

SOLWAY'S BUILT HERITAGE

Identifying the distinctive character
of the north Solway Plain



solway Wetlands
LANDSCAPE PARTNERSHIP SCHEME

 heritage
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Bowness-on-Solway

For centuries, the Solway estuary has been a frontier. In the Roman period, it was a boundary between the Roman perception of ‘civilised’ Britannia and the barbarian north. In later years, the Solway demarcated the border between England and Scotland as it still does today. Lastly, the Solway is at the junction of sea and land – a juxtaposition that has shaped its history for thousands of years.

After the last Ice Age, the Solway Plain was half sea, half land – a water-saturated landscape of salt marshes, peat bogs, raised mires and mud flats interspersed with low, sandy hills.



A Roman ceramic head of a female found at Burgh-by-Sands
Tullie House Museum & Art Gallery Trust, Carlisle

The Romans were the first to address the challenges presented by the environment. In AD 122, Hadrian’s Wall was under construction, taking the shortest route across northern England between Wallsend in the east and Bowness-on-Solway in the west. Forts were established along the line of the Wall – *Maia* (Bowness-on-Solway), *Congubata* (Drumburgh), *Aballava* (Burgh-by-Sands) and *Uxellodunum* (Stanwix in Carlisle). Over time, each fort attracted an adjacent civilian settlement or vicus that provided Roman soldiers

with food, drink, goods and services. In post-Roman times, these early settlements expanded over the remains of the forts themselves. Today, the main road through Bowness follows the line of the *Via Principalis* through the former fort of *Maia*. A similar pattern can be discerned at Burgh-by-Sands.



The Staffordshire Moorlands Pan bearing the names of *Maia* (Bowness) and *Coggabata* (Drumburgh)

Solway Plain was largely defined by the monks of the abbey.

Wool was the valuable commodity of the day. The marshy ‘wastelands’ were drained to create fields for grazing sheep and for growing crops. New settlements appeared that focused on various monastic activities, such as Salt Coates (salt making), Swinsty (pig husbandry) and Calvo (calf husbandry). Larger settlements clustered around the port at Skinburness, the ‘new’ church at Newton Arlosh and the abbey at Abbetown.



Plan of Bowness-on-Solway with Roman fort outline

Edward I’s ill-fated Scottish campaigns of the early 14th century unleashed much resentment among the Scots, which resulted in numerous attacks on English property. The poorly-defended abbeys of northern England were repeatedly targeted – Holme Cultram Abbey being no exception. This led to the building of defensive structures – tower houses, bastles (fortified farmhouses) and thick-walled church towers that could double-up as places of refuge.

With the arrival of the Normans in the late 11th century, baronies were established as power bases from which to control the local area and population. The Barony of Burgh was one of these. The Normans were masters of stone building and rebuilt many of the simpler Anglo-Saxon churches that existed at the time, often re-using Roman stone from Hadrian’s Wall and its forts.

In 1150, Holme Cultram Abbey was founded as a daughter house of Melrose Abbey. From this time on, the distinctive landscape character of the



Holme Cultram Abbey 3

Under more peaceful times in the 17th century, local farmers could reap the profits of their own endeavours. The small fields carved out of the 'waste' now produced earnings that could be ploughed back into farm investment. From around 1650, many farms were rebuilt or enlarged, often proclaiming the new wealth and status of their owners with elaborate datestones, moulded surrounds, classical pediments and other architectural features. Gradually, the humbler clay dabbin cottages were demolished or abandoned, so that only about 300 survive today.

Other buildings were erected for specific purposes: watermills and windmills, forges, tileworks and breweries.



Silloth Docks in 1904

Harbours were the gateways to sea routes that connected the Solway Firth to the wider world. Investment in port facilities resulted in improved access routes and the development of planned towns to accommodate visitors, such as at Port Carlisle and Silloth.

History and topography have shaped this area over millennia and forged distinctive landscape characteristics that are not found elsewhere. This booklet will introduce you to the built heritage features of the north Solway Plain that have survived the centuries of change so that we may appreciate the invaluable contribution they make to the Solway's 'sense of place' today.

GETTING AROUND

BY BUS

Service 93 runs from Carlisle to Bowness-on-Solway via Burgh-by-Sands.

Service 71 runs from Carlisle to Silloth via Anthorn and Kirkbride. For more information, visit the Traveline website: www.traveline.info

BY RAIL

The Cumbria Coastal Railway starts in Carlisle with stations at Dalston, Wigton, Aspatria and Maryport.

SOLWAY COAST AONB



The Solway Coast AONB (Area of Outstanding National Beauty) was designated in 1964 and covers around 73 square miles (118 km) of the Solway Plain. It stretches from Rockcliffe in the north-east to Maryport in the south-west. The primary purpose of the AONB is to conserve and enhance the natural beauty of the area.

