Watling Street, the old Roman road, there is a quarry for which most detailed historic information remains. The Eddisbury Quarry lies about half a mile from Delamere Church, below the Old Pale and an Iron Age hillfort. This quarry is a very old one. Eddisbury stone was used in the building of several churches and it was certainly used, along with the nearby King's Chair quarry, in the erection of Vale Royal Abbey, six miles away. Quarrying for the Abbey began at the end of 1278 and in January 1279 a smithy and some huts were erected. In February the quarries began 'hewing' (cutting out the stone) and the payrolls for the following three years throw some light on the methods of quarrying in the thirteenth century. The workers were of three grades: master quarrymen who received 18 pence a week, mallet-men or cutters receiving 12 pence a week, and trimmers whose wages were 10 pence a week. Work continued all the year round with the exception of periods at Christmas, Easter, Whitsuntide, and certain saints' days. At the end of October wages were reduced for all grades by one-sixth on account of the short days in winter and remained at the lower rate till the early spring of February or March.The men were organised in groups of about eight

under a master mason and remained in these groups at a particular part of the quarry. In addition to their mallets, hammers and chisels, they used 'coyns' or 'wegges' costing 2.5 pence each and picks worth 18 pence each. The stone was trimmed in the quarry and then hauled to the site of the abbey to be shaped by the masons. Many of the workers were not Cheshire men. Among the mallet men were Thomas de Dieulacres, who bore the name of a Staffordshire abbey, Philip de Dore and Henry de Dore who were probably from Dore in Herefordshire, and Richard de Herford and Peter de Herford, who apparently came from the same county.

Beeston Castle

This medieval stronghold atop Beeston Crag was built with stone cut from its own hilltop moat and the landscape served as its anchor to the bedrock. The castle, which began in 1220, is constructed largely from locally sourced sandstone. The rock-cut ditch that defends the inner ward of the castle was evidently the source for much of the material for building the walls in this part of the castle. The ditch itself still retains tool marks from the time of its use as a quarry and tells how the blocks were split both horizontally and vertically by hammering lines of wedges directly into the rock face. This is known as 'plug and feather' and wedges certainly feature in accounts from the period. Quarrying for building stone was carried out within the castle grounds in the eighteenth century, and unfortunately the gatehouse leading into the outer bailey was demolished to build an access track for the removal of stones from the site.The rock here was also carved into a number of caves which may have served as mines for white scouring sand or shelters for animals and supplies throughout the occupied history of the castle and today they contain graffiti, including a number of carved heads.

The Transport of Stone

The responsibility for transport features in all medieval building contracts and specific details were given of who was to move what materials and to where. This is understandable in the light of the transport costs involved and a mason would ensure that he was not moving materials he wasn't being paid for. This highlights the importance of adequate transport routes and links from the quarry site: an importance that can be traced throughout the history of quarries across the Ridge. Transport was a major source of expenditure on medieval building projects. It has been calculated that any journey over 12 miles would cost more in transport than the stone itself! At Caernarvon castle, the total materials cost in 1285-6 was £151 5s 6 ½ d compared to the transport costs of £535 8s ½ d. The use of waterways

was paramount if the source of the stone and the building site were not relatively close.

It is not, however, to be assumed that the roads in Cheshire were universally in a bad condition. Exceptional conditions in limited areas may have led to efforts to maintain good roads. Such a conclusion is suggested by a study of the building accounts of Vale Royal Abbey which throw a good deal of light on transport. The stone used in the building of the abbey was drawn from the quarries at Eddisbury and, although neither the exact site of the original quarries nor the exact route taken can be determined precisely, the distance from the quarries to the abbey must have been from six to eight miles and the stone was hauled largely in one-horse carts. The use of single horses in the transport of such heavy material is noteworthy, for many thousands of journeys must have been made. It becomes still more remarkable when it is seen that some of the carters managed to make two complete journeys, a distance of twenty-five and perhaps thirty miles, every day for a month at a time. Moreover, the hauling continued during November and December, at mid-winter when usually the roads would be soft. It is scarcely credible that so much traffic could be borne, or that horses could have endured the strain, unless the roads were in a tolerably good state of repair. It seems likely, then, that the old Roman road, now just a faint trace on the landscape, was maintained at this time for this purpose.

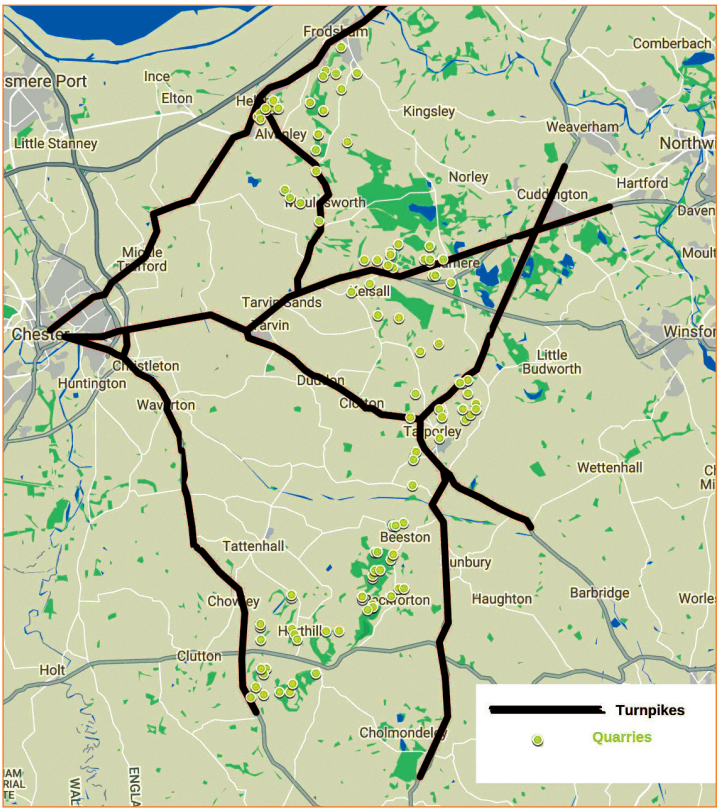
The story of the turnpike roads around Cheshire starts in 1555 with an Act of Parliament from the reign of Queen Mary. The legislation entitled *An Acte for the amendynge of hyghewayes* established that unless a particular individual was liable for the maintenance of a stretch of road then the responsibility fell on the Parish. It also established the role of Surveyor of the Highway who was to be elected from eligible parishioners on the Tuesday or Wednesday of Easter week. The Surveyor was then to establish what work needed to be done in the parish, organise the materials needed for repair and then supervise the 'statutory labour'. As a parishioner, you would be required to work, unpaid, for eight hours on each of five days agreed with the Surveyor. Depending on the value of land you owned or rented you may also have to provide horses and a cart. In 1563 the statutory labour was increased to six days per year. Over the years there were numerous changes in the law to allow, for example, the raising of a local rate to pay for additional labour if the roads proved difficult to maintain. However, in essence, the 1555 Act laid the responsibility of maintaining and repairing roads on the parish. This responsibility remained until it was abolished under the 1835 Highways Act.

There was a problem with this whole approach to maintaining and repairing roads which was succinctly summarised by Thomas Wedge in his 1794 book *A General View of Agriculture in Cheshire:*

> *The present mode of committing the care of the road to an office chosen annually, and by rotation, without regards to any abilities, etc., in each and every parish or township, seems to be one of the chief causes of the neglect and insufficiency of their repairs. Sometimes, though seldom, an active intelligent man is in that office; but no proper system of repairs being laid down and pursued, an ignorant or indolent officer succeeding the former suffers what has been properly done to go to decay.*

For the most part, the parish-based system of road repair was adequate for local needs. The real problems arose when a nationally or regionally important road ran through the parish. The damage from the traffic could just overwhelm the local resources available from statutory labour and additional local rates, and so numerous Turnpike Trusts were formed across Cheshire from the eighteenth to nineteenth centuries.

The map (right) shows how these turnpikes related to the location and distribution of quarries across the Ridge, and all the quarries were located within a short distance of these roads. Similar links can be found with the canals and the railroads, important means of taking the stone away from its



Map of turnpikes and quarry locations

source of extraction and on to the building sites.

Select colours and qualities of stone were transported from a number of sites if they met the specific requirements of the mason. For example, in about 1750 a specification for 2 pieces of 'Manley Stone' for a Dutch oven at Somerford was recorded. Each block was to be 2 ft long by 2 ft wide and 1 ft thick. (*Cheshire Records Office. DSS 1/6/50*). Manley stone is a local variant of the Helsby Sandstone Formation: a coarse-grained, sharp sandstone containing rolled lumps of green shale and small quartzite pebbles.

The links and importance of transport routes are highlighted at Manley where there are two major quarries. The 'Lower Quarry' is bordered by Cob Hall Lane, Quarry Lane, Sugar Lane and Manley Lane and the other is on Simmonds Hill close to *Manley Knoll* a house of a later date. The railway went to the Lower and the toll road passed by the second where an associated toll house was built just below the slope. The records show improvement of Manley Road to Dunham Lane being undertaken in 1797*(Cheshire Records Office, QAB 1/8)*. Further evidence of the importance of transport links can be seen in Manley where the nineteenth century maps (followed-up by *Ridge: Rocks and Springs* project field-visits) clearly show a spur of the railway that led directly to the centre of the Lower Quarry, passing below the road via a short tunnel. This quarry also had its own rail track that ran from Helsby to Mouldsworth. This track worked on a key system to ensure that only one set of wagons travelled along each section of track at a time, by the carrying of a 'key': one per track section.

Manley Quarry 1875

Ridge: Rocks and Springs volunteers undertook an

Iron track from Simmonds Hill excavation

excavation in the summer of 2016 at Simmonds Hill quarry, and found two pieces of iron work identified as sections of a narrow rail track (Ball, G. 2016, *Simmonds Hill Quarry, Interim Report, The Sandstone Ridge Trust)*. In the nineteenth century quarries to the south of Manley Common were dug for marl and a dedicated narrow gauge rail-track brought marl-filled wagons to land adjacent to Simmonds Hill quarry as shown elsewhere on the 1875 map. This trackway may have reused the redundant tracks from the quarries that had previously moved stone from the quarry to the road.

Construction of such features was not without danger and incident and this could reach the local newspapers:

> *21 September 1868 - A very serious accident occurred in Manley Lower Quarry while the West Cheshire Railway Company was cutting a tram road into the quarry the men was lifting a stone 7 tons' weight with a ginne 3 men stood winding the stone up into a wagon the men was 12 yards high the deal bank broke & the men fell with the ginne & two was killed & the others recovered.*

Despite the importance of transport for materials and the efforts made to improve extraction ways and routes, the continued practice of locating new-build sites adjacent to suitable building stone can be seen in later times. For example, a small quarry was located adjacent to the Manchester and Liverpool Sanatoria in Manley and it is likely this was used for the construction of these buildings. The 1830 auction details for the quarry at Beacon Hill, Helsby, stated that "the land is expected to produce a very superior quality stone, and its contiguity to the River Weaver renders it a most desirable object to purchasers" illustrating the value given to good transport links.

The Slars from below –with footholds between grooves

A set of curious features that may be the result of past transport links are 'The Slars' – a series of up to eight grooves running down a sloping rock face on the west side of Bickerton Hill. Cut between the grooves is a set of small steps or footholds.

It seems unlikely that the grooves are natural and they are more probably the result of friction by ropes or sledges. They stretch from a flat ramp that is shown on nineteenth-century maps as a path crossing the top of the hill and making a distinct double bend at this point before descending towards the village of Brown Knowl. At the foot of the feature, there is possibly a rectangular bay for gathering materials or loading a cart.

The Slars from above showing possible bay at their base and path to Brown Knowl

The origin of these grooves is unknown but it seems likely that they form part of a system to transport some material down from the hill. If this was stone one possible explanation may be found in the census records for the nearby village of Brown Knowl. In 1871 there was an exceptional number of men associated with the working of stone living in the tiny hamlet: James Williams (29) and John Bull (55), quarrymen; George Ware (47), mason, William Lightfoot (40), mason's labourer and George Woolley (14), mason's apprentice. There were also at least ten men identifying themselves as "navvies".

This unusual influx of workers can be explained by the nearby construction of the railway from Chester to Whitchurch and it may be that it was the labour of these men in procuring suitable stone for the railway that resulted in these mysterious features.

Case Studies from the North

With the coming of the Industrial Revolution and massive canal and railway embankments and bridges etc., the quarrying of sandstone in Cheshire became a large-scale industry focussed primarily in the north of the county close to the developing transport links around Frodsham and Helsby. Case studies developed by project volunteers from Helsby, Manley and Frodsham may serve to illustrate the nature of the industry and the lives of the people who engaged in it.

1.Transportation of Stone from Helsby Hill

Like many quarries over the country, the lifespan of the quarries in Helsby lasted approximately 100 years but the history and the legacy left by the industry live on. Helsby red sandstone is a sedimentary rock dating from the Triassic Period, 205-142 million years ago. This type of rock was formerly known as 'Lower Keuper Sandstone' but was reclassified in the late 1970s as 'Helsby Sandstone Formation' after the area where it was most prevalent. It is a strong, hard, durable stone that was widely used for building in Cheshire and beyond. In the descriptions of old buildings it is difficult to distinguish those built of the generic 'Helsby Sandstone' from those built of sandstone actually from Helsby. For example, the rostrum of the United Methodist Free Church in Dunham Hill, opened in1897, was edged with "Helsby stone" and this is very likely to have come from Helsby itself as it is only a few miles away, but the Helsby stone facing of the Grade1 listed Gladstone's Library in Hawarden, built in 1902, is much more distant and could have come from any sandstone quarry in the region. Newspaper reports of the day can be enlightening. *The Manchester Courier* of April 1890 reported that the piers of the Stockport Railway Extension were built of brick and "the parapet of the bridge is of stone obtained chiefly from Helsby". In August 1891 *The Liverpool Mercury* described the construction of the Norton Water Tower as "including some 250 blocks of stone that each weigh about 7 tonnes. Most of the masonry was quarried at Runcorn and Helsby". The Wesleyan Chapel at New Ferry, 1891, was faced with sandstone from Helsby, and Christ Church, Port Sunlight, was built between 1902/4 in red sandstone from Helsby.

On the 10 October 1692, Thomas, Earl Rivers granted a 7-year lease for quarries on "Helsbeetower" to William Standystreet, a mason of Frodsham, and Robert

Abraham, a mason of Newton, for 10 shillings a year. In the early nineteenth century, we see transport routes and means of shipping the stone developing with the quarrying undertaken by John Sothern (born in 1791). Sothern was the Commercial Agent at Duke's Dock Liverpool which was built in 1773 by the Duke of Bridgewater for the shipment of cargoes carried on the Bridgewater Canal. He mainly dealt with the transportation of bricks, stone and Roman cement. He was also an agent for the Fly Boats using the Mersey and so knew a great deal about water transport.

Sothern and his business partner, Turner, bought land in Helsby in 1827 including a plot called 'Mountskip' and possibly a plot called 'Hill Lot'. The land was at the foot of Helsby hill and near to the turnpike allowing easy transportation. However, Sothern knew about boats and, living in Liverpool, was also aware of the pressing need for stone in the developing city. In November of 1828 he sought permission from the Turnpike Trustees to cross the turnpike with a tram track. Bryant's Map of 1830 shows the tram-track running from the quarry across the marshes in an almost straight line to the ancient port known as Ince Pier. Stone from the quarry travelled along the tram-track to the small port where it was loaded onto a ferry to be carried across the Mersey to Liverpool. The stone was used extensively in the construction of Liverpool Docks, Customs House and other public works. Built between 1828 and 1839 the magnificent Customs House had to be demolished after being hit in the May Blitz of 1941.

An inquest report of April 1839 gives some indication of how the tram track operated:

> *A large stone landed on a railway wagon having got jammed against the side of the gullet or narrow part of the Delph, as it was going to run down the railway, and the deceased having got upon it to ease it with a pinch bar, the wagon on the stone being disengaged set off with great velocity down the railway, and overpowered the man who had hold of the brake which is used to check the speed down the declivity, and he fell down on the railway. In the meantime as the deceased was endeavouring to get down on one side of the stone, his left leg (when the waggon was passing through a gateway) unfortunately struck against the stump of one of the posts, breaking his ankle.*

Although surgical assistance was immediate the man sadly died of his wounds.

In January 1843 Sothern put Helsby Quarry up for auction. The lot contained a freehold quarry, a thriving plantation of choice young trees, a manager's house and garden, two cottages, a blacksmith's shop, 8 cranes with excellent gearing, 3

miles of strong tram rails with chairs and 2 shipping cranes with double-purchase gearing at Ince Ferry.

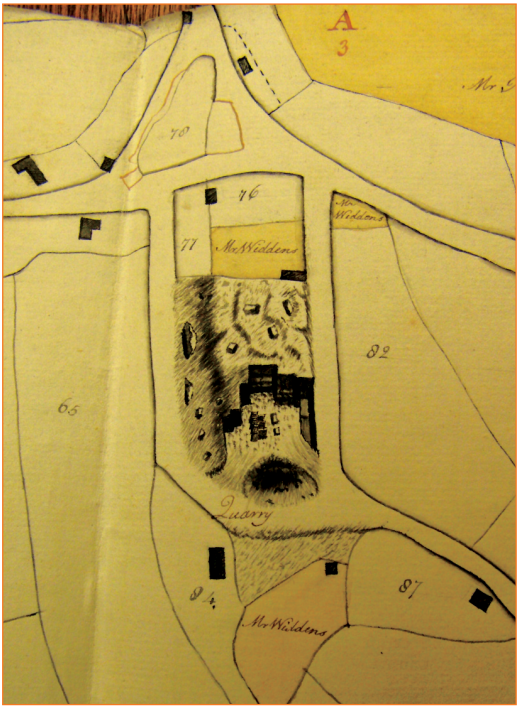
2.Quarrying in Manley

A volunteer on the *Ridge: Rocks and Springs* Project who today lives amidst the remains of Manley Lower Quarry (in fact, much of the landfilled quarry-scape makes up the garden and grounds to his house) provided the following notes:

> *Our deeds have a reference to Quarry Managers house dating back to late 1700's …There is a reference to Roberts Brothers who had previously had the quarry for landfill… There is evidence of red sandstone as bedrock in places which suggests the white sandstone is a band of strata… In my research, I discovered that Chester prison and Ecclestone Hall were 2 named buildings that the stone was used for... There are records at the Duke of Westminster estate records office… Olga Spruce – Rock Cottage – remembers playing in the quarry as a child and it was a big hole with water in the bottom.*

With only that passing reference to the Quarry Manager's house dating back to the late 1700s it seemed that earlier records were lost until the Cheshire Archives and Records Office kindly contacted the Project to draw attention to a recent accession from a solicitor's office in Wiltshire. A faded, discoloured, old covering note inside file D8835 read "A tin case containing some old plans of lands seemingly of no use". How wrong this was. The staff at the Records Office had discovered a treasure providing a fascinating insight into the Manor of Manley. The accession contains 4 maps of Manley and the covering note. The separate sections are marked north, south, east and west quarters and overlap to make the complete manor. The heading of the maps is *A Plan of the Manor of Manley belonging to Jocelyn Deane Esq 1777 taken from an original plan for Rob t Davies Esq 1772*.

Previous research suggests that a quarry in Manley had been in use since Roman times but there are two main quarries in the parish and it is often difficult to distinguish between them when reference is being made to 'the quarry'. The lower one is usually known as Manley Quarry and the other one is on Simmonds Hill (or Simon's or Symonds Hill). The 1770s maps clearly show the lower Manley quarry but at that date, the quarry on Simmonds Hill was not marked, even though volunteers have recently discovered the date '1777' carved into a quarried surface at the site. There is a sketch of the area but no quarry is shown and the area is simply labelled 'Commons'. In contrast, Manley Quarry is sketched in detail, showing the workings and buildings. It is interesting to see how the buildings associated with the quarrying are all clustered to the south of the



Manley Quarry details from manorial map dated 1777 / 1772

workings from 1777 to 1910. There is a level of refinement as permanent houses, offices and stores are constructed, centred on the manager's house. Perhaps the difference in mapping of the two quarries in 1777 reflects a difference in ownership and commercial activity at that time, the Lower Quarry being a developed commercial concern while the Simmonds Hill quarry was only being exploited for local community purposes. By 1840, however, the tithe map shows three distinct quarried areas beside the toll road at Simmonds Hill and it can be assumed that they were by then a commercial concern.

The quarries at Manley certainly provided materials for a number of prestigious buildings across the county. Stone from Manley Quarry supports the gaoler's house and the colonnade at the front of the intended Shire Hall and gaol of the Castle of Chester (*Chester Chronicle*, 7 June 1793).

The Chester Shire Hall, of which the County Court is a part, was built between 1791 and 1801 by the architect Thomas Harrison (1744-1829). In *Magna Britannia - The County Palatine of Cheshire,* p570, it says that the 12 columns of the portico are each formed of one complete stone, 23 feet in height, from the Manley Quarry. Notes from the Crown Court at Chester state that the Crown Court Building of today

Simmonds Hill Quarry has the date 1777 carved into a remaining quarry face

was designed by Thomas Harrison and was commissioned in 1785 but took about 28 years to complete. A grand entrance of Manley Stone with twelve massive Doric columns and lodges was commissioned and the first column was erected amid public celebration on 2nd October 1797. Silver coins were placed in a Wedgwood urn encased in lead under the base of the first column. The pillars were rough cut and weighed about 15 tonnes each. They were brought from Manley Quarry, eight miles away, on a six-wheeled carriage drawn by horses. In August 1813, when the last pillar was erected, the Colonel of the Royal Denbighshire Militia placed coins and a brass plate in a cavity at the base commemorating Wellington's victory at Vittoria two months before. (Crown Court archives)

Quarries shown on 1840 Tithe map of Simmonds Hill. Note the proximity of toll booth and toll road

Later the new Customs House at Liverpool docks would also have walls built from stone from Manley quarries described as "a beautiful freestone of great durability" (*Westmorland Gazette*, 27 June 1835).

Minutes of the Chester City Council meeting show that stone from Stourton and Manley would be used in the building of the new market. There was unanimous conclusion that Manley stone was the best as they had proof of its fine appearance and durability in several large buildings in the city. However, the market contractor, a Mr Roberts, could not supply the 300 cubic feet required each week and it was said that some of the stone had not been of the same quality as previously. The tenant of the quarry, a Mr Wigginer, rose to the occasion and reported that the number of people working at the quarry had been increased from 6 to 20 so he could supply 800 cubic feet per week for the next two months to complete the job. He said that Manley stone had been used in the construction of Eaton Hall, the Castle, the News Room and various other places. Manley stone was a beautiful colour and very hard (*Chester Chronicle*, 10 May 1862). Locally,

the name of Sugar Lane, Manley, is said to come from the silver sand that gives the sandstone its pale colour.

Various census data related to the workers are presented for Manley and the quarry from the period 1851 to 1901. Ages, where recorded, range from 30 to 57 years old. 'Stone getters' worked the faces of the quarry. 'Stone dressers', 'cutters' or masons prepared and cut the stone to the required shape and size.

Entry in census	1851	1861	1871	1881	1891	1901
Stone getter	John Griffith (31)	Thomas Brown (57)	Robert Hayes, Thomas Hayes, Richard Carrington	William Keeling (44)	Joseph Gimmery	
Stone lifter	John Dod (30)					
Quarry Address			Thomas Lloyd – The Quarry, Manley	Samuel Brown, The Quarry, Manley James Done, farmer, The Quarry, Manley William Broomhead (36) Quarry Brow George Jones (32) Quarry Brow		
Stone mason			Henry Evans	Henry Marsh (53) The Barracks, Manley		
Stone cutters			Edward Hughes, John Fletcher, William Whitby, John Whitby			
Stone fitter				Samuel Hicks (41) Quarry Brow, Manley (Simons Hill) Joseph Potter (40)		
Quarryman					A sub-postmaster Henry Marsh John Brown	
Stone quarry labourer						Samuel Done
Total	**2**	**1**	**9**	**8**	**3**	**1**

Based on the census data there appears to be a peak of activity for around a decade between 1871 to 1881 along with the addition of specialist jobs, masons, cutters and fitters. This may reflect the expansion of the railways, with Helsby being an important part of the ever-growing network in the later nineteenth century. However, there are no similar records to determine the number of people involved earlier in the nineteenth or the previous eighteenth centuries when Manley stone was evidently very much in demand.

Project volunteers' excavation at Simmonds Hill

At nearby Simmonds Hill, the private house, Manley Knoll, was built for Llewellyn Jones between 1912 and 1914. After the First World War, the house was purchased by the Demetriades family who made the adjacent disused quarry into a spectacular woodland/quarry garden. This garden fell into disuse but is currently being re-instated by the current owners, Mr and Mrs Timpson, who kindly gave permission for the project to survey and excavate part of the quarries on their land.

3.Frodsham Quarries

Although documentary evidence exists that the hills of Frodsham were quarried from the early 1600s, ownership was precarious and many quarries were short-lived. The larger ones only prospered from the middle of the nineteenth century with the coming of the railways and the increased prosperity of the region, and were worked out by the early twentieth century. Many of the old quarries such as Beacon Hill and Dunsdale Hollow are barely noticeable in the landscape today and even the deeper pits have been reclaimed by nature. Other quarries, like those at Five Crosses, have either been given alternative uses or have had houses built on them.

The quarries have gone, but the red sandstone extracted has given our built environment its distinctive character and has contributed to many of the great engineering achievements of the nineteenth century in Cheshire and beyond. The earliest record near Frodsham is from the seventeenth century with Thomas, Earl Rivers in 1684 granting a 7-year lease to James Thomason, a mason, for stone quarries on the Overton and Netherton hills. The land stretched from "Great Marl Pit in Overton to a valley called Dungedale" (Dunsdale), an area now dotted with former workings. Some small, possibly earlier local quarries can be seen along Ladies' Walk on Frodsham Hill. Another, 'Simon's Delph', was worked by stonemason Simon Hoose on land leased from the Marquis of Cholmondeley in the early 1800s. The turn of the century had seen the Industrial Revolution demanding larger quantities of stone and better ways to move it. Simon died in 1840 but is remembered in the road name 'Simon's Lane' leading from Manley Road to the top of Bellemonte Road and Forest Hills Hotel. His son David is shown as the occupier of the plot on the Tithe Map of 1846.

For most of these quarries their age and history are unknown. However, of the three major quarries in Frodsham, Beacon Hill appears to be the oldest, Five Crosses the most productive and Dunsdale the one we know least about.

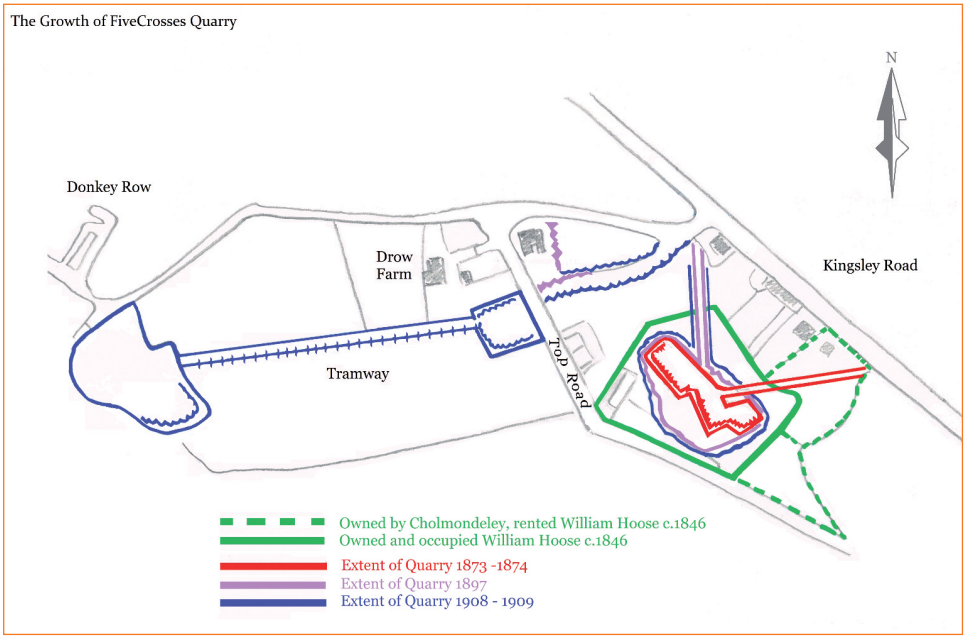
Beacon Hill, the highest point in Frodsham, would have been an obvious place to quarry. Mr John Tomkinson, a builder and master mason from Liverpool had already been leasing a quarry there for 2 years when the opportunity arose for him to buy the land. The land owner, William Darlington a dealer from Comberbach, was declared bankrupt in 1829. His holdings were put up for auction on 17 July 1830 and Tomkinson, who already owned a number of quarries including Weston, Runcorn and Storeton near Bebington, added Beacon Hill Quarry to his holdings. Mr Tomkinson supplied much of the stone for the

public works in Liverpool, transporting it by water from Runcorn. The 1830 auction prospectus for Beacon Hill stated that "the land is expected to produce a very superior quality stone, and its contiguity to the River Weaver renders it a most desirable object to purchasers". Where the stone from Beacon Hill Quarry was used is not known, but it was presumably carted to the Weaver at Frodsham Bridge where it could have continued its journey by barge.

Tomkinson also supplied the foundation stones for the Great Railway Viaduct at Stockport in about 1838 and is listed as one of the main contractors. Although the Viaduct was mainly built of red brick, an estimated 11,300 cubic meters of stone were also used. In 1844 Tomkinson was awarded the contract to build the Birkenhead Docks. He built and gave the original Bethesda Congregational Chapel to the people of Runcorn and was widely respected for his benevolence and as a builder and businessman. In 1846 he lost the building contract for the docks, although he continued to provide the stone, and his masons were involved in the Building Trade Strike. There was also a disastrous fire at his lime-works in Runcorn and these events, combined with an "unfortunate railway contract in Yorkshire", a loss in the assize courts and a large outlay on his Runcorn Quarries, led to his bankruptcy in 1848.

Beacon Hill Quarry was put up for sale and was purchased by Mr Stubs of Park Place (Castle Park) in 1852/53. There is no evidence that the quarry was worked during Mr Stubs' ownership and it was resold on his death in 1861. A house was built on the abandoned quarry site which was later extended to become 'Heathercliffe', the home of a number of prominent people over the years. The house was restored and opened as a country house hotel in the 1990s but has recently reverted to a private residence following a further period of refurbishment. The 10 acres of grounds, including the original quarry, were used in 1991 by Twentieth Century Fox for some of the scenes in their film version of *Robin Hood*.

The quarry at Five Crosses lies on the Overton geological fault and the displacement along the fault line made the stone more accessible. It also lies alongside the main Frodsham to Kingsley road, making the transportation of the stone easier. A clue to the story behind this quarry comes from the tithe map. Plots 434/434a Frodsham Lordship were owned and occupied by William, another member of the Hoose family. He also rented a cottage and land from the Marquis of Cholmondeley. The census records reveal an upwardly mobile career. Hoose appeared on the 1841 census as an agricultural labourer but by 1851 he



Map of Five Crosses quarry

was William 'Hulse', a stone quarry labourer, and by 1861 a quarryman. In his Will of 1871 he left the rents and profits from the four cottages and stone quarry to Jane, the widow of his son William, to be divided between their two children, Jane and Charles on her death. He describes the property as being that which he purchased from the executors of the late John Darlington. Darlington had rented 'Such Farm' and his will of 1826 specified that his land called the 'Common Plot' and premises be sold. There was no mention of a quarry in Darlington's will nor was there any indication on the tithe map of 1846 that large-scale quarrying was taking place. The quarry probably started, therefore, in the late 1840s, spurred on by the need for stone for the railway that was being built through Frodsham. The railway would also have provided an excellent means of transport to distant markets as this high-quality stone was in demand throughout the North West. In the obituary for *Bob Hague, Hewer of Stone*, written in 1975 by H. V. Davies, it is stated that stone from Five Crosses was railed to Blackpool for the construction of the Promenade (unconfirmed but built 1856-1870).

The 1881 Ordnance Survey map, surveyed in 1873/4, shows the quarry with a track leading onto Kingsley Road through land which at the time of the tithe map

had been owned by the Marquis of Cholmondeley, and past what was presumably 'Delf Cottage' where William and then later Charles Hulse lived. 'Delf' or 'Delph' is another word for a 'delve' or quarry. The quarry must have thrived making William Hulse a wealthy man. As well as leaving the quarry to Jane and her children, he left property including shops in Church Street Frodsham to his other children, Jane died in 1879 and presumably her son Charles inherited his share of the quarry as in 1881 he was living in Kingswood and was a stone quarrier. A daughter Jane was only 18 in 1881, too young to inherit, and was a servant in Chorlton. Perhaps her uncle Charles, a former grocer from Liverpool, who was the executor of his father's will had purchased her share or was managing it for her, as in the 1881 census he was a stone merchant and quarryman in Five Crosses. In 1891 he was a grocer again but his will of 1900 had him as a quarryman, although it did not specifically mention a quarry.

During the ownership of Charles Hulse, the quarry was extended to the north onto Cholmondeley land on Top Road and the exit to the original quarry was also altered, as can be seen on the 1899 Ordnance Survey map, surveyed in 1897.
The next significant figure to be associated with Five Crosses was John Jones Palmer. Palmer was born in Liverpool in 1871 and started his career as a mason/sculptor with a small shop initially in Townfield Lane and later in Church Street. The exact date when Palmer took on Five Crosses Quarry is not known but he signed a lease with Cholmondeley for the extension of the quarry plus 2 cottages in 1905. The substantial house he built, 'Quarry Mount', bears a date-stone of 1905. The two stone cottages at the corner of Top Road were rebuilt with local stone and also have a date-stone 1905. In the 1911 census, Palmer was living at 'Quarry Mount' and was the Managing Director of the quarry. *Kelly's Directory,* 1906, had him as quarry owner and stonemason. The quarry was at its peak during this time and the 1911 Ordnance Survey map, surveyed 1908/9, shows another quarry, possibly an old sand quarry, near the right-angled bend on Hazelhurst Road (previously known as Donkey Road), with a tramway to link with a new quarry pit on Top Road. This quarry eventually became so deep that a tunnel had to be built under Top Road to link the quarries and to enable transportation of the stone to the main road.

Palmer constructed the ornamental archway which was added to the Drill Hall, Main Street, in 1900 as a testimony to the Frodsham men who fought in the Boer War. Sandiway Church, designed by John Douglas, was constructed of stone from Five Crosses Quarry in 1902/3 and the stone was in great demand for carved lintels, fancy quoins and coping stones. It is said that stone from this quarry was

also used in the initial stages of building Liverpool Cathedral and Palmer built the steps from Bellemonte Road to the Pleasure Gardens known locally as the '1,000 steps'. The quarry appears to have been a thriving business at this time so it is surprising that in 1912 Palmer and his whole family emigrated to Melbourne, Australia. He died there in 1926.

Throughout the early history of quarries the techniques of extraction and processing changed very little from prehistory to the middle of the eighteenth century. The hand tools and the marks they left changed little in form and, as we have seen in the case studies, it is often the archives that provide the best chronology for a site rather than the field evidence.

Across the Ridge, from the small hand-hewn scrapes of the earliest quarries to the mechanised industrial companies of the nineteenth and early twentieth centuries there is evidently much to be learnt. Understanding the quarrying itself, the methods of distribution and how stone was moved to construction sites and markets, and identifying the end use of the stone all contributes to unravelling the stories of the people who made their living from the Ridge. Through the *Ridge: Rocks and Springs* project industrial archaeology and social history, combined with exacting historical map research, have allowed us to understand and value some of the 'scars on the landscape' left from past activities. There is much more to discover of this story and how stone has shaped the Ridge we see today.

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Shaping the Ridge – the influence of water on the development of communities

Water is the mainstay of civilisation. Supplies of water allow communities to develop and industry to thrive, and are essential for agricultural production. An understanding of the behaviour and supply of water helps to explain the development of an environment in the past and its present appearance.

Water has given the Cheshire Sandstone Ridge many of its special features. For example, Blakemere Moss is the largest peatland of the Delamere Forest. Originally formed by the flooding of a former kettle hole (a shallow, sediment-filled body of water formed by retreating glaciers or draining floodwaters) the mere was drained in about 1815 by prisoners of the Napoleonic wars who dug drainage ditches and an exit channel. In 1992 the decision was made to restore the area back to a wetland of more than 33 hectares. This work made it one of the largest wetland reclamation projects in Britain. Many other meres are found to the northern end of the ridge such as Crow Mere near Frodsham.

Crow Mere

Black Lake, also in Delamere, was created by the melting of an ice-block at the end of the last Ice Age some 10,000 years ago. The lake was enlarged as a duck pond in the 1820s. By the 1940s it was completely covered by Sphagnum moss but is now managed as a valuable natural habitat. Further south, Urchin's Kitchen was a glacial flood-water drainage channel and elsewhere water has carved and shaped the landscape. Flooded marl pits are man-made features that also pepper the countryside of Cheshire.

Water

Until piped water arrived just fifty or so years ago every farm and cottage would have had its own source of water. An article in the *Chester Observer* in 1950 indicates how much variation there was in the way people obtained their water. The inspector of nuisances (see later) had made a house-to-house inspection of a portion of the Frodsham Township from which it was gathered that there were 128 houses and their water supplies were as follows: 49 private pumps; 15 Frodsham water; 4 rain water; 11 public wells; 2 wells; 7 running pipes; 28 Five Crosses spout; 12 Major Hitchen's pipe.

Major Hitchen's Pipe

Mankind has been able to obtain water from a variety of sources. Historically, when our demand for water was less, extensive use would have been made of the collection of rainwater possibly dripping from the roof of a building or collected in dew ponds which were essentially depressions in the ground that collected rain water. Streams and rivers offer more reliable yields but may be susceptible to pollution and may exhibit variable quality, and so are normally used only where a groundwater source is unavailable. There are numerous examples of springs on the Ridge. The quantity of water available from a spring depends on its source, with those from deep-seated aquifers being the most reliable. Some spring sources were in fact artificial land drains and should be regarded as effectively surface waters, with their associated variable quality.

Wells and boreholes have been dug or drilled. Normally a properly designed and constructed well or borehole will be able to supply water sufficient for at least a single household. Wells are usually of large diameter, not less than about one metre, and dug by hand or, more rarely, by a mechanical excavator. Boreholes are of smaller diameter, variable in depth and are drilled by

Five Crosses Farm, Frodsham

a specialist contractor using percussion or rotary drilling

Well at Bellemonte House Frodsham

There is considerable confusion when studying historical maps of water supplies. A well marked on a map may mean an up-welling of water which we would nowadays describe as a spring. Similarly some springs are dug into the ground and can easily be confused with shallow wells.

Dipping Well, Alvanley Court

A sacred spring, holy well or healing well is often a small body of water emerging from underground and revered either in a pagan or a Christian context, often both. The source has some significance in the folklore of the local area. This can take the form of a particular name, an associated legend or the attribution of healing qualities to the water. A few springs along the Ridge have been widely credited with health-giving powers: in particular Whistlebitch Well in Primrosehill Wood, and Horsley Bath below Peckforton Castle.

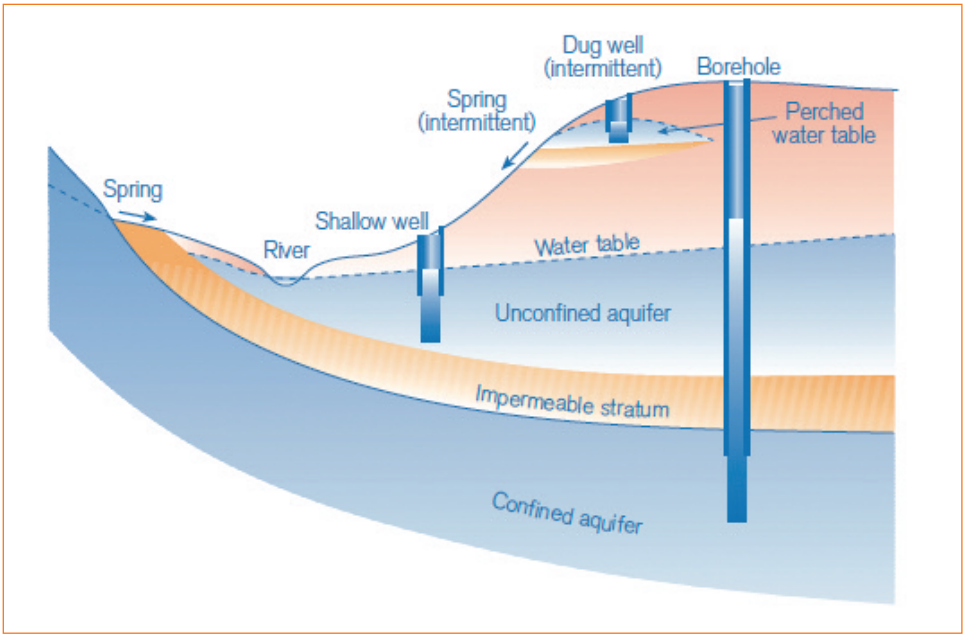
The hydrogeology of the ridge and environs.

The porous nature of the Triassic sandstone rocks that make up the Ridge means that they act as a giant natural sponge and so in the past springs and wells were common below the Ridge and many were found on the Ridge itself.

The basis of all water studies is an understanding of the hydrogeology of the area. It dictates where and how water sources occur. Even today there are many properties in the UK which depend on a private water supply. The water source could be a borehole, well, spring, lake, stream or river. A useful reference is the *Private Water Supplies Technical Manual* (Crown copyright, 2006 published by the Scottish Executive ISBN: 0-7559-5151-4) and the following notes are taken from this publication.

Water

Many of us will be familiar with the hydrological cycle. Evaporation from the oceans produces water vapour, which rises and condenses to form clouds; these clouds move with atmospheric circulation until they lose thermal energy and the condensed water vapour is released as precipitation. The precipitation introduces water into the terrestrial environment where it may percolate into the ground, run-off as rivers and streams, or be returned to the atmosphere through evapotranspiration. Eventually such moisture returns to the oceans or the clouds and the cycle begins again. Water which flows in streams and rivers or which is contained in lakes is called surface water whilst water which percolates into the ground and reaches the water table is called groundwater. Of these sources, groundwater is the most abundant.



Types of water supply

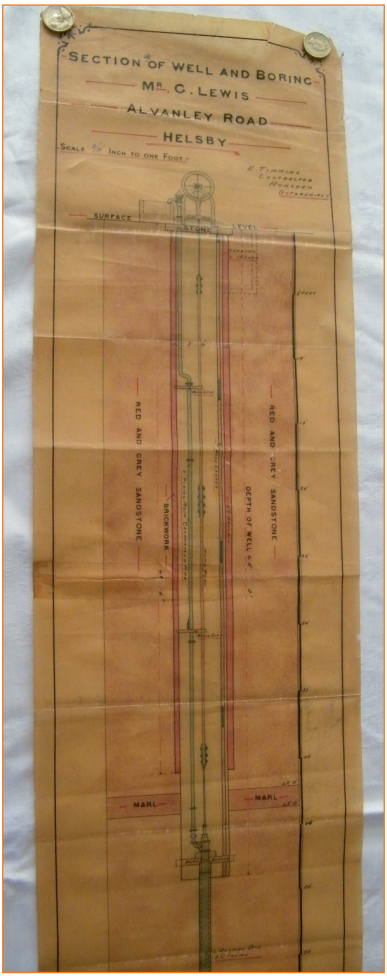
Water covers 71% of the earth's surface but 96% 0f the world's water is in the sea; 2% is locked up as ice (albeit decreasing at present) and only 2% is in the groundwater and potentially available for abstraction. Desalination plants for sea water can provide potable water but they are expensive. The world is extremely vulnerable to water shortages. Modern water usage is about 45–100 metre^3/person/year but, of this, drinking water requirements are only about 2-3

litres/day or approx. 0.5 to 1 metre^3 /person/year. Since 1900 water consumption in Europe has gone up 500-fold. Nowadays, it takes about 1,000 litres of water to produce 1 litre of milk (this water usage includes irrigation, drinking, cleaning of cows and equipment, waste disposal etc.) and it takes 5,000 - 20,000 litres of water to produce 1 kilogram of meat or 500 - 4000 litres of water to produce 1 kilogram of wheat. When we look at historic water supplies it is essential to keep in mind that demands for water in the past were much lower than in the present day.

Cheshire has rainfall of around 790 millimetres/year (31 inches/year). This precipitation will wet the soil surface and then infiltrate below ground level where it adheres to the soil particles by a combination of surface tension and molecular attraction. Precipitation will only penetrate deeper once the soil reaches its field capacity when the force of gravity exceeds the attractive forces binding water to soil particles and allows the water to drain downwards. In this region of the soil the voids present in the soil or rock are not completely filled with water and so this region of the subsurface is known as the unsaturated zone. As gravity pulls the water down to greater depths the voids become completely filled with liquid and this is termed the saturated zone. Water in this saturated zone is termed groundwater and the boundary between the unsaturated and saturated zone is termed the water table. This separation is not clear-cut and the transition phase between the unsaturated and saturated zone is called the capillary zone or capillary fringe.

The water table may be defined in terms of pressure. Pressure differentials mean that if a well or borehole is excavated into the saturated zone, water will flow from the ground into the well. Water will then rise to a level in the well where the pressures equilibrate.

The soils and rocks act as reservoirs and vary in the degree to which stored water will be released so, for example, clays do not readily release their stored water. The ease with which water can pass through particular rock strata depends on a combination of the size of the pores and the degree to which they are interconnected resulting from the degree to which the rock is permeable. An aquifer is any rock which contains interconnected pores or fissures which can hold and transfer water, and may be defined as a water-bearing rock formation that contains water in sufficient amount to be exploited and brought to the surface. Materials that can serve as aquifers include gravel, sand and sandstone,



Borehole construction at Teuthill House

alluvium, cavernous limestone, vesicular basalt and jointed slate.

To complete the hydrological cycle within the groundwater area, all freshwater found underground must have a source of recharge such as rainfall or leakage from surface drainage such as rivers, lakes or canals. It should be borne in mind that groundwater systems are dynamic with water continuously moving from areas of recharge to areas of discharge with transit times of many years. An example is Buxton Mineral Water which is bottled from rain that fell about 5000 years ago and has been percolating through the rock strata. The age of water from sandstones will be much less due to the porous nature of the rock.

'Perched' ground water is subsurface water that forms a saturated horizon within porous media at an elevation higher than the local or regional groundwater table. Downward movement of infiltrating water through a material is retarded and accumulates above and/or within the perching unit. Along the sandstone ridge, marl layers will frequently act as the 'perching unit'.

Where the water table intersects the surface, a spring line is formed. Most reliable are springs issuing from deep-seated aquifers whereas those from perched water tables may dry up after a short period without rain. Spring sources can be of good chemical and microbiological quality although springs from shallow strata (where there is a relatively high water table) may be of variable quality because of surface contamination.

Cheshire's central sandstone ridge is composed of several different types of Triassic sandstone which store up and then release water at a steady rate. The yield of water from a supply will be influenced by activities in the area. Many perched

springs and shallow wells may dry up in times of low rainfall and the widespread adoption of land drainage schemes has diverted water from the springs. Land drainage has been going on since Roman times but greatly increased from the 1750's and the availability of cheap land drain tiles from about 1845 further increased its adoption. Many springs and shallow wells started to dry up as a result. In the Helsby and Frodsham areas, the building of the Manchester Ship Canal started in 1887 and the canal was filled with water in 1893. The canal construction demanded large quantities of water and land drainage which dried up a number of supplies. We know from records that the well at Teuthill House, Helsby was dug in June 1877 and needed 3168 bricks to go down 15 metres (48 feet). However, in July 1887 Ebenezer Timmins was employed to bore down to 66 metres (215 feet) within the well to reach water. Details of the bore construction and geology are lodged with the Cheshire Records Office.

To the south of the Ridge, on the Bickerton Hills, extraction of water by the Staffordshire Water Board meant many local supplies dried up. More detail is given later in this chapter.

Characteristics of water

Many factors affect water quality such as acidity or alkalinity, colour, taste and odour, dissolved metals and salts (sodium, chloride, potassium, calcium, manganese, magnesium), heavy metals and metalloids (lead, mercury, arsenic, etc.), dissolved organics, radioactivity (especially radon), microorganisms and, today, pharmaceuticals and hormone analogues such as female contraceptives.

The sandstones of the Cheshire Ridge were either deposited by water or were wind-blown, so their composition varies. 'Evaporite' is a name for a water-soluble mineral sediment that results from concentration and crystallization by evaporation from an aqueous solution of either marine or fresh water origin and these evaporites will be reflected in the composition of the water. One example of variability within a small area is given in *The Examination of Waters and Water Supplies* by Thresh, Beale and Suckling (1949). This shows data from Mouldsworth for the composition of water abstracted at different depths and the variability of some of the chemical components.

It can be seen that some chemical concentrations are very different and this will

	Mouldsworth Water bearing stratum at 250 ft (77 metres)	Mouldsworth Water bearing stratum at 800 ft (246 metres)
Calcium carbonate	170	170
Magnesium sulphate	6	60
Magnesium chloride	155	22
Sodium chloride	780	300
Total hardness	440	260
Water analysis in parts per million		

Chemical composition of water extracted at Mouldsworth

influence the taste and the way the water can be used. The hardness of a water will affect how much deposit you will get in a kettle or how easily lather can be generated. Other constituents may change the taste, colour and safety of a water. So two adjacent springs or wells may be drawing water from different aquifers and have different characteristics. Such variation may be the reason some supplies have been labelled as having medicinal qualities.

Water-borne disease

Water-borne diseases were common in the past. Bacterial diseases such as typhoid, cholera and Weil's disease afflicted people. Other diseases such as amoebic dysentery occur and we now recognise a wide variety of viruses in water such as hepatitis and viral diarrhoea.

These would have led to illness but the cause would not have been known until relatively recently. Parasites such as liver fluke spend part of their life-cycle in water and infected many people in the past. There are many more diseases that can be transmitted in water and nowadays we take it for granted that we turn on the tap and clean, uncontaminated water comes out. That was not always the case and officials were appointed to ensure clean water was provided to consumers.

'Death's Dispensary' From Fun Magazine, 1860

An Inspector of Nuisances was the title of an office in several areas. In medieval England it was an office of the Courts Leet and later it was also a parochial office concerned with local action against a wide range of 'nuisances' under the common law: obstructions of the highway, polluted wells, adulterated food, smoke, noise, smelly accumulations, eavesdropping, peeping toms, lewd behaviour, and many others. In the United Kingdom from the mid-nineteenth century this office became associated with solving public health and sanitation problems, with other types of nuisances being dealt with by the local constables. The first Inspector of Nuisances appointed by a UK local authority Health Committee was Thomas Fresh in Liverpool in 1844. In some places the title was 'Sanitary Inspector' and eventually this title was standardized across all UK local authorities. An Act of Parliament in 1956 changed the title to 'Public Health Inspector' and the nearest modern equivalent of this position in the UK is the 'Environmental Health Officer'.

Nowadays, we know that the water coming from our taps is safe to drink and this is largely due to the disinfection of water. Water chlorination is the process of adding chlorine or hypochlorite to water to kill certain bacteria and other microbes in tap water. In particular, chlorination is used to prevent the spread of waterborne diseases such as cholera, dysentery and typhoid. In 1854, Dr. John Snow used chlorine in an attempt to disinfect the Broad Street Pump water supply in London, which he had identified as a cause of a cholera outbreak due to sewage contamination. In 1894, it was formally proposed to add chlorine to water to render it 'germ-free' and in 1897 the town of Maidstone, England was the first to have its entire water supply treated with chlorine. Permanent water chlorination began in 1905. Over the next few years, chlorine disinfection using chloride of lime (calcium hypochlorite) was rapidly installed in drinking water systems around the world. Disinfection by chlorination is not without some problems but the World Health Organization has stated that "the risks to health are extremely small in comparison with the risks associated with inadequate disinfection".

Publications reveal the extent of the contamination problem in Kingsley and environs. In his book on Kingsley, William Gibson wrote in about 1967 that "Sixty years ago the health of the village was anything but good. 80 years ago it could be described as bad; even very bad as the water supply was from wells and spouts and sources which were contaminated". He mentions epidemics of scarlet fever, typhoid and smallpox, although of these only typhoid is commonly waterborne. Contemporaneous press releases give more detail of the problem. In 1881, one

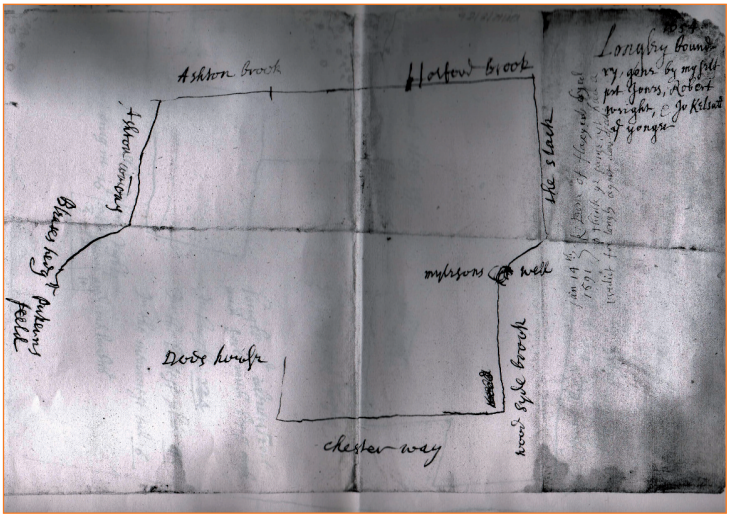
case of typhoid was reported in Kingsley and one in Frodsham. The *Cheshire Observer* of 29 November 1884 reported that the medical officer of health (Dr Adams) had investigated an outbreak of typhoid fever at Kingsley affecting four people linked to water taken from Kingsley Brook. The Inspector of Nuisances was instructed to take samples. The Local Government Board noted that there had been seven deaths from typhoid fever in the quarter ending 30 Sept 1884 in the Authority's District. By 1885. It was reported that typhoid had again broken out in Kingsley and Frodsham and in 1894 there was an outbreak in Helsby.