Solway Wetlands Landscape Partnership Scheme

This book has been produced as one of many projects undertaken by the Heritage Lottery-funded Solway Wetlands Landscape Partnership Scheme. This 5-year scheme brings together a wide range of partners with an interest in the distinctive heritage and ecology of the Solway Wetlands to:

- Improve the condition of wetland sites
- Conserve the built and natural heritage of the area
- Improve access for the public
- Provide opportunities for people to learn about the distinctive character of the area
- Provide training in heritage skills and environmental conservation
- Provide volunteering opportunities

Finding out more

- **Solway Wetlands Centre**, Campfield Marsh RSPB Reserve, Bowness-on-Solway
- **Holme Cultram Abbey Visitor Centre**, Abbeytown
- **Solway Coast Discovery Centre**, Silloth

Websites

- www.solwaycoastaonb.org.uk
- www.solwaywetlands.org.uk
- www.ctfc.org.uk/explore-churches (Churches Trust for Cumbria)
- www.solwayshorewalker.wordpress.com
- www.spab.org.uk (Society for the Protection of Ancient Buildings)
- <http://myweb.tiscali.co.uk/hstchg> (Holme St Cuthbert History Group)

COUNTRYSIDE CODE

Respect other people:

- Consider the local community and other people enjoying the outdoors
- Leave gates and property as you find them and follow paths unless wider access is available
- Do not go onto private property without permission

Protect the natural environment:

- Leave no trace of your visit and take your litter home
- Keep dogs under effective control

Enjoy the outdoors:

- Plan ahead and be prepared
- Follow advice and local signs

Monkhill windmill



PLANNED SETTLEMENTS



Aerial view of Anthorn

Farms, villages and towns on the Solway Plain all developed in response to local conditions and socio-economic influences.

Some villages started as 'vici' or civilian settlements in the lee of a Roman fort to provide goods and services to the Roman soldiers stationed along Hadrian's Wall. Examples of likely fort-based villages can be seen at Burgh-by-Sands and Bowness-on-Solway. These developed organically over a long period of time rather than in a planned way.

Skinburness



In the medieval period, concerted efforts were made to convert the wetlands of the Solway Plain into usable land through drainage. Over time, a distinctive settlement pattern emerged of farmsteads aligned along the main access roads and overlooking the 'wastelands' beyond. An 'occupation road' behind the farms provided access to narrow strip fields at the rear. This settlement pattern is clearly seen at Newton Arlosh, Boustead Hill and old Anthorn.

At Skinburness, a small port was developed by the monks of Holme Cultram. Later landowners sought to expand on trade via the Irish Sea and its connections to main shipping routes further south. To this end, the wealthy Lowther family developed the port at Whitehaven in 1634 and laid out a new town in the 1660s. Other prominent local families followed suit. The Senhouses established docks at Maryport in 1749 and the Curwens

developed Workington Port in the 1770s for their coal and iron trade, all with planned settlements in their wake. Silloth was no exception. The arrival of the railway in 1856 expedited the development of a new port along with an elegant planned town.



Silloth Docks, 1920s

The growth of Carlisle during the early 1800s precipitated the need for improved ways of importing raw materials and exporting finished goods. An Act of Parliament of 1819 allowed the construction of a canal from Carlisle to Fisher's Cross, the nearest navigable point on the Solway Firth.

SKINBURNESS

After 1150, the monks of Holme Cultram established a small port at Skinburness to export their wool, grain, timber, leather, salt and other goods. By 1300, Edward I was using the port as a naval base for his Scottish campaigns.

A year later, Skinburness was granted the right to hold a weekly market and an annual fair. The town was becoming prosperous, but it was not to last. Around 1304, a violent storm breached the sea dyke and devastated the port and its town. The surviving inhabitants relocated to a 'new town' at Arlosh.

Skinburness managed to survive, but much diminished in size. Its medieval layout can still be discerned to the north of the village where a line of farmsteads overlooks the road and salt marshes beyond, with strip fields behind the farms.

Silloth Docks in 1904



NEWTON ARLOSH

The disaster that befell Skinburness c. 1304 helped create another village further inland. In 1305, the abbot of Holme Cultram requested that the liberties and privileges given to Skinburness be transferred to a 'new town' at Newton Arlosh.

The village follows the established pattern of medieval planning with farms fronting a road which overlooked the common and waste. Behind the farms, narrow strip fields were laid out.

Map of Newton Arlosh in 1865



PORT CARLISLE

From the early 1800s, Carlisle's manufacturing base was rapidly expanding, and in need of improvements in transport. In 1823, a canal was dug from Carlisle to Fisher's Cross (renamed as Port Carlisle) on the Solway Firth. From here, coastal vessels could take goods and passengers to larger ports such as Whitehaven and Liverpool.