These outbreaks of disease caused local people to consider alternative sources. In 1915 the *Chester Chronicle* reported that the Kingsley Water Committee had considered the quality of the water from the Kingsley Brook at Kingsley Mill Lane, Crowton. Consideration was given to plans to use the Liverpool water mains but there were concerns about the area to be covered and the scope of the work. Another report recommended a scheme to the Parish Council to provide water and a letter from Messrs Lonsdale and Marsh offered a small water scheme on Mrs Parkenson's estate. The Public Health Authority (the Runcorn Rural District Council) pressed the medical fraternity and the representative of the village, the late Mr Samuel Woodward, brought a water supply from the Liverpool Vyrnwy system which passes through the village.

Water supplies as boundary markers

Streams are relatively rare on the Ridge and yet water courses have often been used as boundary markers. Longley Farm and Quarry near Kelsall provides an example of this. In 1654, 30 acres (12 ha) of land in Longley were bought from a Mr Birkett by Joseph Done. The boundary was walked by three local men and an account of their walk for much of the distance followed a chain of streams: "Woodsyde brook, up to Mylerson's Well, from thence… the ditch… [and]… the slack to Holford brook which falls into Ashton brook…then turns up a slack…" As a side-note the account also mentioned "Neelds well, a fynn spring".

It is difficult today to trace the route exactly as some of the streams have dried up and Woodside Brook does not appear on maps. It may well have been part of the eastern boundary line of the parish of Kelsall that follows an uneven route from Kelsall northwards and eventually merges with Ashton Brook. There are a number of wells on the hillside to the east of this line. Neild's Well is still marked

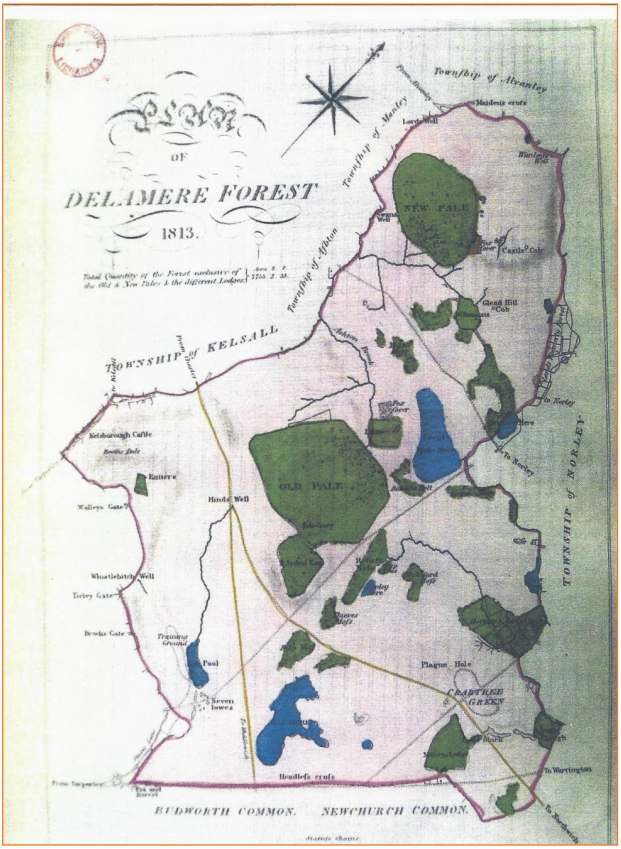


Longley map, Kelsall

on some maps and, although Mylerson's well may have been lost, there is an ancient candidate, lined with moss-covered stones, still holding water at the western edge of the Yeld, just above Longley Farm and the parish boundary. The water supply in the area was far from reliable. In 1810, the land was being taken on by a Thomas Dean under a lease from the current owner, Mr Arden. Dean wanted to build a house and farm here and by this time there was already a small stone quarry on the site. Mr Arden's estate manager, William Manley, wrote to Dean's agent with a sympathetic proposal for ensuring that Dean had water:

> *First, it appears on every inspection that the Waste Land in Longley is very uncertain if water can be found in the dry season. To bring that business to a certainty I propose to take from Samuel Briscoe's farm a part of a piece of Land called the New field where a spring of water … can be found in the driest season sufficient for the use of the House &c and Building, … [It] would leave sufficient room for water, to take a part of the said piece adjoining to Briscoe called the nearer new field, to make Briscoe ample satisfaction from a Bank of inclosed Ground facing his house and some land in Longley adjoining his farm.*

When tithe maps were drawn up a few years later, this New Field was on the parish boundary and, just north of the farm on the same boundary, was a 'Brook Field' so it seems likely that the Woodside Brook mentioned by Mr Jones one hundred and fifty years earlier was still supplying the farm. While it has now become just a muddy depression there is evidence that later in the nineteenth century a wind pump was used on this border to maintain a supply and to the north, where the quarry had been considerably extended, a reservoir tank was also installed.



Delamere Forest 1813

A map of the Delamere Forest dated 1813 shows the boundaries to be defined in a number of places by means of named springs and wells namely Wanlows Well, Lords Well, Swans Well and Hinds Well to the northern edge of the forest. This illustrates the importance of these landmarks.

Community Supplies

The project volunteers undertook extensive desk and field research of water-related features in their areas. A total of 385 sites were recorded and the number of observations by parish is shown in the table. Some parishes were

Parishes Northern sector	No. of records	Parishes Central Sector	No. of records	Parishes Southern Sector	No. of records
Alvanley	**14**	Clotton	**8**	Alpraham	**9**
Frodsham	**52**	Cuddington/Sandiway	**19**	Beeston	**8**
Helsby	**57**	Delamere	**42**	Bickerton	**3**
Manley	**30**	Kelsall	**1**	Broxton	**32**
Mouldsworth	**1**	Little Budworth	**4**	Bulkeley	**2**
		Oakmere	**6**	Burwardsley	**8**
		Rushton	**1**	Duckington	**9**
		Tarporley	**10**	Harthill	**1**
		Tiverton	**6**	Peckforton	**2**
		Utkinton	**4**	Spurstow	**1**
		Whitegate/Marton	**23**	Tattenhall	**5**
		Willington	**27**		
Total	**154**		**151**		**80**

Data from the Project

investigated in greater detail than others but the data show a reasonable cross-section of features across the Ridge.

The following section gives examples of some of the ways in which water has been supplied and used by the communities along the Ridge. This is not intended to be a comprehensive review but does illustrate the range, complexity and interest of various structures that our ancestors used and valued.

Helsby

Near to the Helsby quarries is Gorse Hill Well. The well was on the property of Mark Smith on his private road to serve the cottages he bought from Henry Lowe and Thomas Brandreth in 1884 and 1885. He presumably dug this well following a row with his neighbour, William Guest, as the original well serving the properties was now on Guest's land. The well can still be clearly seen.

At 'Greenbank' on Chester Road a pump can be seen in its original position. It was painted yellow by previous owners of the house over 15 years ago but is in good condition although there are signs of rusting at the base.

Pump at Greenbank House

'Greenbank' was built for James Brandreth in about 1872. He was a coal agent and son of the Quarry owner. Brandreth lived in the right hand side and let the other. He moved to Helsby House in the mid 1890s but 'Greenbank' was not sold until 1920 by his son James. Built as a semi, it was served by a well and small pump at the rear of the garden shown on the 1880 OS map. Although mains water reached this area in 1896 this house was not connected. In 1897 a tenant complained to the Parish Council that the water from the well was unfit for human consumption. Brandreth cleared the well and replaced the pump rather than connect to the mains. There was some ill feeling between Brandreth and the Water Company as Brandreth had his own water scheme supplying the

Alvanley Road area from his well near the Quarry, which pre-dated the Helsby scheme.

A well, with steps down, provided a supply to Upper and Lower Rake Lane and a village pump was situated on Rake Lane. The Parish Council Minutes of December 1896 state "The village well was somewhat out of order and the water in the well was somewhat insufficient in quantity" but it was confirmed in the *Cheshire Observer* of January 1897 that the well was in good repair although the water was low due to dry weather. Mains water had reached here by April 1896 and a free tap had been supplied. However the pump was retained as the new supply was not trusted. By September 1897 the well had run dry and the landlords were compelled to introduce mains water.

Woodhouses

A site of some significance was the Iron Dish Well situated on what is believed to be the route of the Roman road so this could be a very ancient watering hole. It was described in 1786 as being on the road between Netherton and Woodhouses. Some land called the Iron Dish, being auctioned in 1839, was described by the *Chester Chronicle* as a "desirable building plot... [which]… lies very advantageous for erecting a brewery, being well supplied with water and adjoins the turnpike road leading from Frodsham to Chester."

In another newspaper article, Mr Randles described a roadside well:

> *One went down two or three steps to reach it and scooped the water by means of a handy iron dish. The well was known as the Iron Dish Well, while the farmhouse behind became Iron Dish Farm. The old house has been long replaced by a later building and the old well is gone, being covered over and its water piped into an adjacent brook.*

Dipping Well at Woodhouse Farm

The account tells of a gypsy woman who had stopped for a drink at the well. She told Randles' aged father

that it was a blessed spot and that no one ever died in this place. It appeared true in that all former residents had died elsewhere, as did his father when his time came.

The Pearl of Wiggan

The well sounds very similar to another dipping well that can still be seen in good order just round the corner at Woodhouse Farm.

Frodsham

Frodsham lies on three distinct geological fault lines: the Frodsham Fault, the Weston Fault and the Overton Fault, which probably explains the large number of significant springs and wells in the area. *The Universal Directory of Great Britain*, 1791, says of Frodsham: "The town is well supplied with many excellent springs of good water. One in particular called 'The Pearl of Wiggan' …distils from the face of the rock in drops from every vein, resembling the purest gems".

The 'Pearl of Wiggan' on Howey Lane is a Regionally Important Geological Site (RIGS) as the rock strata are exposed and can be clearly seen with the Tarporley Siltstone, the narrow wet band, lying on top of the Helsby Sandstone. The siltstone was formerly called 'Keuper Waterstone' because the mixture of permeable sandstones and impermeable shales causes any ground water to seep from the exposed rock faces with a suitable drip. 'Wiggan' is a dialect word for the rowan tree or mountain ash. The brook running from Castle Park starts from about here, runs through the gardens of nearby houses and then through the park to Fountain Lane and onwards.

There are a variety of interesting accounts associated with Frodsham water supplies, particularly around Castle Park, that can be read in *'Water Supplies, Castle Park'*, published by F W Clarke in the *Frodsham History Society Journal* Vol 22, Autumn 1996.

Foremost among these supplies is The Synagogue Well which is thought to be ancient. The name 'Synagogue' is perhaps a corruption of 'St. Agnes'. F H

Synagogue well

Crossley's *History of Cheshire* mentions "dressing the Synagogue Well of St. Agnes at Frodsham". A poem by James Crossley in praise of the well is included in *Ballads and Legends of Cheshire* by Egerton Leigh published in 1867 and can be viewed online. *The Universal Directory of Great Britain*, 1791, also mentions the well: "In the west end of the town is an excellent cold bath which discharges 1700 gallons of water in a minute". This seems incredible but it certainly was a very powerful spring. The 'cold bath' was about 8 metres long, 3 metres wide and about 3-4 metres deep into the sandstone, the spring emerging from a fissure at the bottom. According to Latham's book on Frodsham there had been steps into the well and it was used for total immersion baptisms and a curate, Rev. Shadwell who was an inveterate bather, used to take a dip there every morning even when it was frozen over. When Mr. Clarke cleaned out the Synagogue Well on two occasions between 1917 and 1924, he discovered copper and silver coins at the bottom, suggesting that it was used as a wishing well.

The water was reputed to be very cold and pure. Beaumont's *History of Frodsham*, 1881, claims that the spring "sent forth waters as copious and as limpid as that once frequented by Numa" and claims were made that the water had medicinal qualities. In 1811, the *Chester Chronicle* reported that "a young man called Bancroft, in addition to several others, was lately cured of a violent rheumatism, by bathing there". Unfortunately, the well held an attraction for people with suicidal tendencies. Following a suicide in 1935, the decision was made to fill the 'bath' with stones. It remains dry and the spring almost non-existent due to the lowering of the water table. Any water still flowing, together with the water from the brook from Howey Lane, still passes down the Wash and goes underground at the 'Sinks' to pass under the A56 and to the Marshes.

A well called Hood Well is also mentioned in Frank Clarke's article on water supplies in Castle Park. This was a very pure supply which served the lower part of the house and a tank in the gardeners' yard which fed a public fountain. The term 'Fountain' was rather a grand name for this public supply. Clarke's sketch

shows it as little more than a pipe feeding into a sandstone trough. It was presumably sited outside the grounds near the railway track on Fountain Lane, hence the road name, and there is a well shown at that spot on OS Maps of 1882 and 1911. It is understood that there was also a public standpipe opposite Glebe Terrace just across from the gardeners' yard which would have been easily supplied from the tank there.

The 1911 OS Map shows another well near the Fountain Lane entrance to Castle Park. Clarke states that another tank at ground level about 15 inches deep stood "where the doors of the old Fire Station once stood". It was full of running water for horses and cattle to drink and for people to carry away to use for domestic cleaning.

Kingsley

The 1875 and 1910 maps of Kingsley show a well said to have been known as 'Boggart Well' near Dark Lane. The remains of a well can still be seen at the top of a field next to a tree-stump. It became known as Boggarts Well locally in order to keep other people away as a boggart is a ghost.

Boggarts Well, 2015

The main source of water in Kingsley used to be a stream known as The Nab (or Knabbe) stream. Nab is a Saxon word for a hill or mound. The stream runs down from Hatchmere Lake, passes through the valley behind Crofton Lodge, crosses Guests Slack and continues downhill through the Dark Lane valley to emerge at the junction with Top Road at a place known as

'Brooksfield'. It is culverted at the lower end where it passes through several gardens, but is open in places which may have been the positions of dipping wells. At Brooksfield, the stream is culverted under the road and passes through several more gardens before emerging at Chapel Lane where it is again culverted under the road and continues alongside the road towards Crowton. The owner of the land here recalled that the well was used by carters to water their horses, as it was the only way from Norley Road down to Crowton at a time when Top Road did not exist. Stone from Finneys Farm quarry was also taken down this road.

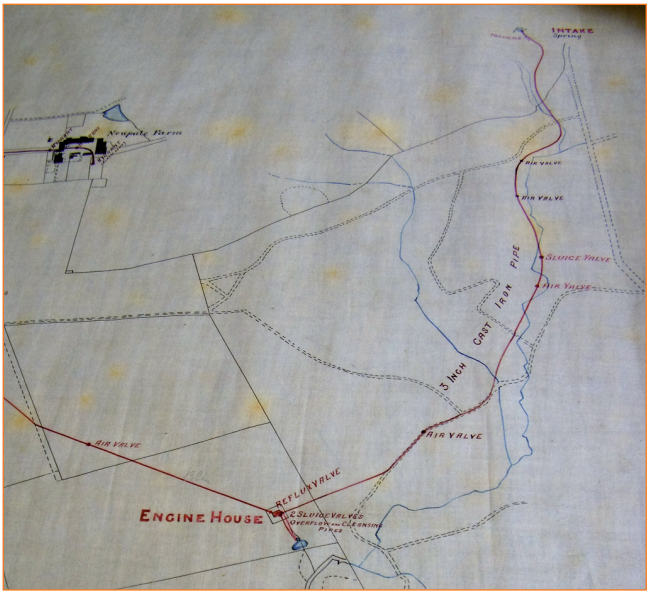
On Fryers Lane, off Waterloo Lane, a well is shown on the 1875 map but not on the 1910 map, in a small group of trees beyond the end of Fryers Lane. This is shown as Seedings Well. The Fryer family remember playing there, but not the well itself. It was a wet area, as a stream ran through it, coming from the higher ground by Ravenslodge Farm. They also remember Wanlows Well as a relative used to call at the well with his horse and cart each morning to get water.

Mouldsworth and Ashton

The village of Ashton Hayes had its own supply of water many years before neighbouring villages. In his book *Ashton Hayes – Glimpses into the Story of a Cheshire Village*, published in 1994, Samuel Jackson describes the problems that Ashton and surrounding areas had in the past with their water supplies. Various wells and pumps were dotted around the parishes but these frequently dried up or were badly polluted. Plans were put in place to draw water from Woodside to supply Ashton Hayes and the village and a scheme was completed in 1897. The water was supplied from 3 springs at the foot of a hill called Willowbanks through concrete conduits to a reservoir presumably at Ashton Hayes. The reservoir was a substantial structure of brick and concrete.

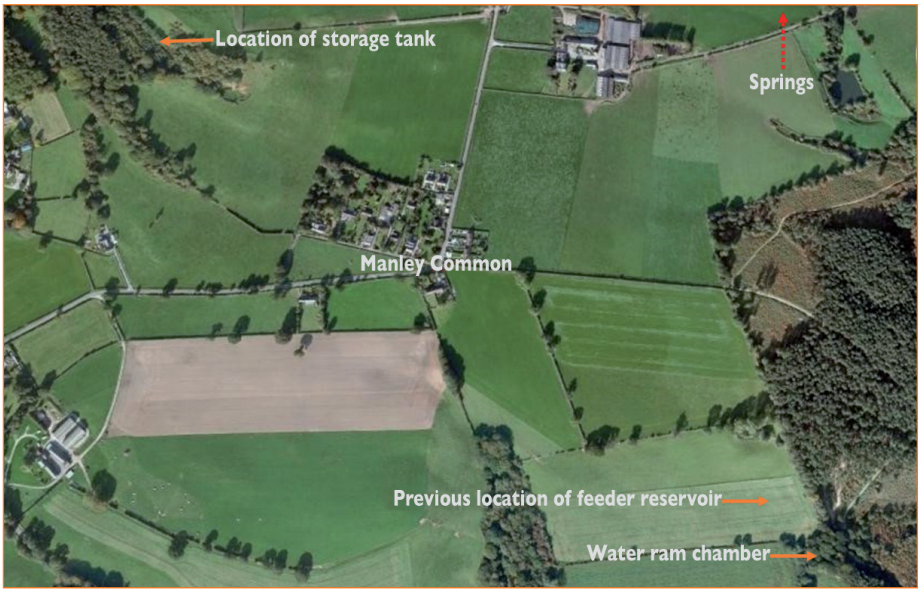
In 1927 the West Cheshire Water Board Act passed through parliament. The water pumping station at Poplar Grove drew water from 310 m below ground level and delivered water to the reservoir on Simmonds Hill in Manley. This reservoir has a capacity of 8-million gallons and was completed in 1936. From the reservoir water can be delivered to the surrounding area and to Ellesmere Port and around the Wirral. The water treatment plant was the first fully automatic Zeolite water softening plant to be used by a water company in Europe.

Manley



Manley Estate Water Map from about 1906

Many villages developed water systems and Manley is a good example of how a community changed over the years. The history of Manley is closely linked to the major quarries on Sugar Lane and on Simmonds Hill which provided employment and led to the development of many of the properties in the area. The community could not survive without reliable water supplies and a number of springs and wells are found around the parish. Much of Manley was dependent on water from Swans Well located to the rear of the present day



Locations of the Manley Estate water supply

Rangeway Bank Cottages. In the past the spring was marked on maps with a small pond adjacent to it and a track-way to the well. Whilst it is marked as a 'well 'it was more likely to have been a shallow spring but there is no evidence of the source today.

As well as local supplies serving particular properties, the parish of Manley is known to have been served by a water ram system (see later). The supply was situated to the south-east of Manley Common in fields now belonging to Robert Challenor. The water was pumped to a storage tank which still remains on the brow of the hill to the north-west of the common. A Manley Estate Water Map (DWW/1/319) of around 1906 shows the supply was from a spring at approx. SJ 531725, passed in cast iron pipes to an engine house at approx. SJ 526727 and then pumped by a hydraulic water ram system up to a wrought iron tank on Hey Cliff, Simonds Hill before distribution around the area. The source spring is adjacent to where the medieval glass works were located. Water is not required for the glass-making process itself but a supply of water would have been required for the workers so the springs may have been actively used for many years.

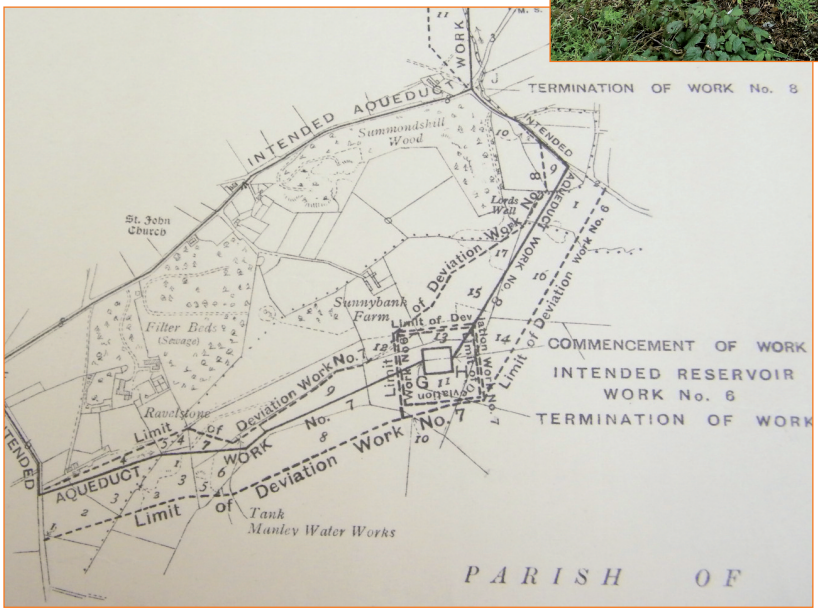
The Manley supply was certainly in use in 1912 when the Manley Agricultural Estate was put up for sale. The sale details shows that Lot 35, Rangeway Bank Farm, had a clause stating a right of way existed across the land to the Pumping Station which was not included in the sale. Also Lot 36, Sunny Bank, includes reference to a right of way to the Water Tank.

An article in the *Chester Chronicle* 24 April 1915 questioned the high costs associated with water from the Manley Waterworks. By 1934, Manley was in a very bad state for the supply of water as there was insufficient water to meet demands, especially from the dairy industry. In 1938 the old Manley supply changed from a water ram system to engines because the ram system wasted too much water. In 1940 the Old Manley Water system was condemned on grounds of pollution by the District Medical Officer.

The picture overleaf was taken in about 1995 when the remains of the feeder reservoir were still to be found in the field to the left of the shed. There was a water rill to the right of the shed. These features were removed sometime later and the field levelled.

Remnants of the Manley Water Supply taken in about 1995

The brick structure containing the pressure vessel of the ram is still present on the edge of Delamere forest.



West Cheshire Water Board Plans from about 1935

The West Cheshire Water Board was considering a supply to the area including Manley in 1927 (QDP 916). The map **s**hows the intended installation of a reservoir on Simmonds Hill, Manley with the supply routes to adjacent villages shown.

The previous Manley water storage tank is shown on the map as well as a sewage farm by Ravelstone. In 1935 there was a public enquiry (LRR/26/9) regarding the provision of mains water from Lake Vyrnwy to North Cheshire including Manley and surrounding areas. As ever, there were objections to the cost of the scheme.

Cuddington & Sandiway

In the eighteenth century that part of Cuddington and Sandiway closest to the present station and crossroad on the A49 was supplied with water from the unappealingly-named Fleamoss Pits, probably a corruption of 'Flamons Pitt' as it appears in the local tithe map. A small part of the pit is still visible from Cheryl Close, just north of the station, but the larger part was eradicated by the building of the railway and sidings. Other wells, which were probably fed from this pit, existed in nearby properties.

A little further away, in a field north of Norley Road was Cranberry Well. Aerial photos suggest that the well lay in the middle of the field in a saucer-shaped depression. The name suggests that this may have been flooded to grow cranberries. Cranberry 'hummocks' can be found on Abbots Moss in Cheshire but the closely related American species is used for cranberry sauce these days. To the immediate south of the field on Norley Road is a development known as 'The Old Orchard' so perhaps this area was used for a variety of fruit-farming? Nearby on Mill Lane there are two cottages named Barberry and Rowanberry Cottages. At The Small House nearby there is a pump house and well in a paddock (see later) that may have drawn water from the same supply.

Well in Old Mill Meadow, 2014

Until very recently there were the accessible remains of a well beside

Footpath 22 in Old Mill Meadow: a circular stone base and two sets of three concrete steps (one broken) remained and water could be heard dripping below. By 2015, however, the landowner had removed the steps and placed two massive concrete slabs over the well, presumably for safety. The higher parts of the village beside Cuddington Lane were also supplied by wells and pumps but none are visible today.

Eddisbury

Close to the Eddisbury hillfort and adjacent to the former Roman Road is a spring forming a waterfall cutting into sandstone rocks, forming a semicircle of water-eroded rock. Water is fast flowing in wet conditions and descends into a small pool, then a marshy area before it disappears. The area is in a steep ravine. Being very close to the old Roman Road and nearby Hillfort this could have been a good water supply for passing traffic.

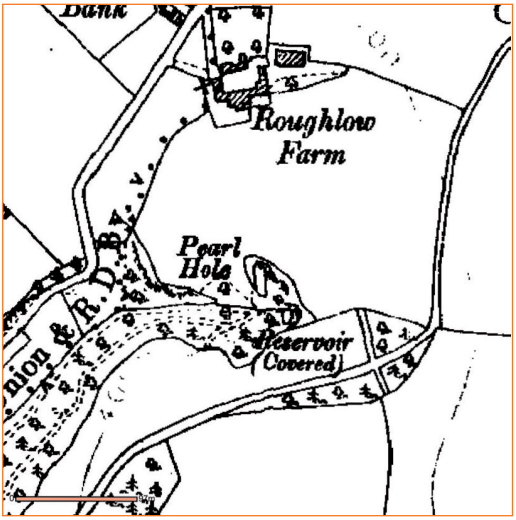
A Roman Watering Hole?

Kelsall

An early water supply for Castle Hill Farm consisted of a large, brick-lined well of about 3 metres diameter now capped with concrete. A stone dropped through a small hole in the concrete cap took about 6 seconds to reach the bottom! The brickwork looks Victorian and is in good condition and the current owner believes the well was dug by Welsh miners. Nearby is a winch and a large underground brick-lined tank, and it is thought that originally, but not now visible, there was a windmill to draw water up to the tank. Inspection covers of cast iron on the site were from a well-known late nineteenth century builders' merchants, G.Farmiloe of Smithfield, London.

Willington

Willington is an ancient settlement and is mentioned in the Domesday Book as 'Winfletone' which means 'the farm of Winflaed', an Old English female name. Nearby are Roughlow, an ancient burial mound or 'low', and the Iron-age hillfort



Location of the Pearl Hole

at Kelsborrow, suggesting that there was very early occupation of this area. A key water supply to the area must have been Pearl Hole, an ancient spring in Willington marked as such on Victorian maps. It is situated at the top of a long valley or 'clough' leading from Roughlow Farm down to Willington Hall.

Research has found that many ancient water features have the name 'pearl' and its origin is Old English 'purl' or 'pyrle' which means to burble. It is therefore onomatopoeic for the sound of a spring. The Old English word 'hole' in this context means a hollow or cave. The name is therefore 'burbling hollow': an apt name for a spring. The spring is still in use but is difficult to access. It has a reservoir attached with a blue corrugated iron cover. It is currently part of the Willington estate owned by the Tomkinson family who owned Willington Hall. It is registered as a bore hole by the British Geological Survey and is believed to have until recently provided water to houses in the village including Willington Hall.

The Pearl Hole

Utkinton

The small rural village of Utkinton was in late Elizabethan times the centre of a huge tourist invasion attracting over 2000 people each day. The reason for this

invasion was a pamphlet produced in London in 1600 which described the *Newes out of Cheshire of the new found well* .The pamphlet described the curative properties of water from Whistlebitch Well on the southern edge of the Delamere Forest called Primrose Hill. It described "a prettie purling fountaine" where a person "by drinking washing and accomplishing what was commaundered, in verie short time hee was of his Ague thoroughly cured". The news spread rapidly and about 40 cures were described from all over England and Wales. The cover of the pamphlet shows an illustration of the area around the well.

The New Found Well

The water was said to taste of liquorice and was claimed to cure everything from colds, colic, ruptures, sores, wounds, swellings, ulcers and aching joints, not to mention curing blindness, deafness and lameness and much more. However the success of the well led to its downfall as it was located in Elizabeth I's deer forest and the influx of visitors disturbed the deer. Within 3 years Master Done, the Forester Royal of Utkinton Hall had closed the forest to all-comers.

It is probable that the well had an earlier history as there are descriptions linking it to Queen Ethelfleda of Mercia in the Saxon period when it was known as St Stephen's Well, and was probably revered for its religious connotation rather than its curative properties.

The name 'Whistlebitch' was acquired around 1813 as it was said that the water

Whistlebitch Well in 2015

whistled as it came out of the ground but this cannot be verified. On an earlier map it appears as 'Twisel-bache' meaning the 'forked stream'. The well fell into disrepair and today it is simply a muddy puddle but water still runs into a reservoir a few yards below and until recently was used by a nearby house.

Tarporley

Situated on the 17th hole of Portal Golf Club in Tarporley is Adam's Well which once had an inscription reading: "Tho' of this ale, you drink a pail, you'll never ail". This could be a reference to the colloquial saying that Adam's Ale is water. The golf course is on ground which was once part of the estate of Utkinton Hall. The hall originated as a large manor house for the Done family, hereditary wardens of Delamere Forest, and is now a farmhouse. Later Arderne Hall was built adjacent to the current hotel. Ormerod's *History of Cheshire*, published in 1882, comments "Within the last few years an extensive and handsome mansion called Arderne Hall has been erected at Eaton Bank. It is the residence of the Earl of Haddington". The house was demolished in 1958.

Salter's well was used up to the end of the eighteenth century by Salters from the salt towns of Northwich, Middlewich and Nantwich to water their horses whilst passing through Tarporley on their way to Chester and North Wales. The supply was renovated by Vale Royal District Council in 1983.

Salter's Well

Beeston

The well in Beeston Castle

Probably the best known Cheshire well is that within the inner bailey, at the top of Beeston Castle.

It is the deepest historical well in England and cuts down through the sandstone to the water table on the plain below, level with the Beeston Brook. It is over 124 metres (350 feet) deep with the first 59 metres (192 feet) of the shaft being about 6 feet wide and lined with masonry. Below this the shaft is carved into solid rock. This masterpiece of medieval engineering must have taken several years to dig. Attempts have been made to clear the well, in 1842 and 1935. These proved inconclusive although the latter exploration revealed some interesting facts. The explorers found entrances to what might possibly have been three passages, but these intrepid men only reached 105 metres (339 feet) and they believed that there was a fourth undiscovered passage at about 125 metres (350 feet). These passages are sometimes referred to as Sally Ports and could be used as secret tunnels for escape or resupply of the castle in the event of a siege.

Much early work on the castle's medieval history was concerned with the long-standing myth that Richard II (r.1377–99) placed treasure in the inner ward well but to date nothing has been found. In 1973 there was an investigation by a consortium of business men but there was no report of the treasure being found. A group from the White Hart Exploration Society of Bristol attempted another exploration in 1976 but with no sign of the gold. A camera lowered down the well in 2009 showed the shaft to be blocked at about 85 metres down.

Spurstow

This area was historically important for salt extraction and Spurstow, on the eastern flanks of the Ridge, has its own eighteenth century brine spa known as Spurstow White Water or Spurstow Spa. There is still a spring which appears in a field forming part of the rising ground behind the Peckforton Hills. There was formerly a considerable pit or hollow at the rise of the spring for bathing but it has been neglected and is now bog. The following information is taken from the Cheshire

Historical Environmental Record (HER Numbers: 308/1, 308/2, 372).

> *Spurstow Spa water was an abundant spring in a field on rising ground, in a stratum of red and white clay, which has been penetrated to a depth of 3 m. Formerly a considerable pit or hollow at the rise of the spring for bathing, but silted up through neglect. About 60-80 years ago, this water was in considerable demand for the convenience of bathing for the cure of various disorders. Taken internally as well. Slightly sulphurous smell.*

The nearby Bath House is a farmhouse dating from the late sixteenth century. It is a timber-fame building built on a sandstone plinth. The house was reputed to have been used to accommodate visitors to the salt spring and the historian Ormerod reported that "crutches and other memoranda of its cures were deposited in the farmhouse".

The spa still existed in the mid-nineteenth century, when it appeared in the *Topographical Dictionary of England* (1848) by Samuel Lewis, who wrote "A mineral spring called Spurstow Spa was formerly much frequented, and baths were erected by Sir Thomas Mostyn, for the accommodation of visiters; but the waters are not at present in repute."

Horsley

Horsley Bath

At Bath Garden Cottage, Horsley Lane, there is a Grade II listed bathing pool and well. It consists of a red sandstone square pool with a flight of stone steps to one corner and a spout that empties into a dished bowl diagonally opposite. To one side of the pool is the well, which also has a set of steps leading down into it. The bath was a spa which developed at Horsley Spring. The information below is taken from HER Number: 1737.

Red sandstone ashlar rendered with cement, paved sandstone surround. Square pool with flight of stone steps to 1 corner and diagonally opposite a spout letting water fall into dished bowl. To one side, amidst rockery of roughly hewn stone, is the rectangular date-stone which has moulded border. To 1 side of pool is the well, of similar plan & has set of steps leading down into it. Bath was an 18th century spa which developed at Horsley Spring. Mineral spring rises from under 1 of the strata forming base of Beeston Castle Hill, c.0.25 mile from Horsley. It is not a surface spring, but pushes through very porous red sandstone. Water rises in 10 places, in a narrow lane. When fresh, it is clear, sparkling & refreshing, with slight smell & strong chalybeate taste. Bath alleged to be site of Roman bath but no evidence. Site once provided water for Peckforton Estate, but now deteriorated and water contaminated.

Chalybeate means that iron is present in the water at a sufficient level to affect the taste of the water.

A datestone has an inscription from 1684 and the *The Spectator* of 22 August 1903 contains a letter describing Horsley Bath and the inscription:

At the foot of the Peckforton hill rises a picturesque spring which goes by the name of Horsley Bath. The so-called 'bath' supplies the house with excellent water. Indeed, a Cheshire doctor once told my father that he and some medical friends, after careful analysis, found the water of that spring to be the purest in England, not excepting the water of Malvern. Of course this judgment is not to be taken for gospel. Nor, indeed, should I rely implicitly on the inscription with which I am now concerned, and which bears date, I think, sometime in the seventeenth century: "Obstructum reserat, durum tent, humida siccat, Debile fortific.at, si tamen arts bibis." As a boy, I was puzzled to make out how water could "dry up what is moist." But that once famous scholar, the Rev. W. E. Jell, explained to me that humida must here mean "humours"; and, indeed, it is plain that the hexameter altogether refers to bodily ailments. It thus appears that the advertising couplet might have been written in praise of any spring of pure water.

It would seem that letters to the papers were a lot more erudite at that time! However, the author of the letter did get the inscription wrong. It should read: "*Sanituti sacrum obstructum reserat durum terit humidia siccat debile fortificat sitamen arte bibis*" which translates as "It clears obstruction to health, it softens rigidity, it makes strong what is weak if you drink of this water in faith as medicine". The inscription was carved in 1424 and up until the twentieth century the bath was a popular visitor attraction. In August 1757 it was visited by Rev. William Cole who, being tempted by the "clearness and limpidness of the water

could barely stay in one minute, during which time the coldness of it was so extreme , that trying to speak, found it out of my power ….". A description and further details are given in *The History of the County Palatine of Chester* by J W Hanshall, 1823.

Droppingstone Well, 1910

Raw Head

Immediately north of Raw Head is the Droppingstone Well. A photograph taken in 1910 shows the well in use by locals. Nowadays the well is surrounded by trees and scrub but is accessible by a wooden staircase. The flow of water is very small now but still in use by a property lower down the hill. Maureen Williams (nee Sheen), a resident of Harthill was born in 1945 and remembers going to the well to collect water.

Broxton

The *Local History of Broxton, Duckington & Harthill* (2004), written and researched by Wendy Bawn, Rebecca Dakin, Carol Shadbolt and edited by Helen Bate describes the area around Broxton which once had many wells and springs from which the local people drew their water. Often, when water was scarce, new wells would be dug.

In times of drought, new wells were dug by local 'pump well sinkers'; alternatively, poorer cottagers could buy water by the bucket from the local water carrier. Finding suitable water supplies for communities could involve a variety of expertise. Sometimes it was as simple as buying water from a carrier. Margaret Cox remembers Mr Thomas (Toby) Jones of Yew Tree farm, a smallholding now known as Appletree Cottage, who was a water carrier in the 1920s and 30s. He would sell water by the bucket

Other techniques made use of water diviners. Mr. B. Tompkins a water diviner from Chippenham paid a visit to Broxton for the purpose of searching for water

in the neighbourhood of Broxton Old Hall. After an hour working with the aid of a small whitethorn twig, Mr.Tompkins hit a spot near a cottage on the hill which he maintained was the source of a stream 120ft. deep which would yield 5,000 gallons of water a day.

Wells were dug by the 'pump well sinker'. One of these was Jack Edge of Broxton. This extract from the Broxton and Bickerton W.I. Scrapbook 1951 [quoted in *Cheshire Village Memories* Vol I by Cheshire Federation WI] describes him and his work:

> *The late Mr. 'Jack' Edge was the pump well sinker to the whole district, including the estates of Cholmondeley, Carden and Bolesworth. It is interesting to speculate that the profession of the late Mr. Edge was, in all probability, the result of his gift as a water diviner. After the site had been determined, the well sinker's procedure was to drive a stake into the ground and with a rope mark out a circumference. The services of a well sinker were, of course, much sought after, and his importance to the community was very great, but now the work of well digging has almost died out.*

The provision of piped supplies was not always welcomed. In May 1912 an item on water pollution in the Scrapbook read:

> *It is the unanimous desire of this meeting that seeing that no complaints of an inadequate supply of water have been made, so far as the meeting is aware of nor have we suffered from epidemics, or anything of a serious nature, we are greatly surprised we should be asked to consider any scheme as suggested by the District Council. Further, we do not feel that such a scheme should be forced upon us at all.*

The discussions considering a piped water supply continued for 21 years before the Parish minutes showed a change of attitude. Mr. Fred Stant said that the fire at 'Bay Bush' and the lack of mains water for the Malpas Fire Engine encouraged the Township to consider installing this utility. On 10th May 1935 the Parish Minutes stated "The question of the proposed scheme for a water supply to the Township was considered ...and it was deemed advisable to convene a Public Meeting".

A few metres west (outside) of the current Broxton parish boundary watercourse lies Holy Well, associated with Holywell Farm, and on later maps Holywell Gorse. The 1836-51 Tithe Map appears to show the stream running to the west of the

well's position, not east as it is now. It is not known whether the well was a boundary marker or what is the significance of the word 'holy' in this context.

Ancillary features

Shaft on Simmonds Hill

There are a number of features along the Ridge that, to the casual eye, appear to be wells but may, in fact, be something else. Copper has been mined on the Ridge, both in pre-history and in more recent times. We know that there was metal working at Beeston during the Bronze Age and it seems likely that copper was mined in the vicinity at that time. However, the only copper mining for which there is clear evidence is much more recent and was centred on Gallantry Bank at Bickerton in the eighteenth and nineteenth centuries. It is possible that one or two supposed 'wells' found elsewhere on the Ridge may actually also be prospectors' shafts sunk in a search for seams of the valuable metal. Two that seem to be very similar in character are on Simmond's Hill, Manley and at Merrick's Hill, Delamere. Both shafts are cut into the natural rock without lining. Both are about one metre in diameter and both lie near a geological fault or boundary. As the Merrick's Hill shaft is located close to the mediaeval 'Chamber in the Forest' and the Iron Age Eddisbury hillfort, it has long been thought to be a well for one of those settlements. It is much harder to believe that the Simmond's Hill shaft is a well as it is adjacent to an eighteenth century quarry and quarry waste has been dumped right beside it, making it unlikely that it served as a water supply to the quarrymen.

Harthill drinking fountain

In addition to looking at the wells and springs on the Ridge it is important to consider other water related features. We tend to overlook the importance of water troughs for livestock and drinking fountains along the byways. An excellent

Drinking fountain, Kingsley Road

example of which is found at Harthill Boys and Girls School where there is a water storage tank behind a public drinking fountain in front of Harthill school , later shown as a well in about 1910. There is a carved coat of arms above the drinking fountain and a good sandstone facade as a monumental masonry surround for the fountain.

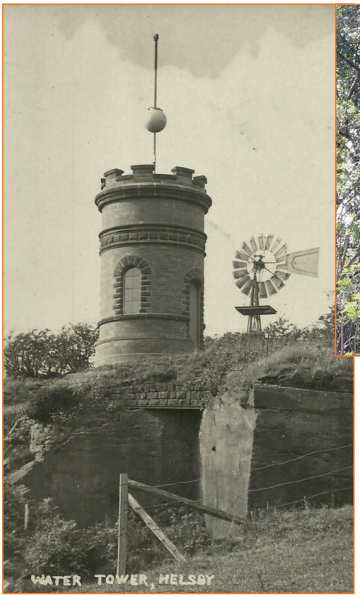
At Newton Hall, Kingsley Road there is a small lions-head casting fitted into the wall on the roadside below the waste land. Water used to flow continuously from a pipe fitted in the lion's mouth into a very long sandstone trough lying next to the wall. This was used to water horses as they went along Kingsley Road. The water level in the waste land has been significantly reduced and no longer flows through this lions-head and the trough has gone. Above the lions-head casting are some words inscribed into the sandstone wall but the ivy that has covered the wall means the inscription cannot be read.

Water tower, Eddisbury Hill

Water storage towers are spread around the area to maintain a sufficient pressure head for water delivery to the neighbourhood and a constant supply in case of mechanical breakdown of pumps. Examples can be seen at Eddisbury and Pale Heights.

Water tower, Pale Heights

In Helsby in Feb 1896 James Taylor was complaining that the water supply in his well was failing and wanted to be joined to the mains water that the Helsby Water Company had on Chester Road. The *Cheshire Observer* (11 April 1896) said



Helsby water tower, about 1896

Helsby water tower, 2015

that the Water Company had laid the mains as far as the Railway Inn and provided a free supply to the parish pump. A 200 feet borehole would provide the water. A reservoir of 30,000 gallon capacity was placed on the hill by the powder magazine which saved the constant working of the machinery and held sufficient water for 2 days in case of accident.

Netherton Farm pump (not in situ)

Having water in a well is one thing but getting it to consumers requires additional equipment. This may be as simple as a yoke and buckets, or a windlass and bucket, to get water from a well, or a manually operated piston lift pump, or a pump that could be driven by water wheel, windmill or 'water ram' system. Later pumps were driven by diesel engines or electricity.

At The Small House, Mill Lane, Cuddington, there is a pump-house and well located on the western down-slope of the paddock, just above a stream that forms the present boundary with the

'Merlewood' property. The well is brick-lined and well preserved with a water level about 2 m below the surface. The pump-house still contains the working parts of a pump, heavily corroded but still recognisable.

The pump seems to have made use of a small overshot water-wheel. It seems likely that this spring was connected in some way to Cranberry Well in an adjacent field. It is not clear how the pump-house and the well relate to each other. It may be that the well was dug at an earlier time in order to supply the properties that subsequently became The Small House, and the pump-house was built to supply Merlewood, although the brickwork in each looks contemporary.

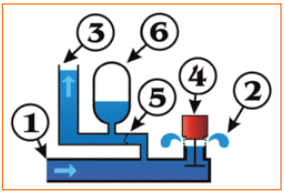
The pump-house, The Small House (photo courtesy Derek Hastings)

Ram pumps have been around for many decades and are popular for two main reasons: they need no external source of power as the force of moving water gives them the power they require, and they are extremely simple, with just two moving parts. The history of the water ram system can be traced to a Cheshire inventor. In 1772 John Whitehurst of Cheshire invented a manually controlled precursor of the hydraulic ram called the 'pulsation engine'. The first one he installed in 1772 at Oulton, Cheshire, and raised water to a height of 16 feet (4.9 metres). He did not patent it, and details are obscure.

The first self-acting ram pump was invented by the Frenchman, Joseph Michel Montgolfier (best known as a co-inventor of the hot air balloon) in 1796. His friend Matthew Boulton took out a British patent in 1797. The sons of Montgolfier obtained an English patent for an improved version in 1816, and this was acquired, together with Whitehurst's design, in 1820 by Josiah Easton, a Somerset-born engineer who had just moved to London. Easton's firm, inherited by his son

James (1796–1871), grew during the nineteenth century to become one of the more important engineering manufacturers in the United Kingdom. They specialized in water supply and sewerage systems world-wide and a number of their installations still survive to this day.

A simplified hydraulic ram:
1. Inlet — drive pipe
2. Free flow at waste valve
3. Outlet — delivery pipe
4. Waste valve
5. Delivery check valve
6. Pressure vessel



A ram pump uses the momentum of a relatively large amount of moving water to pump a relatively small amount of water uphill. To use a ram pump, you must have a source of water situated above the pump. For example, you must have a pond on a hillside so that you can locate the pump below the pond. If the pump is 10 feet below the pond, the delivery pipe might carry water up to 100 feet above the level of the pump. A ram pump wastes a lot of water. Typically, only about 10% of the water it consumes actually makes it up the delivery pipe. The rest flows out of the pump as the water builds momentum.

Development of businesses

Water is needed for human consumption but is also essential for the development of businesses. Cheshire has long been associated with agriculture and, in particular, dairying and the production of Cheshire cheese. Dairying requires large amounts of good, clean water and many supplies were developed to ensure a sufficiency of safe water.

Water has also driven other commercial operations. Many brew-houses and inns were dependent on good water such as the Volunteer Inn in Mill Bank Cottages, Frodsham which closed in 1914. The excess water from Synagogue Well, Frodsham originally flowed down a Wash parallel to Fountains Lane and joined the brook that ran along Main Street, which then flowed to the Marshes down Marsh Lane. The water from the Wash would have also fed into the mill pool for the corn mill at Millbank and supplied water for the Tan Yard at Brook House. The tanning industry in the early 19th Century was a dirty, smelly, noxious

occupation and tanneries were usually situated on the outskirts of towns. Not so in Frodsham, where the tannery was just off Main Street near the centre of population. The Frodsham Tannery was located here to make use of the water flowing from the Synagogue Well. Large amounts of water are needed to wash the hides of fat, blood and dirt and perhaps salt from the storage barrels. Water filled the pits where the hides were immersed in slaked lime and vegetable matter such as oak chips, the tannins of which penetrated the skins making them more flexible and waterproof. How long the Frodsham Tannery had been in operation is not known but in 1813, when William Grice christened his youngest child he described himself as a farmer and tanner in Frodsham. The coming of the railway in the late 1840's would have destroyed the Tan Yard which fell in its path. In 1859 Brook House was put up for sale and Lot 1 consisted of house, shop, bake-house, granaries, warehouses and cottages. The auction details added "the property which adjoins the railway is particularly well adapted for a brewery or tannery, there being an abundant supply of good clear water direct from the springs".

Frodsham Mineral Water Company

Also relying on good water in Frodsham were Ellison and Corker, brothers-in-law who founded a mineral water company there in 1888. Their premises were behind Mill Bank Cottages, off Main Street, and were renamed Frodsham Mineral Water Company in 1912. Many of their old bottles with 'glass alleys' in the neck still remain.

The man in the photograph holding the horse is Joe Ellison, a son of the founder who worked for the company in 1909, and the boy on the cart was Billy Booth. The company was still listed in the 1939 Trade Directory.

The plentiful supply of water at a constant temperature of 54° F. was an essential requirement for the manufacture of gutta percha insulated wire. C.L. Banbury, in

his *History of Cable Making at Helsby* writes that in 1886, The Telegraph Manufacturing Company Limited (later B.I.C.C.) moved its operation from Neston to Helsby because of the good rail links. The Company had its own wells to supply the needs of the factory, but when the water supply of the village was compromised by pollution and the construction of the Manchester Ship Canal, a private company, The Helsby and District Water Company was formed in 1895. James and George Crosland Taylor, founders of the Telegraph Works were also directors of the Water Company. Despite competition from a rival scheme operated by James Brandreth, using a well by Helsby Quarry, The Helsby and District Water Company laid on mains water to the whole village using the supply from the well in front of the Cable Works. Pumping started in 1896 and by 1900 most of Helsby was connected. Helsby and District Water Company was wound up in 1905 after being bought by Runcorn Rural District Council.

Draining the Hills

This chapter has reviewed the ways in which water was found and used over the years. Water is essential to life and without it we cannot exist. Our ancestors showed skill and ingenuity to find supplies of water so they could live in particular locations. The landscape, habitations, farming and industry would have been very different without adequate supplies of water. But, our demand for water of a high quality has changed considerably over the years and it can be seen from the previous sections of this chapter that communities changed from reliance on simple local sources to community supplies. This has resulted in water companies sinking boreholes throughout the Ridge and abstracting large quantities of water, which has had an effect on many of the historical supplies which people once relied upon. The British Geological Survey offers a free search of over a million borehole records. The BGS Borehole record viewer offers direct, online access to the National Geoscience Data Centre at www.bgs.ac.uk/data/boreholescans/home.html.

Bulkeley Hill tramway. This view is looking downhill from the top of the line.

One example of the large-scale abstraction of water is described. The buildings that can be seen at Fullers Moor, near the main A534 Nantwich to Wrexham Road, house the bore holes and pumps which send the water extracted from below the Peckforton and Bickerton Hills to Stoke on Trent. In 1937 the Staffordshire Potteries Water Board gained authority for the erection of pumping stations at Peckforton and Tower Wood in Cheshire, with a reservoir on Bulkeley Hill, whence the water would gravitate to a large storage reservoir at Cooper's Green near Audley, for distribution to Tunstall and the Potteries. Most of these enterprises were held up by the Second World War and it wasn't until 1953 that the Peckforton scheme and its linking aqueduct to Audley had been completed. There are two boreholes where water is pumped from the Sherwood Sandstone aquifer, which is near to the surface: one close to the Coppermine Inn and the other at Peckforton Gap. There is a holding reservoir at the Gap, from where water is pumped up 110 metres to a covered reservoir on Bulkeley Hill at 210 metres above sea level. From there a 27 inch steel pipe feeds the water under gravity to the reservoir at Cooper's Green, Audley. The Bulkeley Hill railway was the hauled tramway used in the construction of the Bulkeley Hill reservoir and water main, including a massive anti-surge valve at the top of the tramway. There are foundations for a haulage engine at the top of the line. The climb up the track is approximately 105 metres of ascent.

These operations, and similar ones along the Ridge, have taken so much water from the 'sponge' that forms the Ridge that many of the local wells and springs have dried up and are now simply records on a map. Our environment is constantly changing and water shortages are a frequent problem world-wide. It seems likely that we will have to alter the way in which we view our water usage in the future and maybe we will have to develop innovative ways to satisfy our needs just as our ancestors did in the past.

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Leaving a Mark
Rock art and graffiti on the Ridge

From earliest times and across the world, people have felt a need to leave a personal mark on their physical surroundings recording their presence. From the famous cave paintings at Lascaux to the graffiti spray-painted onto modern city buildings, paintings and carvings have survived as a reminder that someone was once there. Whether just the idle scratchings of someone with time on their hands or complex messages intended to communicate with other humans or with spirits or gods, these marks deserve our attention. They are a record of our human story and whilst many people complain, perhaps rightly, about modern graffiti defacing our city walls, art critics, anthropologists and historians recognise that some of today's graffiti may well become tomorrow's art.

Anyone who has walked any part of The Sandstone Trail or explored the many exposed rock surfaces on the Ridge cannot have failed to see carvings by people who have passed that way before. Often it will be initials or a pair of initials with a love-heart suggesting that a tryst has taken place. Often there will be a date and sometimes a more complex message or an illustration. Sandstone is soft and easily carved so the temptation can be strong to take a stick, a stone or a penknife and scratch out a record of a special moment sitting on a sunny ledge taking in a view of the beautiful Cheshire countryside.

Because it is soft our sandstone is easily eroded by the weather and most carvings will barely survive a few decades. However, where there is a cave or overhang or vegetation covering the site, carvings can last longer. With luck they may be buried by deposits of leaf mould, eroded sand and silt, in which case there is no knowing how long they may survive. This chapter is intended to encourage wanderers on the Ridge to look out for interesting examples of carvings, to listen to the voices of the past and read the rocks for what they can tell us about those who preceded us.

Pre-historic rock art

Although pre-historic rock art, both carvings and paintings, are found all over the world, Britain is not often seen as a major location for this art. Certainly very little

Graffiti

Some typical patterns of pre-historic rock art

Palaeolithic art survived the last Ice Age, although recent discoveries at Creswell Crags on the Derbyshire/Nottinghamshire border have been dated to about 11,000 BC. More common are a variety of patterned rock-carvings, dating back to the Neolithic and Bronze Ages in Britain, 4,000 – 1,000 BC, and almost all in the north of Britain. The patterns are varied but they share common themes including cups, spirals and grooves that link or enclose other patterns.

By far the most common and simplest form of pre-historic rock-carving is the cup-mark (or cupule). It is found in quantity all over the world. It is impressive for its ubiquity and yet continues to mystify as to its purpose or meaning. Compare an example of a panel of cup-marks found in the Tsodilo Hills in Botswana and a boulder with a similar set of marks found at Eddisbury Hillfort on the Cheshire Sandstone Ridge.

Cup-marks in the Tsodilo Hills, Botswana

In the pre-historic past the Ridge would have provided a place to live, originally in caves, perhaps, and later in and around the hillforts. The Ridge would almost certainly have been a natural highway for people to avoid the swamps and forests of the lower land. Hunters and shepherds are usually very fit and excellent climbers who tend to select high positions with good visibility from which they can tend their herds or spot wild game. Any pre-historic art may be sought with that in mind.

Cup-marks at Eddisbury in Cheshire

The Cheshire boulder was found in the rubble during an excavation at Eddisbury in 2010. Its exact context is not known but

it seems to have been buried near the eastern entrance to the fort. Dan Garner, the archaeologist who excavated the site writes:

> *The object may have originally been associated with a monument somewhere on the hilltop and perhaps indicates the presence of Bronze Age burials. This boulder represents the first piece of Bronze Age rock art to have so far been found in West Cheshire but it is unlikely to remain an isolated or unique find on the Ridge. (Garner, 2012, 26)*

The boulder can be seen in the Weaver Hall Museum, Northwich. The cup-marks have escaped erosion as the boulder was buried for centuries in the soil. Whilst unprepossessing in itself, it provides an indication of what may be found elsewhere on the Ridge in the future and opens up possibilities for other archaeological finds.

Historic carvings: carved heads and other figures

Sandstone is soft and easy to carve and so the better quality stone has been the chosen material for building and carving architectural features and figures in the region since Roman times and earlier. The walls, columns and quayside of Roman Chester were built of local sandstone blocks and the Grosvenor Museum houses many examples of Roman sandstone memorials and carvings.

On the Ridge there remain examples of one stone-carving tradition that has a pre-Roman origin: that is the carving of so-called 'Celtic heads'. The term 'Celtic' is potentially misleading but it is intended to refer to the people who inhabited the Ridge during the Iron Age (700BC-100AD) before settlement by the Romans. Our local tribe were the Cornovii. We know that to people of the Iron Age the head was a potent symbol as the residence of the human spirit, and the Manchester Museum has a collection of over two dozen ancient carved stone heads and similar objects found across the North West. Whilst dating is extremely difficult, these seem to belong to a tradition that might well stretch back to those pre-historic times. They have certain features in common: "lentoid or spectacle eyes, simple triangular or rectangular nose, and a slit mouth, occasionally with a hole in it" (Manchester Museum Information Sheet, 1987). Sometimes the heads have animal features, particularly rams' horns. Horns may refer to the antlered Celtic god, Cernunnus, and it has been suggested that the Cornovii may have derived their name from him.

Carved head of Cernunnus on the Pillar of the Boatmen, an early 1st Century AD carving found in Paris, - Source: Museum of the Middle Ages, Paris

The heads may have been placed in shrines or at places of spiritual significance such as springs or other natural landmarks. The tradition has lasted well into recent times and, in addition to churches with their gargoyles and other carvings, domestic buildings can still be seen with carved heads above doors, perhaps intended to ward off evil spirits or bring good luck.

Examples of such carvings can be found at various points along the Ridge. Several can be found embedded in the architecture of buildings such as 'The Image House' in Bunbury. This small early nineteenth-century brick-built cottage situated on the outskirts of Bunbury is decorated in an unusual fashion with a number of images carved in sandstone. The most prominent of these are two full-length figures of men on either side of the upper storey and two stone heads used as caps to the porch posts.

Head carved on exterior east wall of All Saints Church, Harthill

The cottage and carvings feature in the 1931 novel, *The Shiny Night* by Beatrice Tunstall. In the novel, the house is built by Seth Shone, a poacher, who is unjustly convicted of murder and transported to Van Diemen's Land. On his return he builds the house and carves images of his enemies, whom he curses: the local squire, the head game-keeper, his cousin who stole his inheritance and the judge who convicted him. Above the door he set "complete with horns and tail, the devil… In one hand, he clasped a knife; in the other, a robed figure symbolical of the law" (Tunstall, 1931, 56). This figure is no longer present but may have been within the novelist's memory. The two heads

The porch of 'The Image House'

on the porch, which according to Tunstall were "two under-keepers", may not be more than two hundred years old but they perpetuate the tradition of carved heads erected to protect a property and ward off enemies.

There are other examples of heads recorded on a cottage in Burwardsley and on a barn in Kelsall (Historic Environment Records: 1741 & 2986) but at the time of publishing these have not been accessed. Another carved face in relief on a block of local sandstone, is thought to have been medieval and was found whilst digging a drive in Utkinton (HER: 2967). It measures 17cms high, has a painted face, oval eyes and a moustache, and is now installed inside the house where it was found.

More mysterious are some badly eroded but still identifiable carved heads on the rocks in Delamere Forest, at 'Urchin's Kitchen', Delamere, and the caves at Beeston and Harthill.

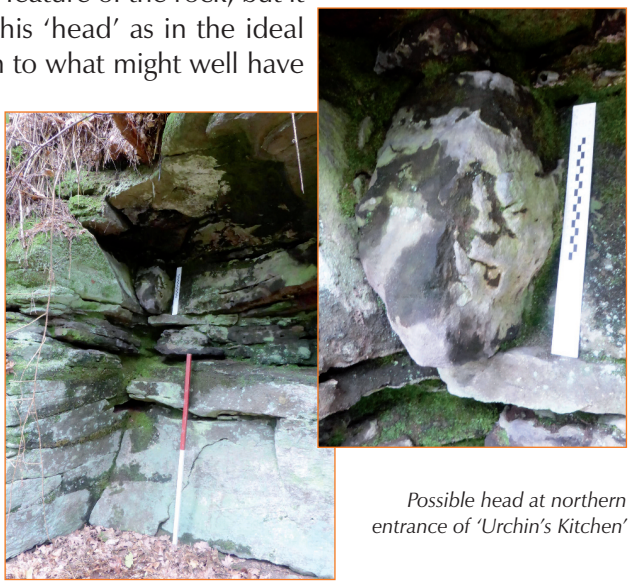
At the northern-most end of Delamere Forest, close to the border with Manley and carved on a rocky outcrop that shows signs of minor quarrying are at least two and perhaps three carved heads. The third of these may intriguingly have been carved upside-down! Turn the book upside down and see what you think.

Carved face in Utkinton

Graffiti

Three heads carved close to each other in Delamere Forest

At 'Urchin's Kitchen' (See text box) there is a projecting ovoid shape that, whilst badly damaged, has all the proportions of a head with ears, nose, eyes and mouth all discernible. Our minds can be deceptive and there is nothing to prove that this is not simply an unusual feature of the rock, but it is very tempting to regard this 'head' as in the ideal location to act as a guardian to what might well have seemed a magical or otherwise significant landscape feature in the Iron Age, set, as it is, directly on a conjectural route between Eddisbury and Kelsborrow hillforts. Visitors must decide for themselves.



Possible head at northern entrance of 'Urchin's Kitchen'

‘Urchin’s Kitchen’

‘Urchins Kitchen’ is a narrow gorge, 20-30 feet deep, cut through the sandstone in Primrosehill Wood, Delamere. It is a glacial drainage channel, formed towards the end of the last Ice Age by melt-water under huge pressure beneath the retreating ice. Old maps show that about one third of the length of the gorge once extended into the privately-owned field to the north but it was used as a farm dump and since the early twenty-first century has been filled in. When humans first began to visit the area they may have regarded it as a convenient cut through the hills or a useful place to trap hunted animals or ambush other travelers. On the other hand, it is possible that because it was a hidden and rather unusual place it might have been treated with caution or even fear. An archaic meaning of the word ‘urchin’ is ‘hedgehog’. In the sixteenth century it was sometimes applied to a person who looked like or behaved like a hedgehog: a hunchback, perhaps, or a goblin. The gorge today, hidden as it is among the trees, can sometimes have a somewhat sinister atmosphere and it is easy to speculate about why people may have given it this name and perhaps avoided it. It lies midway on a conjectural direct route between the Iron Age hillforts of Eddisbury and Kelsborrow and so, whether it was used or avoided, concealed by trees or more visible than it is today, it seems highly likely that pre-historic people would have been familiar with it.

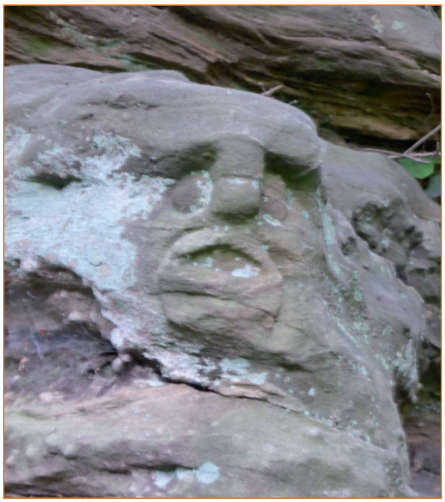
In much more recent times the Kitchen has received its full share of graffiti including some carved by Second World War PoWs. As part of the Ridge, Rocks and Springs project, The Sandstone Ridge Trust conducted an exploratory archaeological dig in the remaining part of the Kitchen in March 2016 and found some medieval ‘Midlands Purple Ware’ pottery and one or two clay pipe fragments that may date to the eighteenth century, illustrating occasional visits over many centuries. The silt in the gorge is well over a metre deep and deeper digs might fill out the story.

Graffiti

At Beeston, in the caves by the castle, there are more carved heads. These differ stylistically and are likely to have been carved at very different dates but they share the same 'Celtic' features and the horns are reminiscent of Cernunnus as well as suggesting a more recent representation of the Devil.

Heads in a cave at Beeston

Another head on a cliff near the caves at Beeston is again in a different style and is probably more modern. However, because it has only recently been revealed from behind a heavy protective cover of ivy, it is in very good condition. It is interesting to see how, as with earlier examples, the sculptor has used the natural projection of the rock to assist in the three-dimensional shape.



Head on a cliff near the Beeston caves

At Frodsham, near the start of the Sandstone Trail, there are oval shapes, possibly heads, also taking advantage of the projection of the rock but either unfinished or seriously eroded.

There are also two-dimensional profiles of heads to be found elsewhere along the Trail, some more recent than others. One

Cartoon of a military figure on cliffs by 'The Ladies Walk', Frodsham

is a confidently carved cartoon of a military character and further examination of the nearby graffiti may be able to link it to one of the two world wars whose history is also recorded elsewhere on the Ridge.

Another kind of carved head found on the Ridge is the skull. This memento mori of the Middle Ages has remained consistent throughout popular culture right up to the present day. A skull found in the caves at Beeston even shows how it might have been improvised around cup-marks:

Skull in cave at Beeston

The most striking group of skulls, however, are to be found in a shallow cave close to 'Mad Allen's Hole' on Bickerton Hill.

Skulls near 'Mad Allen's Hole'

Although the immediate impression of these figures is of skulls, it may be, of course, that they are just crude attempts at creating faces, but the quality of the work is not as important as the fact that someone was there and wanted to leave their mark. 'Mad Allen's Hole' is not easily accessible and it has attracted several stories over the years. These carvings add to its reputation and enrich the sense of a special place and landmark in the long history of humans on the Ridge (See text box for an account of 'Mad Allen's Hole').

The Peckforton Elephant and Castle

No discussion of carvings on the Ridge could pass without reference to the largest, most peculiar and one of the most recent of all its sandstone monuments. Standing four metres high, the massive carving stands in the garden of a cottage on Stone House Lane, Peckforton. It is said to have been carved by local stonemason, John Watson, in about 1859. Watson, who lived at this cottage, had worked on the construction of nearby Peckforton Castle and the red sandstone seems to have derived from the same quarry. The elaborate three-tier castle, like a howdah on the elephant's back, was apparently intended originally to serve as a beehive but it is not clear how practical this really was and there is no evidence of its use as such. Watson was also responsible for carving two stone lions at the 'Lion House' in Tattenhall

The figure of the elephant and castle is a well-known but rather mysterious symbol. It has been said that the phrase is a corruption of 'The Infanta of Castile' or 'Eleanor of Castile', the wife of Edward I, but a more likely explanation is that the elephant and howdah represent the ivory trade. This was the emblem of the Worshipful Company of Cutlers, a medieval London craft guild who dealt in ivory for their knife handles and were granted the crest of an elephant and castle to their coat of arms in 1622. The Shropshire family of Moreton Corbet also has the elephant and castle as a crest on its

coat of arms. It may simply suggest 'strength' or may possibly relate to an association with the Cutlers or the ivory trade. Why Watson would have chosen to celebrate the neighbouring Corbets rather than Lord Tollemache, the owner of Peckforton Castle, is not clear.

Carvings in caves and rock shelters

Most of the natural caves on the Ridge have been extended in the past by human excavation. This has been in order to exploit a particularly fine quality white sand for a variety of industrial and domestic purposes. If you look in a cave such as 'The Queen's Parlour' on Rawhead you will see the very fine sand that might have been dug out and sold by local people for such purposes as scouring and polishing, making molds for casting or simply for scattering on floors to absorb domestic and animal waste. Caves like this can be found on the western cliffs of the Ridge from Frodsham in the north to Bickerton in the south. Some of them, such as 'Bloody Bones Cave' and 'Mad Allen's Hole' (see text boxes), have acquired interesting stories as well as a variety of carvings and graffiti.

'Mad Allen's Hole'

Hidden high in the western face of Bickerton Hill there is a curious cave with a curious story. Also known as Allenscombe Cave, it is difficult to access and, as there have been rock-falls partly blocking its entrance, no-one should attempt to visit it without extreme caution. The cave has two levels and there are several interesting carvings in and about it. Stories and myths about who may or may not have lived in the cave lack real historical or archaeological evidence but the unusual name suggests that there is probably a kernel of truth upon which our imaginations may work.

Most frequently cited is a tale relating to a certain John Harris said to have been born in Handley in 1710. His parents forbade him to marry his great love, Ann Egerton, and after the death of his parents he sold his estates in Tattenhall, Broxton and Handley, vowing to live with as little contact with mankind as possible. He settled into a life as a hermit on lands within the Carden Estate owned by the Leche family. This is plausible as it suited the

romantic fashion of the time for great estates to accommodate a picturesque hermit in their grounds. There is archaeological evidence that a cave at Carden was occupied until around the mid eighteenth century, but around 1765 John Harris appears to have left Carden. He was possibly evicted and it may be that he subsequently moved to the cave on Bickerton Hill to continue living as a hermit. A local landowner John Tarleton apparently had a dispute with the Leche family over hunting rights and an anonymous pamphlet of 1809 refers to the hermit John Harris being discovered on John Tarleton's lands. It is said that the Tarletons wished to show their moral superiority to the Leches by letting him live there. According to the story, after forty years of obscurity, John Harris was re-discovered living in the cave and in 1809 he is said to have related his tale. By this time, however, Harris would have been 99 years old!

The entrance to 'Mad Allen's Hole'

As with all such tales, over the years what was known as fact at the time becomes embellished and changes. What is known is that there are interesting carvings at the cave. Who did them, when and why will probably never be known.

The names 'Raw-head' and 'Bloody Bones' have long been associated. Defined by the OED as a bogeyman or bugbear with its skull stripped of flesh, 'Raw-head' was used to frighten children as far back as the 16th Century. 'Bloody Bones' was Raw-head's companion, also defined by the OED as a bugbear invoked to frighten children. Perhaps Cheshire's Rawhead, the highest point on the Sandstone Ridge, was so-called because its red sandstone crags and cave entrances resembled the bogeyman's de-fleshed skull. The name speaks of menace, of bad things, of a place to avoid, especially at night when criminal gangs seek remote places to hide

their ill-gotten gains. It is thus unsurprising that a large cave overlooking Harthill, the home of at least one local criminal gang in the 1830s, is called 'The Bloody Bones Cave'.

This is on private land and inaccessible to the public but this has not prevented many visits over the years including a 'rave' in 2009 which left an impressive panel of modern graffiti. There are also several much older panels of graffiti cut in the stone and at least two separate clusters of heads of unknown age. They are well worn but, sheltered in the cave, they can have suffered little from erosion so it is possible that they belong to the period in the early nineteenth century when the caves were allegedly occupied by marauding bandits, when the Ridge was the equivalent of Cheshire's own Wild West (See text box).

Two clusters of grotesque heads in 'Bloody Bones Cave', Harthill

Cheshire's Wild West

When Police Inspector John Hill and three of his men tricked their way into the home of a thief called Sefton near Harthill one summer Sunday morning in 1837 it was the culmination of dramatic events around the criminal-infested hills of Broxton. That the inspector drew a pistol and threatened to blow Sefton's brains out if he resisted arrest provides eloquent testimony to the lawlessness of Cheshire's own Wild West.

At the time of Queen Victoria's ascent to the British throne the undermanned County Constabulary was in its infancy and Broxton's Peckforton Hills enjoyed a reputation for unfettered criminality. Organised gangs of thieves from Tattenhall, Burwardsley, Bickerton and other villages

ranged up to 15 miles plundering homes and farms, unopposed by their terrified inhabitants. Stolen cheeses, grain, livestock and other loot were concealed in cottages and caves along the Ridge, and even inside a tomb in St Albans churchyard at Tattenhall.

On the Sunday before Sefton's arrest Hill, accompanied by Chester's Superintendent of the Watch Haswell and Police Officer Ithell, had followed information about a burglary in Tattenhall to a gang member's house in Burwardsley. There they detained Richard Meredith who would soon find himself transported to Van Diemen's Land, the fate of many a convicted Cheshire criminal. Hill's small but determined posse then proceeded to a cottage "just under the edge of the hill" near Harthill, wherein dwelt Tattenhall gang leader Thomas Hughes. Described as "a tall and athletic person, measuring upwards of six feet, and stout in proportion" and with a cottage full of stolen goods, Hughes did not come quietly.

The police attempted to enter the cottage but the burly Hughes cast Haswell aside and grappled with Hill. Hughes' wife, a woman of fearsome repute, ran outside and blew a whistle to summon help from gang members lurking in the nearby hills. Soon Ithell, who was guarding the doorway, was fighting for his life. Hill went to his aid but, outnumbered and fending off a pickaxe blow from Hughes, was forced to order a retreat to a nearby farm. On their return to the cottage with nervous reinforcements the police found the gang had fled and a three-hour pursuit proved fruitless. Stolen goods were recovered but the Harthill raid had failed.

What The Chester Gazette headlined as "A desperate affray with a gang of robbers" was recounted by Hill in 1839 before a Royal Commission into the establishment of a Constabulary Force in England and Wales. In summarising his testimony Inspector Hill was asked "On the whole, then, you think that, notwithstanding this constabulary … Cheshire is distinguished beyond other counties for crime?" Hill, perhaps recalling his desperate struggle with the gang below the Ridge, answered "Yes; more particularly the Hundred of Broxton."

Whilst it is difficult to find contemporary references to 'Bloody Bones Cave' itself as a hideout, it seems likely that it formed part of the wider infrastructure of criminal activity in the early 1830s and perhaps beyond.

Four carved seats above Kelsall

There are also natural rock overhangs along the Ridge that have been adapted to form shelters and used as such in quite recent times. There are two examples of such shelters on private land in the cliffs between Willington and Kelsall. Near the hillfort site of Kelsborrow above Kelsall there is a shelter cut out of the rock face which includes four well-carved seats. Above each seat is a set of initials: GW, JA, JR and CC. The lettering is of a high standard and suggests that it was carved by a stonemason rather than an amateur. There is also a central date of 1842 and the surrounding area, with pick-marks, looks as if it may have been quarried for stone. The owners of the initials are unknown but a family connection seems unlikely as the second initials

Initials and date above the seats

of each are all different. As the seats appear to be grouped in two pairs it has been suggested that they may be love seats enjoying the impressive view across the Cheshire Plain to the Welsh hills. They could also be simply quarrymen's shelters from the rain.

The surrounding area also contains other interesting features. There is a local story that during the Second World War young boys used the seats as a viewing platform to watch the dogfights between British fighters and German warplanes attacking Liverpool. As evidence there are two childish sketches of British planes

carved onto the rock. One shows a side view of what may well be a Hawker Hurricane fighter with quite impressive 3D perspective.

Planes carved near the seats (plane 2 digitally enhanced to show outlines)

Another feature at this site is a dated set of initials from the First World War marked as S. KERR JUNE 1915. It has not been possible to identify this person from the records. Underneath and perhaps in the same hand is the name W. MOLYNEUX.

S. Kerr and W. Molyneux graffiti near the seats

Nearby is a nicely drawn two-dimensional head with the initials A.W.

Two-dimensional head near the seats

At the rear of the rock face there is a set of steps leading up to a higher level but it is unclear how old these are.

A second rock shelter, known locally as 'The Witches Kitchen', exists a little further along the cliffs above Willington. This appears to be carved out in a similar way to the one at Kelsall but has a stone bench rather than individual seats. In

addition, there are slots cut into and beside the bench which suggest that there may have been a wooden seat fitted on top for extra comfort.

'The Witches Kitchen'

Another feature nearby is the ruin of an old stone tower described locally as a folly and built around the 1890s. It was apparently also used as a viewing platform. The views across to Wales from here are obscured today by trees but in the past these sites may well have been popular spots for locals, either for lovers to meet and enjoy the panoramic landscape or to experience the excitement and horror of a war in the sky.

Recent carvings and graffiti

Whilst in the past the Ridge has been a location for small-scale industry and occasional bolt-holes for individuals like Mad Allen, in modern times it has not been a site of habitation. Rather it has provided 'special' or private places where people have spent leisure time, escaping from the daily chores, enjoying the views and keeping trysts.

A 'special' location also matters to some graffiti-painters in the city. More respect is gained for painting in inaccessible places: on bridges for example. The artist has claimed the space as his or her own, where they can 'show off', demonstrate their skill and courage and express their individual point of view.

Whilst the content of city graffiti frequently reflects popular youth culture in its style and content, it might not be expected that this would extend to the remoter sites on the Ridge where city kids are unlikely to have visited. However, in one spot close to Frodsham there was, at the time of writing, a colourful panel of spray-painted graffiti. There may have been several people involved in the spray-painting at the same or different times but they demonstrate two typical

Spray-painted graffiti near Frodsham

characteristics of graffiti: (a) graffiti attracts graffiti - so the work tends to be concentrated in one particular location; (b) graffiti respects graffiti - so that the painter with the yellow paint has surrounded the work with the red and blue paint and someone with black paint has embellished rather than defaced the red and blue panel. Thus a kind of conversation has been played out on the cliff-face.

There is also a remarkable panel of modern graffiti deep in the Bloody Bones Cave at Harthill.

Graffiti in 'Bloody Bones Cave', dated 2009

Again, the principles outlined above can be seen quite clearly. There had evidently been quite a party in the cave and marijuana (a leaf is illustrated on the right) probably played a role in the mix of obscenities and fantasy illustrated in some cases with considerable care and intensity.

There is a pattern of behaviour here which might have been applicable to the much older carved graffiti along the Ridge. It may be worth asking whether in rock art the accumulation of images merely represents the overlays of time or

whether there was once a deliberate conversation being conducted between the carvers.

No graffiti or rock art will have existed in a vacuum. It would have been part of a people's history, recording their visits incrementally for many years and perhaps reminding them of the circumstances in which it was created for long afterwards. Rock art can mark places where special events have taken place, as witness the aeroplanes at the Kelsall seats or the rave at 'Bloody Bones Cave' and the numerous love-hearts where the original activities may be left to the imagination. As time passes, of course, the original associations may be forgotten but the location will have acquired a permanent significance by virtue of the carving there and new meanings developed depending on new visitors' associations.

Of course, most engraved graffiti on the Ridge consists of initials. Sometimes there are dates. The earliest to survive tend to be from the early nineteenth century and there are many from the early twentieth century. These clearly help to place the graffiti in its period context. Sometimes names are written in full. Sometimes there are more complex messages written out. Sometimes there are strange shapes and doodles that may have had symbolic meaning to the engraver but are mysteries today.

One recognisable symbol which looks very much like the pyramid that appears on the Great Seal of the United States and on the US dollar, as well as being a Masonic symbol, can be found in the cave known as 'Musket Hole' below the cliffs at Raw Head. Close examination suggests that the 'Eye of Providence' had also at one time been carved in its centre. It is interesting to speculate on what story that tells.

Pyramid in 'Musket Hole'

Sometimes the lettering is exceptionally well designed leaving us to suppose that professional stone-masons have been at work and helping us, by the style of lettering, to date the work as belonging to the nineteenth century.

Nineteenth-century lettering near Frodsham

Perhaps the workers on a site used for quarrying building-stone spent their lunch breaks signing their work or memorialising a girlfriend such as Emily Lane.

Sometimes it may be possible to identify the individuals who made their marks. With initials alone it can be very difficult but when more is recorded on the stone, careful searching through census and parish records or seeking out local knowledge can bring rewards. For example, among the names carved in one panel at Frodsham there is a George Cuthbert and a Jas Hoose close by the date 1842. The neatness and elegance of their nineteenth-century lettering puts the nearby modern graffiti to shame.

Nineteenth-century lettering near Frodsham

In the early nineteenth century there was a well-known local stonemason living in Overton named Simon Hoose and William, another member of the extended Hoose family, was working the quarry at Five Crosses so James is likely to have been a young relative of quarrymen. Indeed, there was a James Hoose born in Overton in 1827. In the 1841 census there was also a George Cuthbert born in 1824, also living in Overton and at the same address as two Hoose girls of similar age, so we might imagine that the Hoose

youngsters and Cuthbert would have been acquainted. Nearby we find the name S L Gorst who can also be identified in the UK Census with an individual born in 1827: Samuel Gorst was the son of a shoemaker in Frodsham. Although there is no firm proof that, at some time in the 1840s, this little gang were friends or were indeed the carvers of the graffiti, future researchers might find this circumstantial evidence of value and a basis for further study.

Ben Oxley's signature at Helsby Quarry

HP POW 3.1.-1946 Alois Schwarz

Another example can be found at Helsby Quarry. Where the tram track ran down to Ince there is a panel of crude writing including the name B. Oxley and locals say this was written by Ben Oxley the son of the founder of 1st Helsby Scout Group in 1908. The family had left the area by the time of the 1911 census so we can surmise that the graffiti dates to prior to that time.

In the 'Urchin's Kitchen' we find evidence of prisoners of war including one Alois Schwarz.

The main PoW camp in the area during the Second World War was at Tarporley but prisoners were often billeted in small groups elsewhere. For example, at Eddisbury Hill Farm there were some Nissen huts said to have housed German

Inscription on the 'German Wall', Willington

prisoners. A nearby resident as a boy in the war, remembered his father coming to collect the PoWs in a van, to work on the land, and commented on how they were totally unguarded. Perhaps Alois Schwarz was one of these? If so, he may also have been one of the men who built the 'German Wall' at Willington. The German Wall is a retaining wall on the side of the road through Willington Wood. A faded inscription there records that it was built by German PoWs in 1946-47.

Sometimes, irrespective of style, the names themselves are indicators of the age of the graffiti. A panel near the Old Pale, Delamere, can only have been carved in the late Twentieth Century and not far away, as if to confirm the context, someone has also carved the name John Lennon.

Whether or not it really was the Beatle or some other John Lennon or a deliberate hoax, or someone just honouring the Beatle does not really matter so much as the fact that an individual spent time and effort memorialising a moment in their personal history.

Twentieth-century graffiti near the Old Pale

One must not overlook the sensual experience of leaving a mark and this depends on the medium and method used. City graffiti artists use what comes to hand in their urban environment and one might wonder if the aerosol propellants from their cans produce a 'high' that spurs them on. The use of the spray-can and stencil is an extraordinary echo of

one of the oldest methods of cave-painting. The stenciled outlines of hands have been found all over the world created by Palaeolithic people as long as 40,000 years ago. By placing a hand on a rock and blowing charcoal or other pigment either directly from the mouth or through a straw the outline of the hand was created and the message left was not only 'I was here' but also 'I touched this rock'. Recently drawn outlines of hands can be seen cut onto the rocks at Bulkeley Hill today. People do not change that much!

Outline of a hand on Bulkeley Hill

A boot in the 'Urchin's Kitchen'

In 'Urchin's Kitchen', the outlines of the soles of some boots (all right feet and differing in size but two complete with hobnails) have been drawn in a similar way. Here, however, the initials H.C. and R.A. have been neatly inset reflecting a typical urge to frame or enclose one's mark: an attitude of mind that dates at least as far back as the Neolithic rock artists and the Egyptians who enclosed the name of a Pharaoh within a cartouche. Other frames made of boxes, diamonds and shields and, of course, hearts can be seen elsewhere.

A different sensory experience from spraying or drawing is achieved by cutting into rock. Because sandstone is so soft, the temptation to make a mark in it is especially strong and it is difficult to imagine anyone who has not experienced the temptation to carve their initials at some time or other. There is plenty of evidence for this along the entire length of the Ridge. The temptation to deface a surface, to feel the effects of pressure on the grainy rock, to make a shape that is the product of a deliberate personal act,

Dave and Sue's love heart in 'Bloody Bones Cave', Harthill, 2002. The inscription around the heart reads 02 IN STONE IN FLESH

to struggle to impose a pattern against the resistance of ancient stone and to leave one's initials there for what might promise to be forever is surely something all children understand. The temptation is only partly lost when adult discipline and concern for pristine 'natural beauty' and conservation attempt to stifle it.

When we look at any panel of rock where carving has taken place we can recognise a common human instinct which draws us closer to all those who have passed this way before. Whether Mesolithic hunter gatherers, Neolithic herdsmen, nineteenth-century quarrymen, prisoners of war from the twentieth century or yesterday's day-trippers, we have all experienced the same desire: to leave our mark.

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Circular Walks visiting some of the sites mentioned in this book

Volunteers on *The Ridge: Rocks and Springs* project have put together a series of short walks which, apart from being interesting and enjoyable in their own right, can assist readers in visiting some of the sites mentioned in these pages.

The walks are organised geographically from north to south and many of them can be used to make circular detours from locations on the long-distance Sandstone Trail.

INJURIES / LOSS OF PROPERTY
Please note that The Sandstone Ridge Trust does not accept any responsibility for personal injury or loss of property when following any of our walks.

You should always follow The Countryside Code:

Be safe - plan ahead and follow any signs
Leave gates and property as you find them
Protect plants and animals, and take your litter home
Keep dogs under close control
Consider other people

WARNING
Some of these walks bring you close to the edges of quarries and steep rock faces. Extreme care should be taken at all times. Correct footwear should be worn and, if it is thought necessary, individuals should take out their own insurance.

The sketched maps are intended to help you follow the route described and the volunteers have endeavoured to ensure that they are accurate but there is no substitute for a proper Ordnance Survey map. Be aware that some landmarks, like gates and fences, can also appear and disappear over time.

1. Frodsham Rock, Pop and Leather

This walk will take you past a line of springs that, when the water table was higher, used to issue from the weakness caused by the Frodsham Geological Fault. It also passes the site of an old quarry, the sites of two water mills and two local industries that made good use of the spring water.

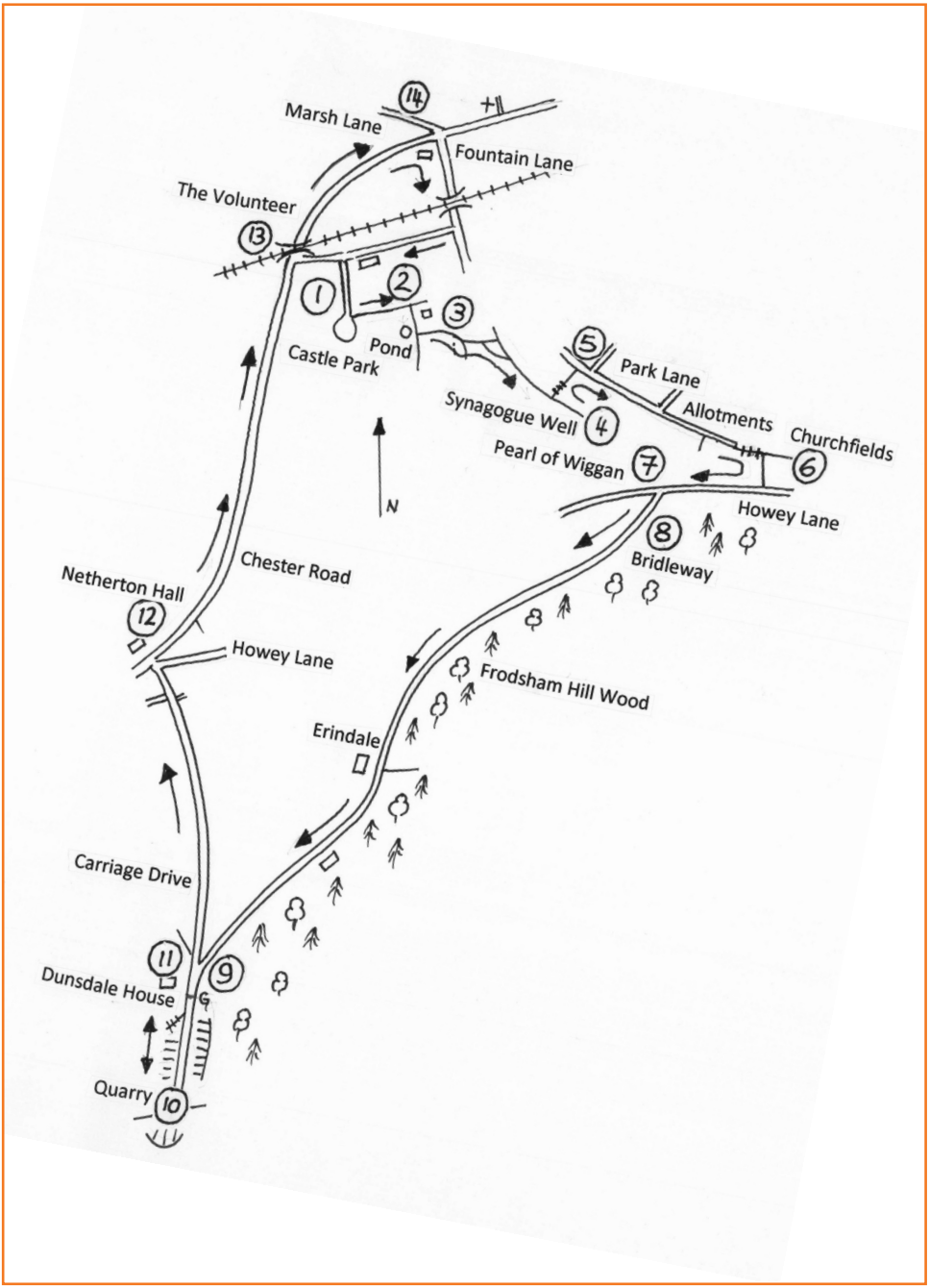
Start: in the main car park of Castle Park, Frodsham.
OS Explorer 267, grid.ref: SJ 513 774.
Castle Park Arts Centre has a small café and is open daily from 10am – 4-pm.
Distance: approximately 3 miles
Level of Difficulty: Easy, but beware of traffic.
Duration: 1.5 hours

Directions

Castle Park, where you begin **(1),** was the site of one water mill and close to a second. Both mills were powered from local springs and both were closed due to the building of the railway in the late 1840s. The main entrance to Castle Park was the site of the Upper Mill and the car park is on the site of the Upper Mill Pool. The railway line was built over the Lower Mill Pool (see page 49).

Take the main path through the grounds and at the entrance to the playground **(2)** take the right hand path into the American Garden, keeping the Park Pavilion on your left. With your back to the pond in the American Garden follow the right hand path curving towards the corner of the bowling green **(3).** Then take the left fork, and next, the right fork to head uphill towards Synagogue Well **(4)** (see page 49).

Retrace your route a few metres and take the short flight of uneven steps on the right. At the end of the footpath turn right up Park Lane **(5)**. This becomes a footpath as you pass the end of Kingsway and then allotments on the left. Climb the short flight of steps to reach Churchfields Recreation Area **(6).** Take the footpath on the right to Howey Lane and turn right again to head briefly downhill on the pavement. Remaining on this side of Howey Lane you can view 'The Pearl of Wiggan' **(7),**part of a RIGS (Regionally Important Geological Site) (see page 49). Cross Howey Lane with care and turn into Bottom Walk, now a bridleway **(8),** but designated a road by the Allotment Commissioners in 1797. It was originally


Marsh Lane
Fountain Lane
The Volunteer
Castle Park
Pond
Park Lane
Allotments
Churchfields
Synagogue Well
Pearl of Wiggan
Howey Lane
Bridleway
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Chester Road
Netherton Hall
Howey Lane
Frodsham Hill Wood
Erindale
Carriage Drive
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called Dunsdale Road and used to go as far as Woodhouses. Continue along the bridleway passing through Frodsham Hill Wood established by the Woodland Trust in 2006. You pass a large house on the right called 'Erindale'. It was built in 1885 and in the 1950/60's was part of Netherton House Private School.

Where Carriage Drive joins from the right **(9),** bear left and keep the sandstone wall of Dunsdale House to your right. Continue through the gate uphill to Dunsdale Hollow and Quarry **(10)** (see page 30). The extent of the quarry face is best seen from the prominent fingerpost indicating the route of The Sandstone Trail.

Retrace your steps downhill to Carriage Drive passing the turreted Dunsdale House on your left **(11).** This property was designed by the famous Chester architect John Douglas in the 1870s. It served as a branch of the National Children's Home from 1943 to the 1970s. Continue straight on into Carriage Drive and down to Chester Road (A56) at Netherton Hall **(12).** Bear right and carefully cross Howey Lane then Chester Road at the pedestrian crossing. Turn right and follow Chester Road into Frodsham.

Walk under the railway bridge **(13).** The site of the Lower Mill was just beyond the bridge, on your left. Millbank Cottages, now in Millbank Court, were originally 17th century and when the mill closed the brick cottage nearest the main road became 'The Volunteer' beer house. There is a spring under the beer house. The Frodsham Mineral Water Company originated in this area and used water from their own springs (see page 71).

Continue along the A56, now Main Street, to its junction with Marsh Lane **(14).** On the opposite side of Main Street is Brook House, a Grade II listed building. Behind this house in the early 19th century stood Grice's Tannery which used water flowing from Synagogue Well (see page 71). Carefully cross Main Street and walk up Fountain Lane to enter Castle Park. Follow either Main Drive or North Walk back to the main car park.

2. Frodsham Quarries, Caves and Panoramas

This walk can be undertaken as three separate sections or combined into a walk of approximately 4.5 miles.

Start: at the top far left of the car park at the Forest Hills Hotel, Frodsham.
OS Explorer 267, grid.ref: SJ 517 768.
The starting point is not accessible by public transport.
Distance: approximately 4.5 miles.
Level of Difficulty: Moderate**.** The terrain is rough in places and can be slippery when wet with some easy to moderate climbs. There are four stiles along the route. Refreshments and toilets are only available at Forest Hills Hotel.
Duration: 2 hours

Directions

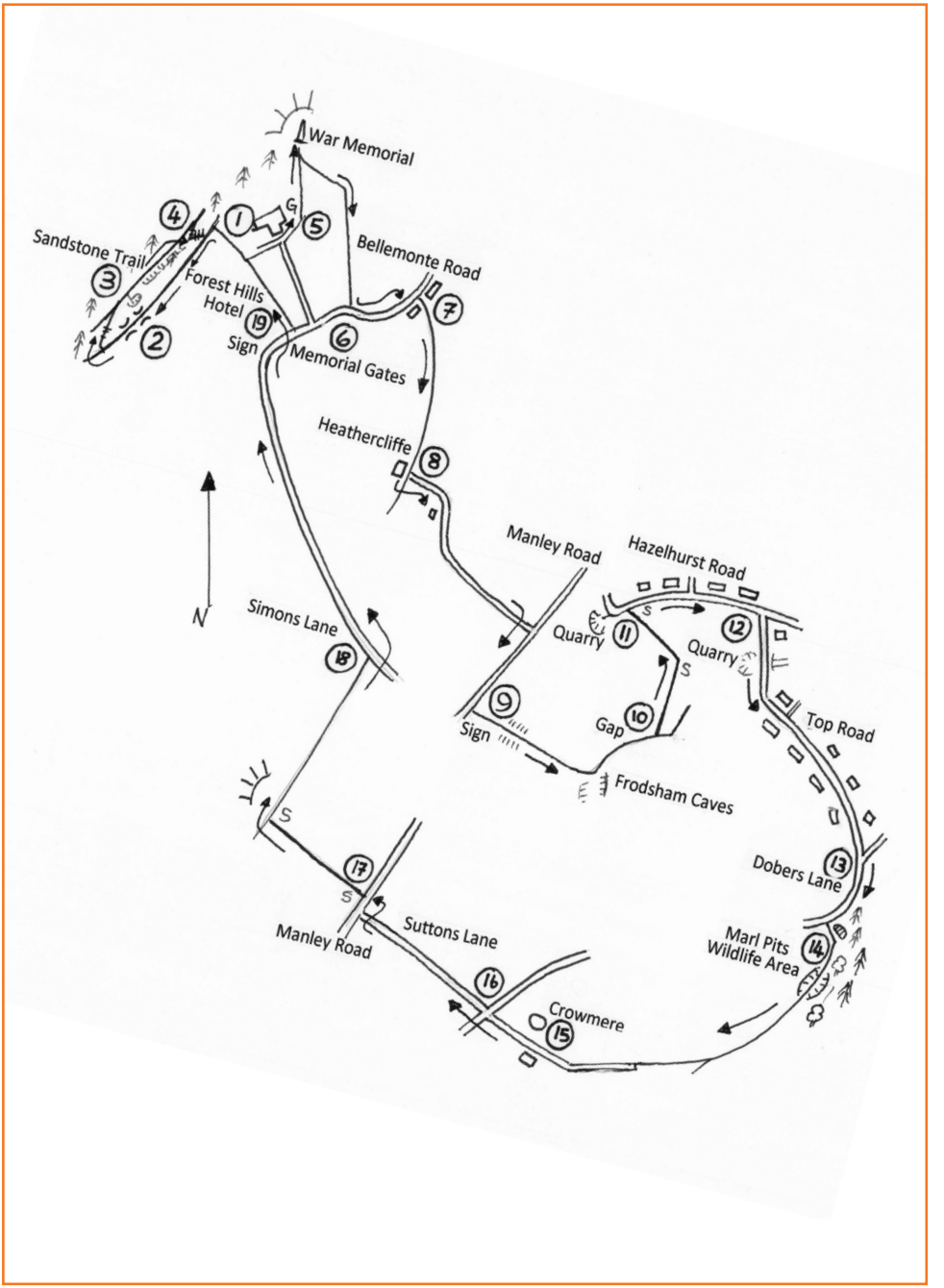
Section 1 - Graffiti on The Ladies Walk

From the carpark **(1)** go through the gap in the wall and turn left. Keep to the path ('Top Walk') alongside the golf course until you come to two bridges **(2)** where you can look down over the edge of a quarry (see page 30). Just after the second bridge, which has a metal railing, turn right off the path and go down the slope to reach a metal post on a path below. Turn right here to join The Sandstone Trail indicated by a yellow waymark **(3)**. Note the differing colours and quality of the stone in the quarry.

Continue along the Trail, known here as 'The Ladies Walk', and note the masses of graffiti on your right. An interesting exercise is to consider the quality of the carving, look for faces or other emblems and the oldest date you can discover. Among other figures are an outline of a soldier and a crudely-carved three-dimensional head (see page 83). Take great care in case of rock falls. When you reach steps to your right **(4),** ascend to 'Top Walk' and continue back into the hotel carpark.

Section 2 - Panoramic views

Cross the carpark and, keeping the hotel and swimming pool on your left, turn left up an easy trail **(5)**, through a metal gate and onto the tarmacked walk to the War Memorial, which was built of red sandstone from the quarry at Five Crosses. The War Memorial, unveiled in September 1921was dedicated to 105 Frodsham men lost in the First World War. A further panel with an additional 34 names was


War Memorial
Sandstone Trail
Bellemonte Road
Forest Hills Hotel
Sign
Memorial Gates
Heathercliffe
Manley Road
Hazelhurst Road
Quarry
Quarry
Simons Lane
N
Sign
Gap
Frodsham Caves
Top Road
Dobers Lane
Marl Pits Wildlife Area
Suttons Lane
Manley Road
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added at the end of the Second World War. Enjoy the magnificent panorama from the Clwydian Range in the west, the Mersey Estuary in front of you and the Pennines and Peak District in the east. Use the toposcope to identify significant landmarks. Note that the sea used to reach a line approximately equating to the route of the motorway. From the Memorial take the grassy path inland across the Memorial Field and exit via the wrought iron Memorial Gates **(6)**.

Section 3 - Main walk to caves and quarries

From Forest Hills Hotel turn left at the car park entrance, along Bellemonte Road to reach the Memorial Gates **(6).** From the Gates, continue down Bellemonte Road about 100 metres and turn right onto the footpath **(7)** between two modern bungalows. This path follows the approximate line of the Frodsham geological Fault. Continue along the path until you reach 'Heathercliffe' on your right. Beacon Hill Quarry (see page 30) lies behind the house and is now part of the garden.

Continue left down the tarmacked drive **(8)**. When you meet Manley Road turn right for about 50 metres and take the footpath through the gate on the left hand side of the road into a field with an old 'No Camping' sign **(9).** Follow the grassy track to reach the Frodsham Caves. These caves are partly natural but have been extended by the extraction of sand to use on cottage floors. There are graffiti inside the caves including one carving with date of 1838. Take great care when entering the caves because of antisocial litter and possible rock falls.

With your back to the caves, go back to the track and take the path to your right, following it uphill until, just before you reach a metal gate, there is a gap in the fence to your left **(10).** Go through the gap and walk straight downhill on an indistinct path across the field and over a metal stile. As you cross the next field you go across the route of a tramway linking various parts of Five Crosses Quarry (see page 31).

Continue, keeping a fence on your left, to another metal stile to join Hazelhurst Road **(11).** Another small part of the quarry can be glimpsed with a short detour to your left, but to continue the walk turn right until Hazelhurst Road meets Top Road and turn right **(12).** Look over the stone walls to your left and right for views of the main quarry. You are in fact walking over a bridge/tunnel linking two parts of the quarry. Further up the road the oldest part of the quarry can be viewed over a wooden fence on your left.

Continue along Top Road enjoying the panoramic views over the Weaver Valley towards the Peak District. Turn right into Dobers Lane **(13)** and continue uphill. Look out for a kissing gate on the left of the road and turn left into the Marl Pits Wildlife Area **(14)** (See page 12)**,** owned by Frodsham Town Council. Follow the path onto a farm track veering right until Crowmere is reached **(15).** Crowmere is also owned by Frodsham Town Council and is partly spring-fed resulting from its proximity to the Frodsham Fault.

Continue to the left of the lake and cross into Suttons Lane **(16).** Go up the lane to its junction with Manley Road, noting the erratic rock on the right corner, and cross the stile opposite into a field **(17).** Continue ahead and appreciate the view over the Mersey Estuary, Runcorn and beyond. Cross the stile, and turn right alongside the golf practice ground. At Simon's Lane turn left **(18),** and continue along the road. On your left you pass a house called 'Simon's Delph'. Delph means a quarry. The quarry here was worked by Overton stone mason, Simon Hoose, in the early 19th century. Simon died in 1840 but is remembered by both the house and road name (See page 30).

Cut through the hedge next to the Belmont Road sign **(19)** to return to Forest Hills carpark.

3. Helsby Quarries

This walk allows you to explore the red sandstone quarries for which Helsby is famous. There is an opportunity to walk up to the summit of Helsby Hill for views over the Mersey Estuary and a detour to see one of the few remaining well sites in the village.

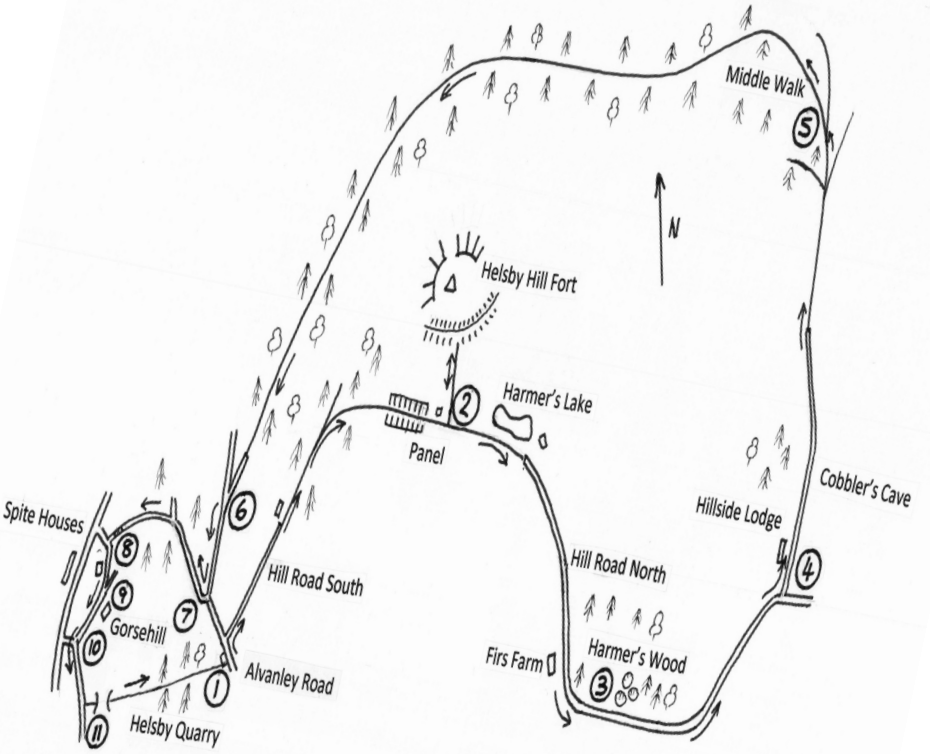
Start: Helsby Quarry Car Park, Alvanley Road:
OS Explorer 267, grid ref: SJ 490 749.
Distance: 2-2.5 miles
Level of Difficulty: Easy. There are some short, moderate to steep stretches but no stiles.
Duration: 1.5 – 2hrs approx**.**

Directions

Park in Helsby Quarry car park **(1).** There are interpretation panels on site (see also page 23). Cross Alvanley Road and go up Hill Road South, past the gate of 'Tanglewood' onto National Trust land. Continue up through the woods to where the path divides. Take the right hand fork through the sandstone cutting following the route of the old road over the hill. There are some graffiti on the rock face on the left.

Go through the 'squeeze' and by the interpretation panel on the left there is a permissive path **(2)** to the summit of Helsby Hill with views over the Mersey Estuary towards Liverpool. A popular spot with tourists, the area is covered with graffiti although anything of age has been worn away. Helsby Hill is the site of a Late Bronze Age hillfort, which is a classified ancient monument*. There was a Royal Observer Corps Monitoring Post here in the Second World War and in 1791 it was where the notorious mail robber William Lowndes was gibbeted.

Return along the permissive path and continue along Hill Road North, past Harmer's Lake, which is mainly spring-fed and was a place for swimming, boating and ice-skating in times gone by. Carry on downhill for approx. ¼ mile, past Firs Farm on the right, until you reach Harmer's Wood and Quarries on the left **(3).** This site was purchased from Cholmondeley Estates in 2007 and is now managed by the Friends of Harmer's Wood. There is a notice board showing a map of the area. 'Ben's Quarry' and 'The Classroom' are worth a visit. Explore with care and return to the same spot.


Middle Walk
5
N
Helsby Hill Fort
Harmer's Lake
2
Panel
Cobbler's Cave
Hillside Lodge
4
Spite Houses
6
Hill Road South
Hill Road North
8
9
7
Gorsehill
10
Alvanley Road
Firs Farm
Harmer's Wood
3
1
11
Helsby Quarry

Continue downhill for a further ¼ mile and take the first path on the left by Hillside Lodge **(4).** 'Cobbler's Cave' on the right is where in the mid-nineteenth century the Tweedle family quarried the sand to sell around the district for sanding floors. The track becomes a narrow footpath. Continue along this until you enter National Trust land on the left. Take the lower footpath on the right sign-posted 'Middle Walk' **(5).** This is part of the 'Carriage Drive' built by landowner and philanthropist Samuel Burgess jnr. and the Marquis of Cholmondeley between 1866 and 1870, providing work for locals and a leisure amenity for the newly gentrified people of Helsby. At the next fork bear left and continue along the foot of the hill. Note the sandstone kerbstones along the way marking the original Carriage Drive.

At the junction with Alvanley Road **(6)** turn left and head slightly uphill to the left hand bend **(7).** Here you can either carry on along the road back to the car park to explore the Helsby Quarry at your leisure, or turn sharp right and head downhill, along the old packhorse route from Alvanley. This is a steep path and care is needed. At the fork take Footpath 20 on the left. Continue and go down a few steps to meet a cobbled path **(8).** Turn left and on the right hand side is the original 'Robin Hood' pub, now a private house. It used to be single story and thatched. The pub moved to Chester Road in the late 18th century when the turnpike was built, but sadly that pub is no more.

Follow the cobbled path to a house called 'Gorsehill' where in the wall near the gate is a well **(9)** which was dug in the late 1880s. The original well for the old 'Robin Hood' and surrounding area was across the road near the tall sandstone terrace known as the 'Spite Houses'. These houses were built following an argument between the quarry owner and another land owner to spoil the view from the latter's new house 'Gorsehill'.

Follow this path round to the right until just before it reaches the road **(10),** turn sharp left and follow this path to Helsby Quarry **(11).** The path follows the route of the old tramway built to carry stone from Helsby Quarry across the marshes to Ince Pier (see page 24). Enter Helsby Quarry Local Nature Reserve and go through the tunnel on your left. Continue uphill until the car park is reached or take a diversion to explore this fascinating quarry on your own.

**The Sandstone Ridge Trust publish two leaflets: A circular walk around Helsby Hill and Woodhouse Hillfort and The Archaeology of Helsby Hill which may be of additional interest.*

4. Manley and Delamere Forest

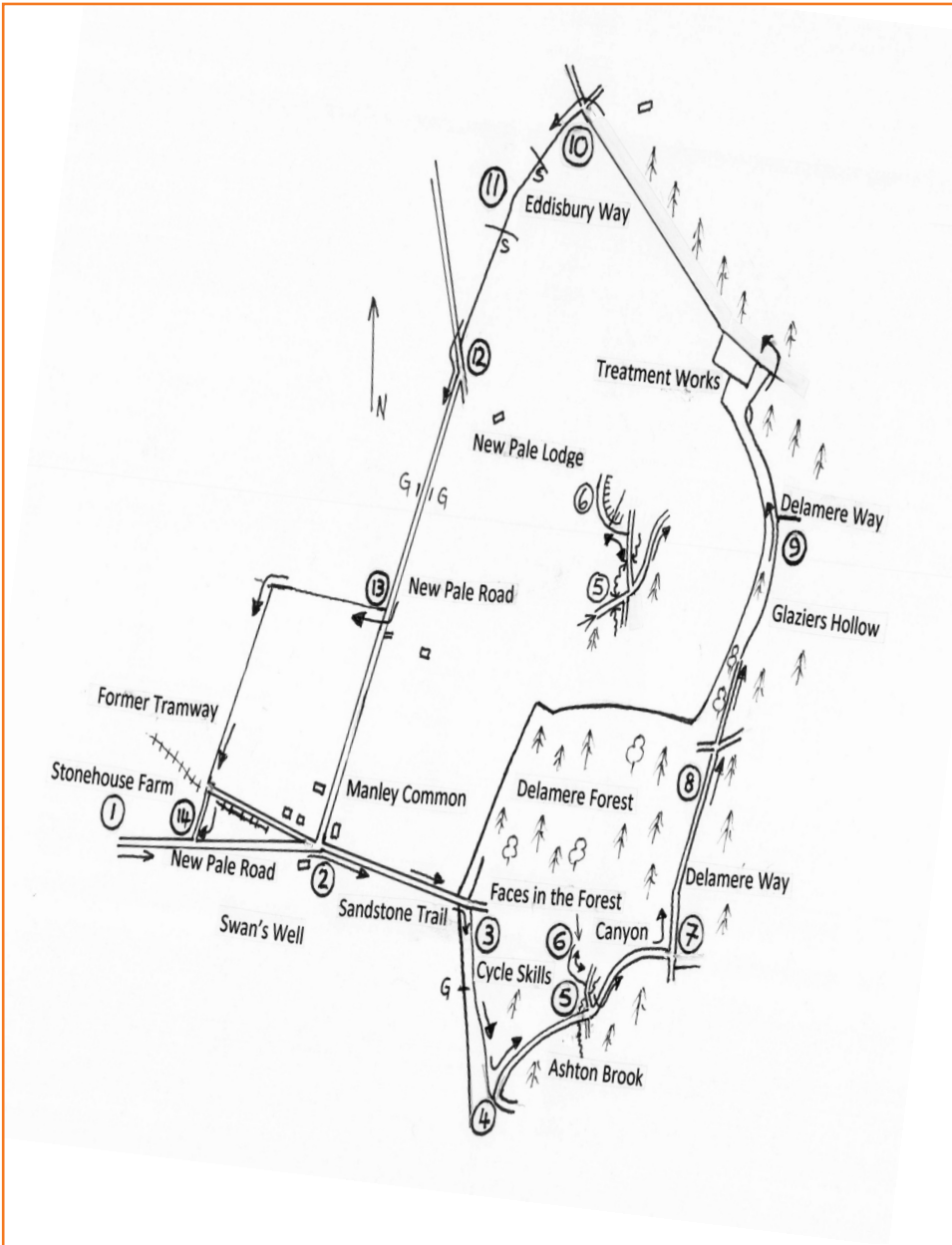
In this part of the Ridge there were all kinds of activities and industries in the past. Whilst many of the features have disappeared over time, it is still possible to imagine how things used to be and ponder over the changing uses this beautiful countryside has seen.

Start: Park on New Pale Road near to Stonehouse Farm:
OS Explorer 267, grid ref: SJ 517 719
The starting point is not accessible by public transport but from Mouldsworth Station go along the B3593 crossing into New Pale Road to reach Stonehouse Farm. This will add about 1.5 miles to the route.
Refreshments and toilets are available at 'The Goshawk' in Mouldsworth or at Stonehouse Farm.
Distance: approx.4 miles
Level of Difficulty: Moderate. The route has road sections and tracks with easy to moderate climbs. The terrain is rough in places and can be muddy when wet. Some sections get overgrown in the summer.
Duration: 2 hours

Directions

From Stonehouse Farm **(1)** walk east along New Pale Road as part of The Sandstone Trail to reach Manley Common. The boundary wall marks the edge of the New Pale (see later). There used to be a horse-drawn tramway across the common which transported marl (see pages 12,21) from pits behind Rangeway Bank Cottages to fields to the east of Simmonds Hill. To the rear of these cottages was Swan's Well (see page 46).

Take The Sandstone Trail **(2)** towards Delamere Forest. When you reach the edge of the forest pass a metal footpath sign and take a path to your right **(3)** along the edge of the forest. Delamere Forest is the remnants of the Royal hunting forests of 'Mara and Mondrem' which covered about 60 square miles in the 11th Century. The term 'forest' in these times meant an area of heath with some trees. The forest was the hunting grounds of the Norman Earls of Chester and was subject to harsh forest law. Ownership of the forest passed to the Crown in 1812 and to the Forestry Commission in 1924. Continue along this path until you reach a gate on your right but don't go through it. Turn slightly left and carry on down the slope


Eddisbury Way
Treatment Works
New Pale Lodge
Delamere Way
New Pale Road
Glaziers Hollow
Former Tramway
Stonehouse Farm
Manley Common
Delamere Forest
New Pale Road
Faces in the Forest
Delamere Way
Swan's Well
Sandstone Trail
Canyon
Cycle Skills
Ashton Brook
N

with a notice-board on your left and the edge of the forest to your right. Beware of bikes as this is now a cycle-skills area. You are now following the line of the Manley Water Supply which ran in a cast-iron pipe in the field to your right (see page 53). You will soon reach a more permanent path marked by a 'horse and rider' sign **(4).** Down below you on the right, in a boggy depression, is the ram-pumping chamber that used to lift the water from Ashton Brook, but at the 'horse and rider' sign turn left.

Continue until you reach the Ashton Brook. Bear left across the brook to reach a fork in the path **(5).** Take the left fork to see 'the faces in the forest'. Crossing the brook again, take an indistinct path to your left. Continue around the edge of the hill, ignoring paths which climb upwards, to reach a small rock face or quarry and hunt for the carved faces on the quarry wall **(6)** (see page 79).

Retrace your steps and take The Sandstone Trail up a sunken track known as 'The Canyon'. At the top of the canyon **(7)** turn left onto part of the modern Delamere Way. Continue until you reach a crossroads of tracks **(8).** Take the track in the centre beside an avenue of beech trees. This path drops down to a boggy area known as 'Glaziers Hollow' and was the site of a medieval wood-burning glass furnace. Excavations in the 1930's/40's revealed the glazed brick floor of the furnace covering about 12m^2. The site was closed down when the use of timber in the royal forest was forbidden in about 1615.

Continue up the slope until the main path, The Delamere Way, turns to your right **(9)** but take the smaller path veering to your left around the edge of the forest before curving right to join The Delamere Way again at a T-junction, turning left by a metal mesh fence. Keep the fence to your left. The fence surrounds the sewage treatment works which was originally built to service the Manchester and Liverpool Sanatoria built in the 1900's. Continue along the edge of the forest to join The Eddisbury Way **(10)** at a junction with a metal sign where you turn left (south west) across the fields towards Manley Common. Head for a gap in the hedge with a stile and continue across the field to another stile.

You can see to the south the masts on Pale Heights and the extent of the Sandstone Ridge and the Cheshire Plain; to the west are the Clwydian Hills with Deeside in the foreground. To the north there are glimpses of Liverpool. To the east you look across the Cheshire Plain with the Pennines beyond. Go over the stile **(11)** and head for the corner of the boundary around New Pale Lodge.

Continue with the hedge to your left. You are now within the Park Pale which was created "for the preservation of 'vert' (vegetation acting as cover for deer) and venison in the early seventeenth century. In the centre of the Pale is New Pale Lodge a Grade II listed building which was formerly a farmhouse dating from 1623 but has extensive alterations.

Go through a metal gate and turn left on New Pale Road **(12).** To your right on the skyline is the United Utilities reservoir (see page 56). Continue along the road until it starts to drop down the hill. Where there are metal gates on each side of the road you will see a stile and footpath sign on your right **(13)***. Cross the stile and go straight ahead following the hedge-line. At the second large water trough there is a stile in the hedge. Cross the stile and the farm track and head downhill across the field towards the corner by the trees. Continue to rejoin New Pale Road **(14)** and turn right to your starting point.

**NB: At point (13), depending on how the farmer is managing his cattle, it is sometimes easier to pass through the metal gate and go along the farm track to the left of the hedge, and when you reach the second water trough and stile turn left across the field as above.*

5. The Old Pale

A circular walk around the historic Old Pale, a medieval enclosure in Delamere Forest. It takes in the splendid viewpoint on the Old Pale Heights, an Iron Age hillfort, Roman Road and medieval quarry.

You may approach this walk either by car, parking at the Yeld Car Park, or by train, starting from Delamere Station.

Start: at Yeld Car Park, Yeld Lane, Kelsall:
OS Explorer 267, grid ref: SJ 533 693.
Distance: 4 miles (5 miles from the station)
Level of Difficulty: Easy with one or two gentle climbs.
Duration: 2 hours (2.5 hours from the station)

Directions

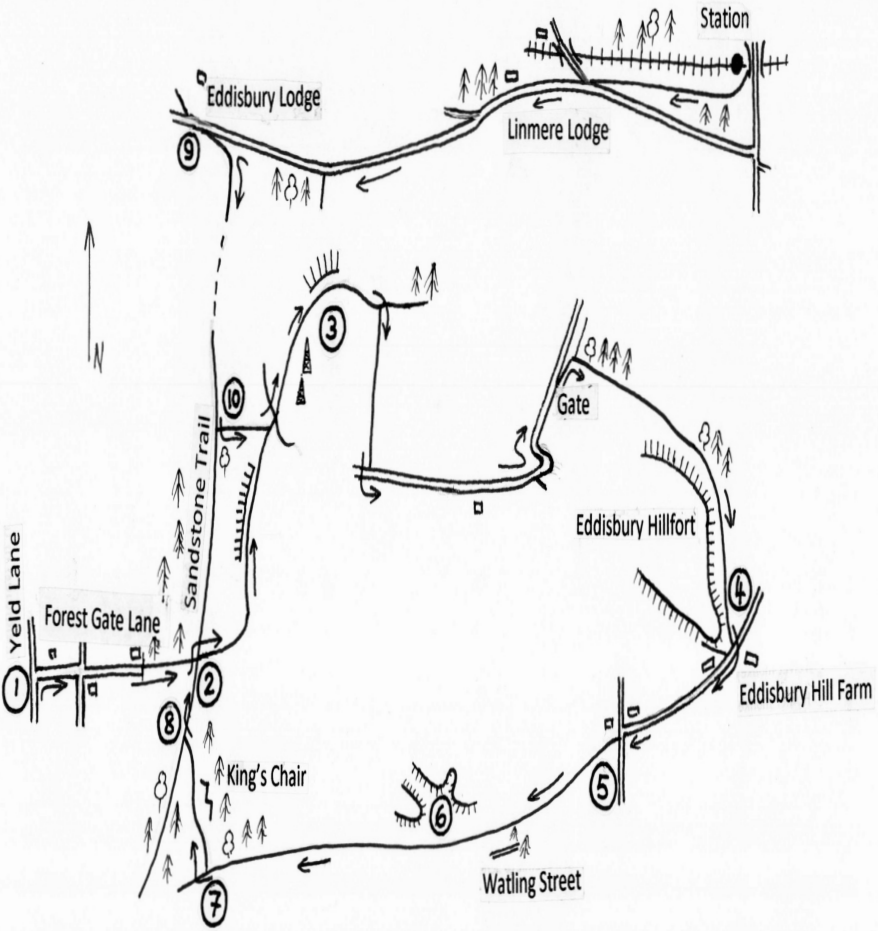
a) From the Yeld Car Park (parking free)

From the Yeld car park **(1)** walk down Forest Gate Lane until you enter Delamere Forest and reach The Sandstone Trail which crosses your path **(2).** Look out for the remains of an ancient stone wall running parallel to the Trail at this point. This was the original boundary of the Old Pale, an oval enclosure created in 1338 by Edward the Black Prince within the medieval hunting forest.

Follow the path up to your left, signposted as an alternative route for The Sandstone Trail. This will lead you up past the communication masts on the top of the hill to the viewpoint **(3)** from which on a clear day you have a panoramic view of seven counties with seven standing stones cut from the local stone of those counties. For those interested in the history of mapping, check out the story of the Delamere Meridian from which early OS maps were surveyed: www.thesandstoneridgetrust.co.uk > Heritage > Local History> click on map.

After taking in the view, set off downhill by the path that leads east towards Eddisbury Hill. There are circular *'Habitats and Hillforts'* way-markers that will direct you down the lanes to a path that skirts the eastern ramparts of Eddisbury Hillfort* and brings you to the lane at Eddisbury Hill Farm **(4)**. Through a gate on your right you can read an interpretation panel for the hillfort set in stone and, if you wish, you can climb up from here to the eastern entrance of the fort to see its ramparts and ditch.

Returning to the lane, turn right and walk to the T-junction at its end where you can pass through a kissing gate **(5)** to continue in the same direction along the


Station
Eddisbury Lodge
Linmere Lodge
9
N
3
10
Gate
Sandstone Trail
Eddisbury Hillfort
Yeld Lane
Forest Gate Lane
4
1
2
Eddisbury Hill Farm
8
King's Chair
5
6
Watling Street
7

edge of a field. This is the route of the Roman road, known as 'Watling Street', running from Chester to Northwich. The line of the road can be traced clearly at one point on your left where there is an untidy grove of trees.

A little further on, take a detour through a gate on your right to see a small spring that emerges into a semi-circular cove of rocks **(6).** Modern graffiti can be read on the rocks here and on other nearby outcrops and it is pleasant to speculate about whether this might have been at one time a useful watering place for travellers on the Roman Road. The road from here to Northwich, however, was a notorious site for highwaymen so you might have stopped at your peril (see pages 57,96).

Continue on the path which soon re-enters the forest **(7).** Immediately after entering the forest take the small track up to your right. This leads you to the site of an ancient quarry known as 'The King's Chair' (see page 16). It is recorded as the source of much of the stone used in building Vale Royal Abbey, founded by Edward I in 1277. You are walking on the spoil that fills the cavities left by the quarrying but you can still see several places on your right where the last of the quarrymen's pick-marks remain in the un-used stone. It is interesting to speculate on how the stone was removed and transported down to the road on your left which now forms The Sandstone Trail.

The path will lead you down to the Trail **(8)**. When you reach it turn right and return to the crossing point **(2)** where you started your ascent of the Old Pale. Turn left here and return on the path which eventually becomes Forest Gate Lane and takes you to your car **(1).**

b) Joining the walk from Delamere Station

From the Station forecourt turn right along the woodland path parallel to Forest Farm Road. Pass the Linmere Lodge Visitors Centre and onwards on the road towards Eddisbury Lodge **(9).**

At Eddisbury Lodge turn left onto The Sandstone Trail and continue up the Trail to a gate **(10)** on your left that leads up to the viewpoint on the Old Pale Heights **(3).**

From here continue as above **(4-8)** until you return to The Sandstone Trail **(8)**. Continue on the Trail to Eddisbury Lodge **(9)** and retrace your steps to the station.

**The Sandstone Ridge Trust publish two leaflets: A circular walk around Eddisbury and Kellsborrow Hillforts and The Archaeology of Eddisbury Hill which may be of additional interest.*

6. Primrosehill Wood

A pleasant walk through woodland and country lanes with extensive views. The walk includes an Ice Age feature with interesting graffiti, a medieval water supply with healing properties, an old water source, evidence of German PoW activity, and an Iron Age hillfort site.

Start: at the King's Gate, Forestry Commission free car park at Primrosehill Wood: OS Explorer 267, grid ref: SJ 535 679.
Distance: 4.2 miles
Level of Difficulty: Easy. There are kissing gates but no stiles, lanes are quiet and tracks easy to negotiate. There are no facilities on the walk. Nearest refreshments available are at the Boot Inn, Willington.
Duration: 2 hours

Directions:

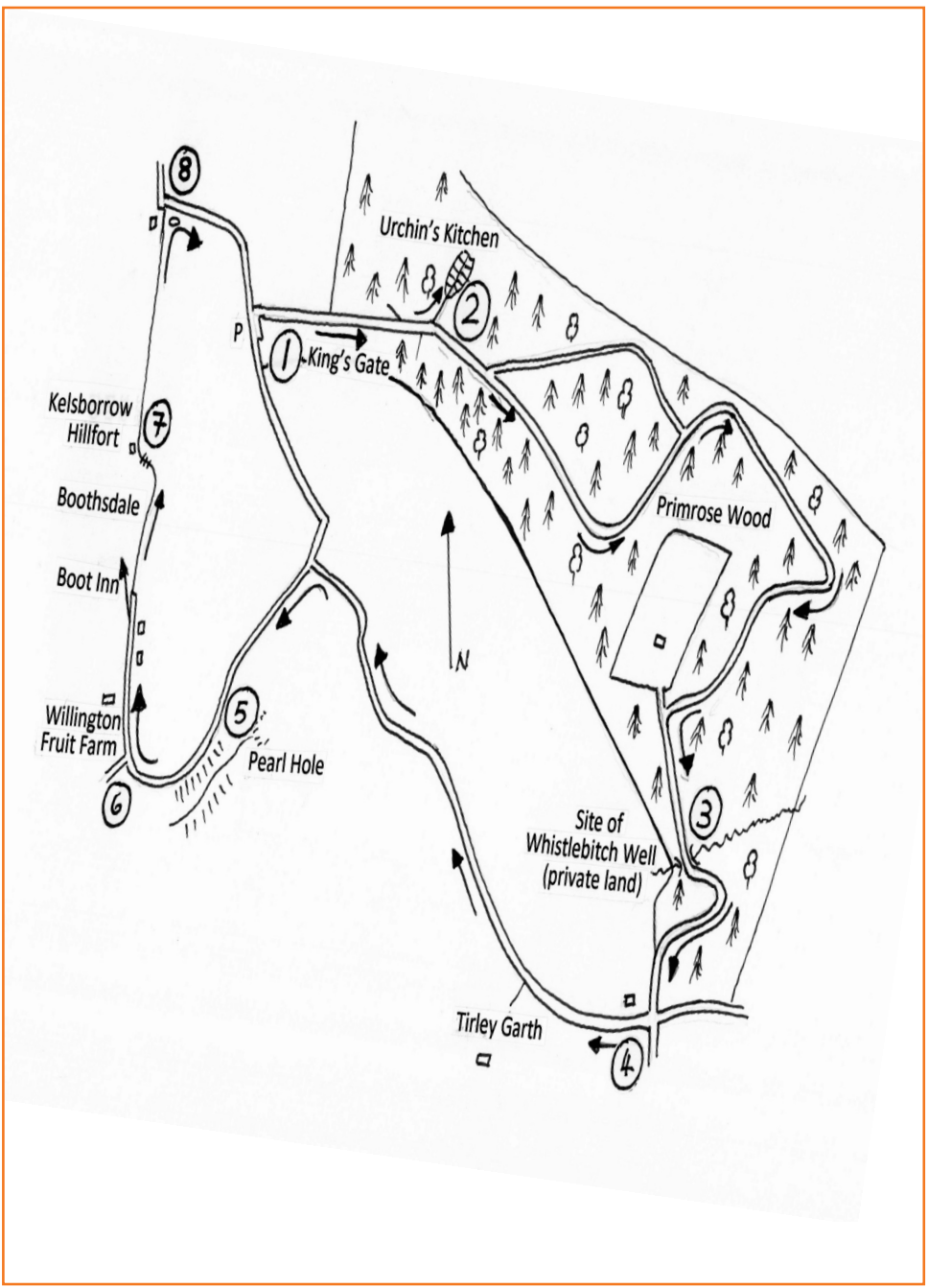
From the car park **(1),** take the broad straight forestry track, heading downhill. At the bottom of the incline, ignoring The Sandstone Trail signs, there is an interpretation board **(2)** about 'The Urchin's Kitchen' (see page 81). To visit this feature, take the path behind the board. The path can be very muddy, as it weaves its way through an increasingly deep ravine. Most of the graffiti are on the left side in the deeper part of the ravine. Look out for the 'footprint' carvings, initials from the First World War period, and 'POW Schwarz'.

Retrace your footsteps to the main track and turn left, heading uphill along the track, with a bench on your left. Continue for about a mile, sometimes winding, along the main track through the wood.

At a sharp bend **(3)** there is a small roofed structure on the left over a small stream. Taking care, descend from the track and look inside this structure. This is a holding tank for water running from 'Whistlebitch Well' (see page 59) which is hidden in the privately-owned woods above the path.

Continue along the path, gradually climbing, until you come to a lane **(4).** Turn right along this lane, passing Tirley Farm on the right, and continue with views to the left and right.

After slightly less than a mile, at a T-junction, turn left, downhill towards


8
Urchin's Kitchen
2
P
1
King's Gate
Kelsborrow
Hillfort
7
Boothsdale
Boot Inn
Primrose Wood
N
Willington
Fruit Farm
5
Pearl Hole
6
Site of
Whistlebitch Well
(private land)
3
Tirley Garth
4

Willington. Halfway downhill on the left side, there is a low wall **(5)**, overlooking 'Pearl Hole' in a steep ravine (see page 58). The wall was constructed by German PoWs. Look out for their inscription and dates of construction in the cement (see page 96).

Continue downhill and at a sharp bend **(6),** turn right along Gooseberry Lane, next to Willington Fruit farm.

Continue along this lane. It ends by a modern house but you can go straight ahead along a path leading uphill with the lovely valley of Boothsdale, also known as Little Switzerland, below on your left.

[To visit the Boot Inn, take a path to the left, near the modern house]

At the head of the valley, past a bench, go through a kissing gate. On the left, there is a large sandstone block, with information about the Kellsborrow Iron Age hillfort site **(7) *.** Continue along the path over fields and through a small wood, following the path by a hedge to a road **(8).**

Turn right, uphill along the road, past a pond on the right, returning to Kings Gate car park on your left.

**The Sandstone Ridge Trust publish two leaflets: A circular walk around Eddisbury and Kellsborrow Hillforts and The Archaeology of Kelsborrow Castle which may be of additional interest.*

7. Bulkeley Hill Woods

A circular walk from Higher Burwardsley, climbing up to the Sandstone Ridge and Trail, passing through picturesque woods with wonderful views in different directions and an extraordinary railway along the way.

Start: at the Candle Factory in Higher Burwardsley:
OS Explorer 257, grid ref: SJ 521564.
Distance: approximately 2.5 miles.
Level of Difficulty: Moderate with some sections of uphill. In winter or periods of heavy rain conditions underfoot can be muddy in places.
Duration: approximately 1.5 - 2 hours

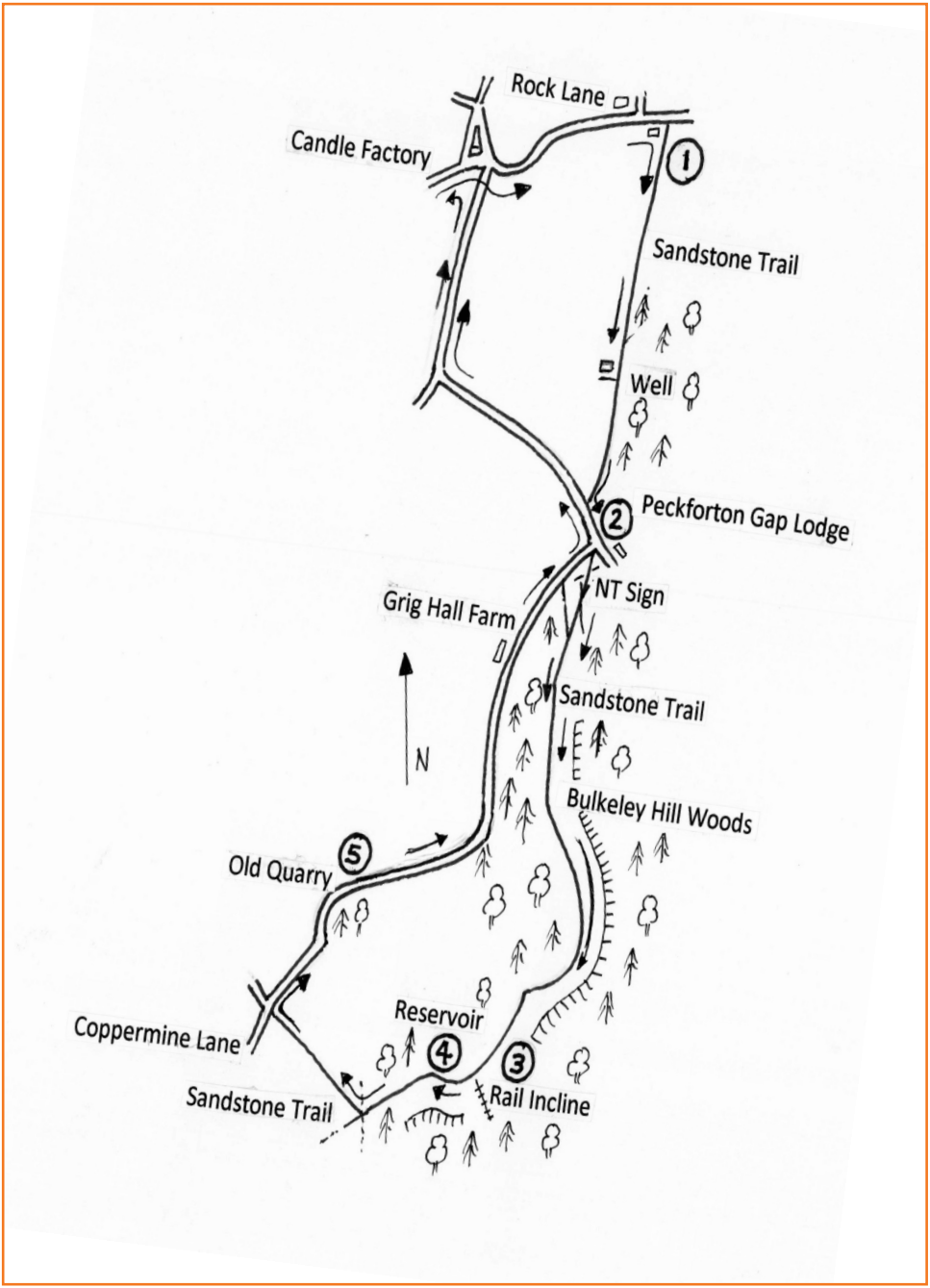
Description

After parking in the first section of the car park at the Candle Factory bear left out of the car park entrance. Cross the road and turn up a lane with a house on your left. After a few yards go straight on up Rock Lane ignoring the lane turning off right.

Follow Rock Lane**,** which soon starts rising uphill, ignoring a left fork. Go straight on passing Rock House farm on the left. Pass a left turn and sign for Beeston Castle* and carry on for a further 100yds or so past the unusually named 'Elephant Track Cottage', until seeing a path and gate turning off right into a field **(1)**. This is signposted for Bulkeley Hill and Rawhead along The Sandstone Trail.

Follow the Trail keeping to the left hand side of the field. Off to the right are panoramic views of the Clwydian Hills and Moel Famau. Pass through a gate leading to a narrow path with woods to the left and a house on the right. At the next gate ignore a path off to the right and carry straight on through another gate until reaching a further gate onto a lane. Turn left here and after a few yards, opposite Peckforton Gap Lodge **(2),** an unusual lodge to the Peckforton Estate, go through a gap in the wall where you will see a National Trust sign, into Bulkeley Hill Woods.

Follow the path off diagonally right. It soon starts to go uphill over an uneven surface laced with tree roots. A path soon joins from the right but carry straight on upwards as the path narrows and there is a steep bank down on your left. When the path levels out you will join The Sandstone Trail again, onto which you


Rock Lane
Candle Factory
1
Sandstone Trail
Well
2
Peckforton Gap Lodge
NT Sign
Grig Hall Farm
Sandstone Trail
N
Bulkeley Hill Woods
5
Old Quarry
Reservoir
Coppermine Lane
4
3
Rail Incline
Sandstone Trail

turn left. Carry on along the Trail and reach several viewing points with views to the left over the Cheshire Plain. On a clear day you will see the Pennines and, depending on its orientation, the dramatic white Jodrell Bank telescope.

After a while you will see an information board and Bulkeley Rail Incline **(3)** dropping down the very steep slope on your left. This was used during construction of an enclosed reservoir that you will pass before leaving the woods. After the railway you pass through a grove of ancient sweet-chestnut trees and another rocky viewing point that has some interesting graffiti including carvings of hands in the stone (see page 97). When passing through a gap in a wire fence the enclosed reservoir **(4)** can be seen off to your right.

The path now goes downhill and reaches the end of the wood. Here bear right across a field along The Sandstone Trail signposted to Rawhead. At the end of the field, opposite Coppermine Lane**,** turn right up a gently rising rough vehicle track. Carry on past driveways to houses on the right and after passing a footpath to the left, over the hedge you can see an overgrown disused quarry **(5).** You will have noticed the many uses that stone from this and many similar small quarries has been put to in the past: in buildings, walls, gate-posts and footpaths. The entire domestic landscape has been shaped by the use of this local resource.

Continue along the vehicle track. On clear days you will have panoramic views over the Dee Estuary, to the Liverpool Cathedrals and Ellesmere Port. Pass Grig Hall Farm on your left and arrive back at Peckforton Gap Lodge **(2).**

From here you can either return the way you came or continue left down the lane and bear right at the bottom. Follow the lane and bear left at the junction with the next lane to return to the Candle Factory car park.

**The Sandstone Ridge Trust publish two leaflets: A circular walk around Beeston Crag and The Archaeology of Beeston Crag which may be of additional interest.*

8. Harthill and Rawhead

A circular walk from Harthill with its historic church, climbing to the Sandstone Ridge and Trail, passing ancient wells and intriguing caves. Rawhead is the highest point on the Trail and has wonderful views.

Start: at Harthill village green:
OS Explorer 257, grid ref: SJ 501 552.
Distance: approximately 3 miles.
Level of Difficulty: Moderate with some sections of uphill. In winter or periods of heavy rain conditions underfoot can be muddy in places. There are several steep sets of steps.
Duration: approximately 2 hours

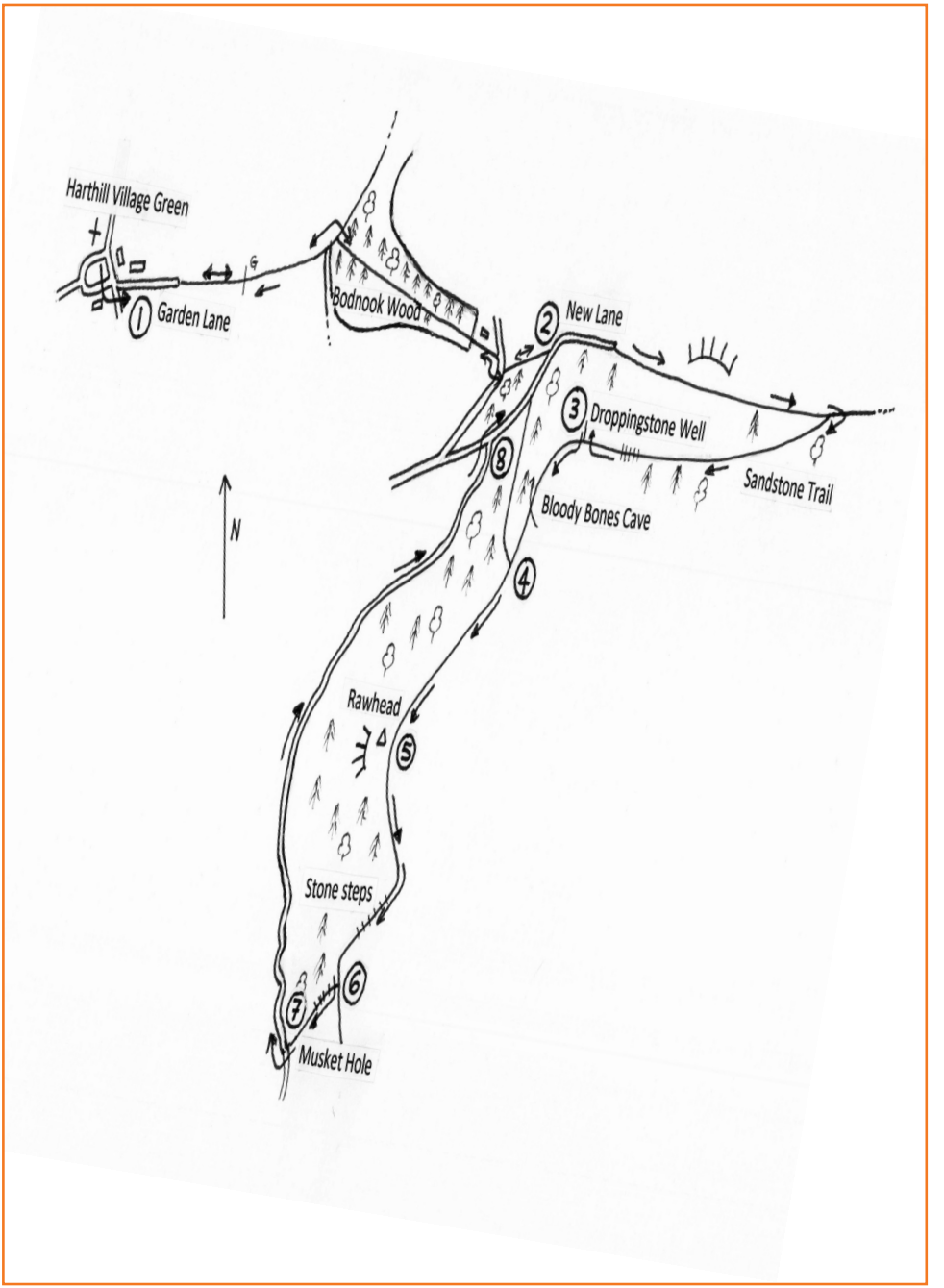
Description

Park on the church side of the green. Behind the houses opposite there are the remains of an old quarry and you can see some of the tracks that were used in transporting the stone embedded in the pavement in front of the houses. Cross the road to the school. In the wall in front of the school you will see a disused well/fountain**.** See if you can read the inscription on it.

A few yards beyond the school, follow Garden Lane **(1),** which shortly becomes a footpath with a skateboard park to your left, up to Bodnook Wood. Ignore a single stile on your right and bear left until you meet two gates**.** Go through the right-hand gate into Bodnook Wood and follow the path straight ahead. Leave the wood through another gate keeping to the left of the field against the boundary of a house. Cross a stile onto a lane, turn right and immediately left up a steepish path onto New Lane **(2).**

Turn left here and follow the lane straight on following the bottom of a wood on your right-hand side. Continue as the lane becomes a dirt track for approximately half a mile enjoying the wide views to your left including Beeston Castle* and, on a clear day, the Liverpool cathedrals. After passing several gates and waymarks you will arrive at a Sandstone Trail waymark and a stony path to your right.

Follow The Sandstone Trail into a wooded area, almost doubling back on the track just taken. After a short distance climb several flights of shallow steps until the woods thin on your left and you will see a path on your right with timber stairs leading down to 'Droppingstone Well' **(3).** This is a well-preserved relic of the


Harthill Village Green
1 Garden Lane
Bodnook Wood
2 New Lane
3 Droppingstone Well
Sandstone Trail
8
Bloody Bones Cave
N
4
Rawhead
5
Stone steps
6
7
Musket Hole

Nineteenth Century with water still running, and it is interesting to compare the way it appears now to the photograph of 1910 (see page 64).

Return and continue on the Trail. In the cliffs below you on the right is the site of 'Bloody Bones Cave' (see page 87). This has interesting associations with bandits of the early nineteenth century but is on private property and cannot be visited. There are several indications of small-scale quarrying in the cliffs to the left of the path.

[Before arriving at Rawhead you will see a sign for a path on the right **(4)** down to Harthill which you may take if you wish to shorten the walk. At the bottom of the track turn right up New Lane and then left on the footpath **(2)** to retrace your way back through Bodnook Wood to Harthill].

Staying on the Trail you will reach the trig point on Rawhead **(5).** (For a suggested explanation of the name see page 86) You will wish to stop to admire the excellent view from here. In the cliffs immediately below you is a cave known as 'The Queen's Parlour'. The cave has been carved out by mining for the fine white sand used for various domestic purposes in the past (see page 85). It is possible to scramble down to the cave and it can be visited with due caution. Please take care to leave no litter.

Continue along The Sandstone Trail following the fence line and descend a long flight of stone steps. When you come to a little clearing on the path **(6)** you will see a way-marker pointing to a path on the right. Follow this path down a steep set of steps to a forest track at the bottom. Just before the track, on the right-hand side in the cliff-face above, is 'Musket Hole' **(7).** This small cave is difficult to access but contains some interesting graffiti (see page 93). Turn right here and follow the track.

Continue on the forest track until meeting New Lane **(8).** Turn right here uphill until reaching your earlier path to the left. You have now made a complete circuit and are back at point **(2).** Follow the path until meeting another lane and almost opposite go over the stile into a field. Keep to the right hand side of the field and through another gate into Bodnook Wood again, back to the gate and the path downhill to Garden Lane and Harthill.

**The Sandstone Ridge Trust publish two leaflets: A circular walk around Beeston Crag and The Archaeology of Beeston Crag which may be of additional interest.*

9. Bickerton Hill

A circular walk around Bickerton Hill visiting mysterious marks in the rocks, passing near a hermit's cave and exploring an Iron Age hillfort. There are wonderful views and an opportunity to enjoy open areas of 'lowland heath', a rare habitat being restored by the National Trust. You may begin this walk from one of two National Trust free car parks: from Pool Lane (OS Explorer 257, grid ref: SJ 503 5300) * **or from Duckington. The following description is from Duckington.**

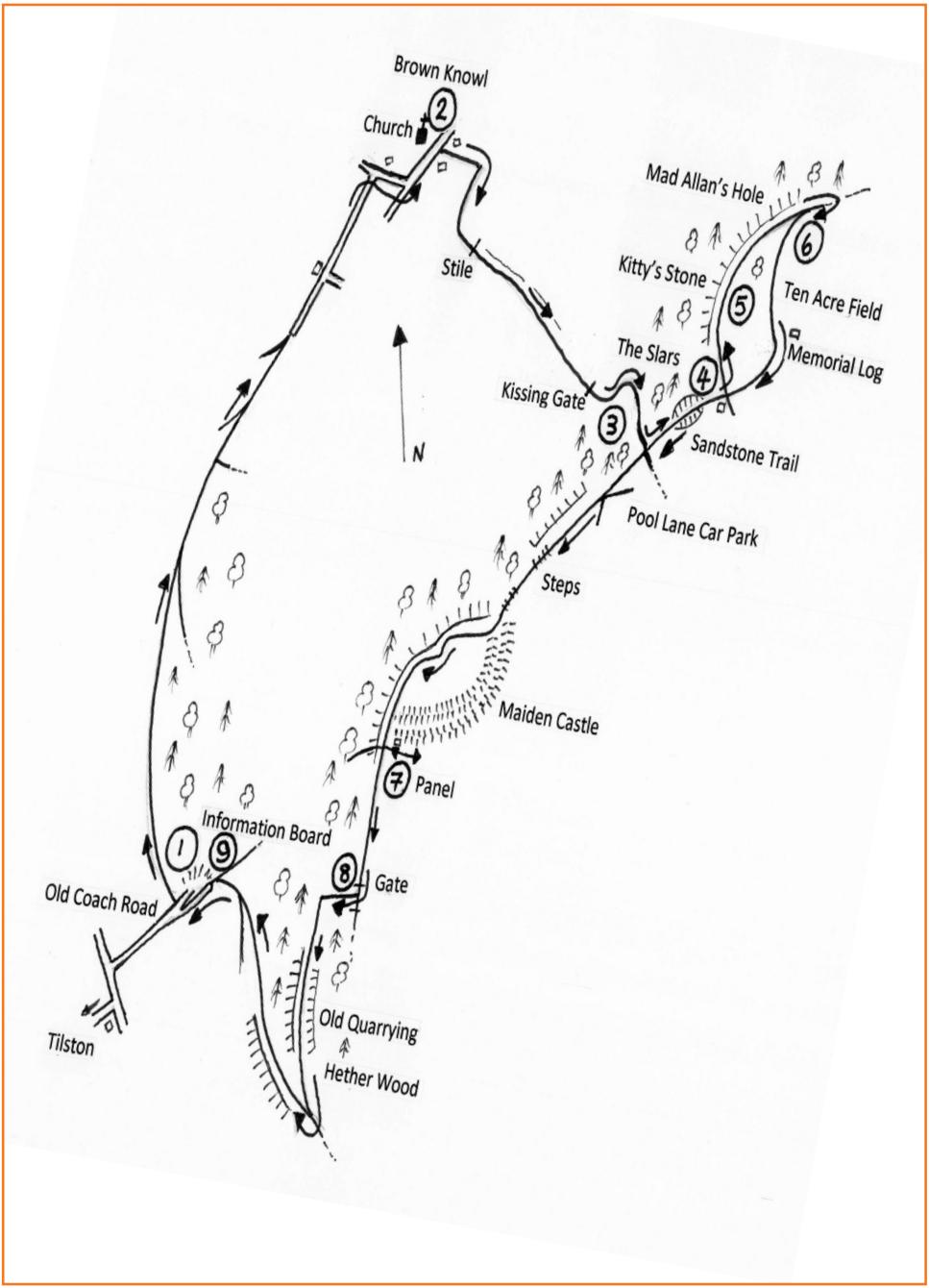
Start: at the small car park at the top of a single-track lane off the Old Coach Road, near Duckington. Approaching from the north, the lane, which is marked only by a 'No through-road' sign, is on your left, just before a turn to Tilston and a thatched cottage on the right:
OS Explorer 257, grid ref: SJ 494 525.
Distance: 3 miles
Level of Difficulty: Moderate with one or two gentle climbs.
Duration: 2 – 2.5 hours

Directions

From the car park **(1),** which is on the site of an old quarry, with your back to the National Trust information board, turn right along a sandy track towards Brown Knowl. Continue straight ahead through several gates until you are on a tarmac lane and reach a T-junction. Turn right and follow this road downhill towards the Methodist church **(2).** Wilfred Owen, the poet, stayed in this village as a child and it has been said that it was his experience of this landscape that first inspired his love of poetry.

Opposite the church turn right down a drive signposted as a footpath. This becomes a track that kinks sharply right, then left. This track can be muddy at times. Cross a stile into a field and walk uphill keeping close to the left-hand fence. Pass a disused stile on your right, and go up and through a kissing-gate at the base of the hill.

Immediately ahead there is a slab of stone marked with a set of curious parallel grooves **(3).** These are known as 'The Slars' (see page 22). It is not known how or why the grooves were created but it is very possible that they played a role in


Brown Knowl
2
Church
Stile
Mad Allan's Hole
6
Kitty's Stone
5
Ten Acre Field
Memorial Log
The Slars
4
Kissing Gate
3
Sandstone Trail
N
Pool Lane Car Park
Steps
Maiden Castle
7
Panel
Information Board
1
9
8
Gate
Old Coach Road
Tilston
Old Quarrying
Hether Wood

the transportation of stone from quarries on the hill down to the village. In the 1870s when the Chester to Wrexham railway line was being built, a number of quarrymen and masons were billeted in Brown Knowl and stone would have been needed for bridges and other purposes. The stony outcrop is an obstacle on the nearest manageable path down from the hill so the grooves may have been worn by ropes or sledges. You can see some small steps or footholds cut alongside them. There is also a considerable amount of graffiti on the stone here.

You can now follow the path around the top of the Slars up to the top of the hill, looking out for The Sandstone Trail signpost. Turn left here on the Trail up a sandy sunken track to a fingerpost **(4)** pointing left to Rawhead and Beeston. Follow this up to the splendid viewpoint at 'Kitty's Stone' **(5).** The path continues along the edge of the cliffs to enter open birch woods. Somewhere below you here is the site of 'Mad Allen's Hole' (see pages 83,85). This is a cave, said to have been the home of an eighteenth-century hermit. Its entrance has been partly blocked by a rock-fall and it remains difficult and dangerous to access.

When you see a fence and a waymark on your right **(6)** turn right and head back, away from the cliffs. To the left of you is Ten Acre Field, an area that is being restored by the National Trust as 'lowland heath'. Follow the path and bear right past a log carved in memory of Dr. Andrew Deadman, chair of the *Habitats and Hillforts* project and first chair of the Sandstone Ridge Trust. From here return to the fingerpost and back down the sunken sandy track and, if you wish, you can descend from here to a car park at Pool Lane. Otherwise continue straight ahead on the Sandstone Trail, climbing a series of stone steps. Just after a viewpoint with a log bench the path goes over a distinct bump and you have arrived on the eroded double ramparts of Maiden Castle **(7) *.**

Maiden Castle is an Iron Age hillfort built between 900 and 400BC. To fully appreciate it, follow the Trail along the cliff-top and down some steps to an interpretation panel set into a huge sandstone block. With your back to this block walk a few yards down to your left and look back up at the twin ramparts. When originally constructed they would have been much more impressive: twice as high, faced with sandstone and topped with a timber palisade. You can explore the monument at your leisure, following the ditch between the two ramparts to find the in-turned entrance way and return to the Trail on the cliff edge.

Returning to the interpretation panel check out the traces of fossils on its edge

(see page 6) and then continue on a path across the heath, ignoring The Sandstone Trail which turns down to the right. Go through a wooden gate **(8)** into birch woods and bear immediately right on a well-used path beneath the trees. Ignoring a gate on the right, follow this path as it winds up and down past sandstone outcrops, looking out for signs of minor quarrying in the past. Before the rocks end, turn sharp right downhill on a path edged with tree-trunks. You are passing through Hether Wood, a mixed woodland which is rich in wildlife. Ignore paths to either side and go right down to the bottom of the slope where there is a Sandstone Trail information board **(9).** Turn left here and descend a few yards to the car park which is hidden on your right.

**The Sandstone Ridge Trust publish several leaflets: A circular walk around Maiden Castle, Bickerton, providing directions from Pool Lane, The Archaeology of Maiden Castle and Lowland Heath which may be of additional interest.*

How to help

The Sandstone Ridge Trust would like to encourage readers of this book and all who visit the Ridge to keep an eye out for interesting old quarries, wells and graffiti or carvings. We are always keen to learn what might still be out there unrecorded.

Contact us:

If you find anything that you think might be important please take a photograph and let the Trust know by e-mail to:

infosrtrust@gmail.com

You can also contact the Cheshire Historic Environment Record. See their website:

http://www.cheshirearchaeology.org.uk/?page_id=1800

Warning

The Sandstone Ridge Trust cannot take responsibility for your safety. Please do not take risks on rock faces.

Please respect private land and do not disturb any site. If it is necessary to remove litter or vegetation that is obscuring the site, use your hands and, where you think the site may be very old, do not try to remove weeds, lichens, or moss growing on the rock.

In the case of graffiti, any examination of the images must be non-destructive. Do not use any abrasive materials to clean the surface or try to re-carve, paint or chalk the engravings. Photograph it as it is.

Thank you

Other information

The Sandstone Ridge Trust publishes a series of leaflets that can be read in association with this book or separately.

Circular Walks:

Helsby Hill and Woodhouse Hillfort
Beeston Crag
Eddisbury and Kelsborrow Hillforts
Maiden Castle, Bickerton

Key Habitats:

Broadleaf Woodland
Meres and Mosses
Lowland Heath
Species-rich Grassland

Archaeology:

Helsby Hill
Eddisbury Hill
Beeston Crag
Woodhouse Hill
Kelsborrow Castle
Maiden Castle

These are available at information points along the Ridge and on-line at:
www.thesandstoneridgetrust.co.uk > Access and Interpretation > Leaflets.

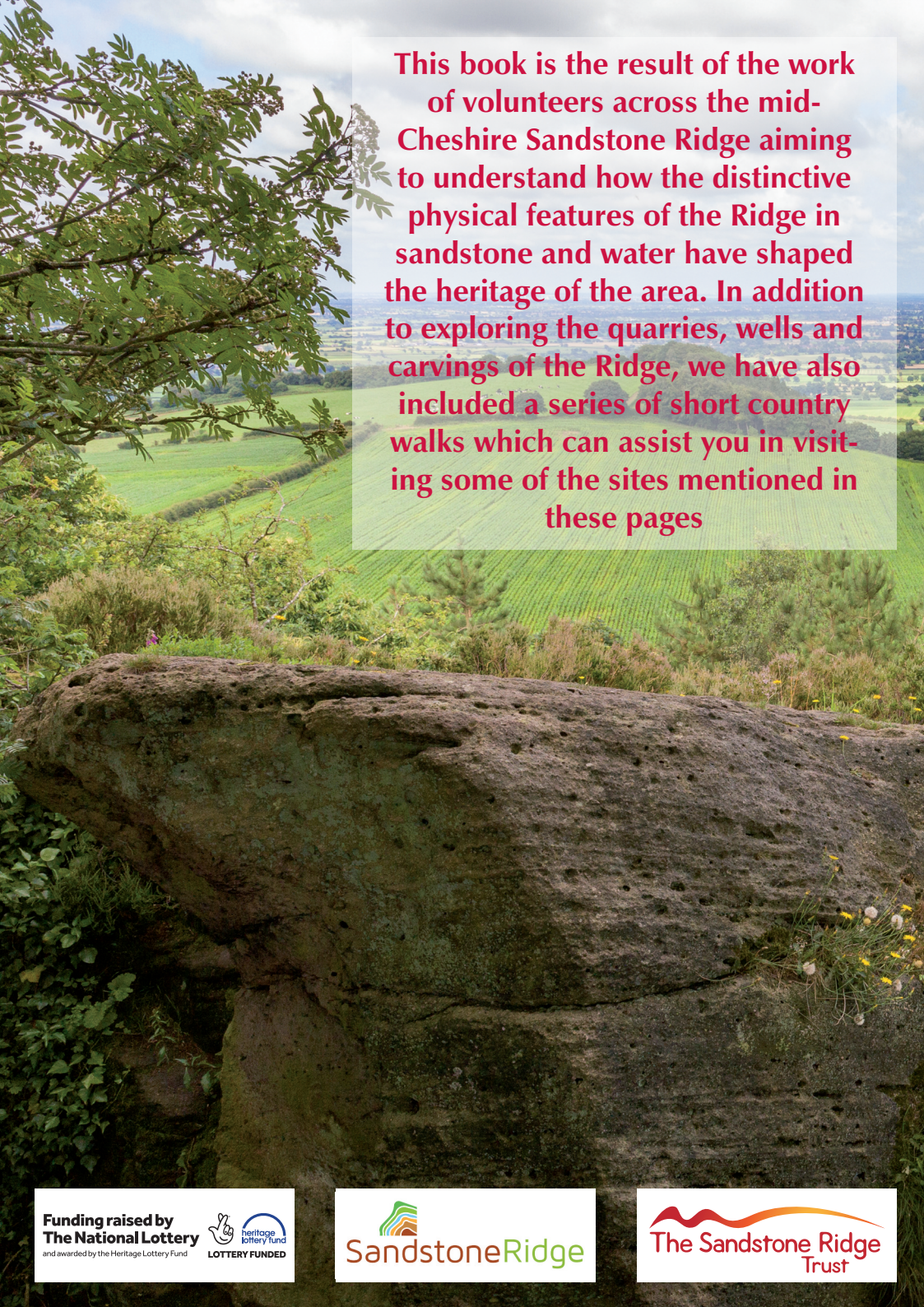
The Sandstone Ridge Trust

The Trust is a charitable body run by a Board of Trustees. It is seeking new opportunities for partnerships and funding with local people, businesses and organisations that:

- *Conserve the special qualities of the Ridge*
- *Celebrate and improve understanding of the area's archaeological, historical and cultural inheritance*
- *Increase public enjoyment through interpretation and improved access*
- *Develop rural skills and provide training, volunteering and educational opportunities in the natural and historic environment*

The Trust would be pleased to hear from anyone who shares these aspirations.
If you would like more information about the Trust, or want to volunteer, please contact us:

Email: infosrtrust@gmail.com
Visit: www.thesandstoneridgetrust.co.uk



This book is the result of the work of volunteers across the mid-Cheshire Sandstone Ridge aiming to understand how the distinctive physical features of the Ridge in sandstone and water have shaped the heritage of the area. In addition to exploring the quarries, wells and carvings of the Ridge, we have also included a series of short country walks which can assist you in visiting some of the sites mentioned in these pages

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