Port Carlisle expanded in anticipation of a steady stream of visitors. A hotel,

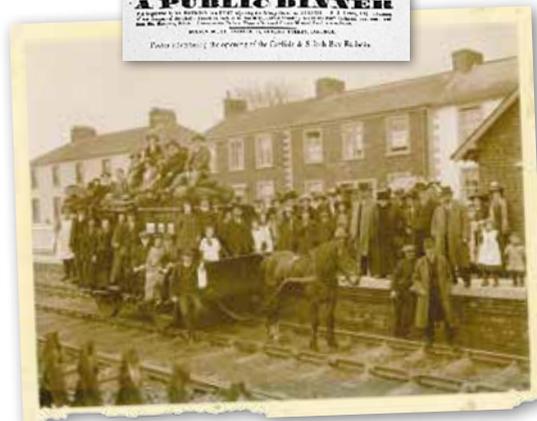


Carlisle Library

Carlisle Canal by Matthew Nutter (1795–1862)

two public houses, public baths and an elegant Georgian terrace were built fronting the sea and the canal.

Unfortunately, the port suffered from siltation and the canal struggled to attract enough business. In 1853, the canal was drained and replaced by a railway the following year. Between Drumburgh Junction and Port Carlisle, a horse-drawn 'dandy' operated until 1914.



Cumbria County Council (Carlisle Library)

Last day of the 'dandy' service to Port Carlisle, April 1914.

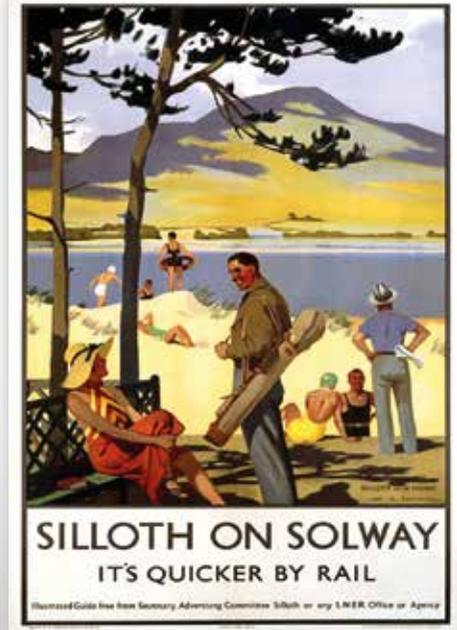
SILLOTH

The creation of Silloth as a seaside town was promoted by the developers of the Carlisle and Silloth Bay Railway in 1854. The following year, the Senhouses of Maryport started constructing a new dock at Silloth and, at the same time, work began on laying out a gracious seaside town on a grid pattern. Today, Silloth is a fine example of Victorian planning with its wide tree-lined streets, elegant Italianate buildings overlooking the Green, and a pleasant promenade along the sea front.



Cumbria County Council (Carlisle Library)

Silloth, 1960s



The monks of Holme Cultram had 'sea lathes' (grain barns) along the coast from which the name 'Silloth' is likely to have been derived.



Silloth today

ABBEY AND CHURCHES



St Michael's Church, Bowness-on-Solway

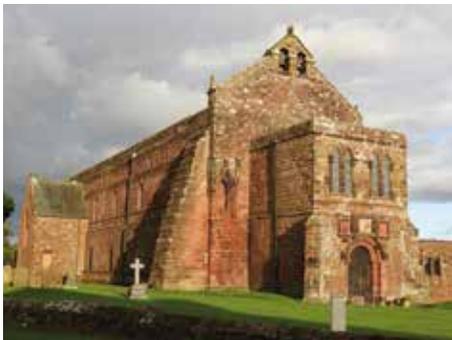
The distinctive landscape character of the Solway Plain was largely defined by the activities of Holme Cultram Abbey from 1150 onwards.

The abbey was given large tracts of 'wasteland' on the Solway to turn into productive usage. Cistercian monks were masters of land and water management. Throughout the 12th and 13th centuries, the Abbey systematically changed the landscape of the Solway forever. Marshes were drained, sea

dykes thrown up, and farms developed for sheep grazing and for growing crops. The monks also fished, smelted iron ore, tanned leather and produced salt (a valuable commodity for preserving meat and fish for trade over the winter). Granges were established to store their grain, and the small port at Skinburness was developed to export their products; in particular from sheep – mutton, bone, horn, skin and most importantly, wool.

Local place names are indicative of the Abbey's activities – Salt Coates, Abbey Cowper (barrel making), Swinsty (place where pigs were kept), Calvo (place where calves were kept) and Raby (place where working dogs were kept).

Most of the churches in the area were endowed to the abbey and either built by the abbey (as at Newton Arlosh) or rebuilt on earlier foundations. Many



Holme Cultram Abbey

have Roman masonry incorporated into their construction that came from Hadrian's Wall or from one of the many Roman forts in the area.



St Bride's Church, Kirkbride

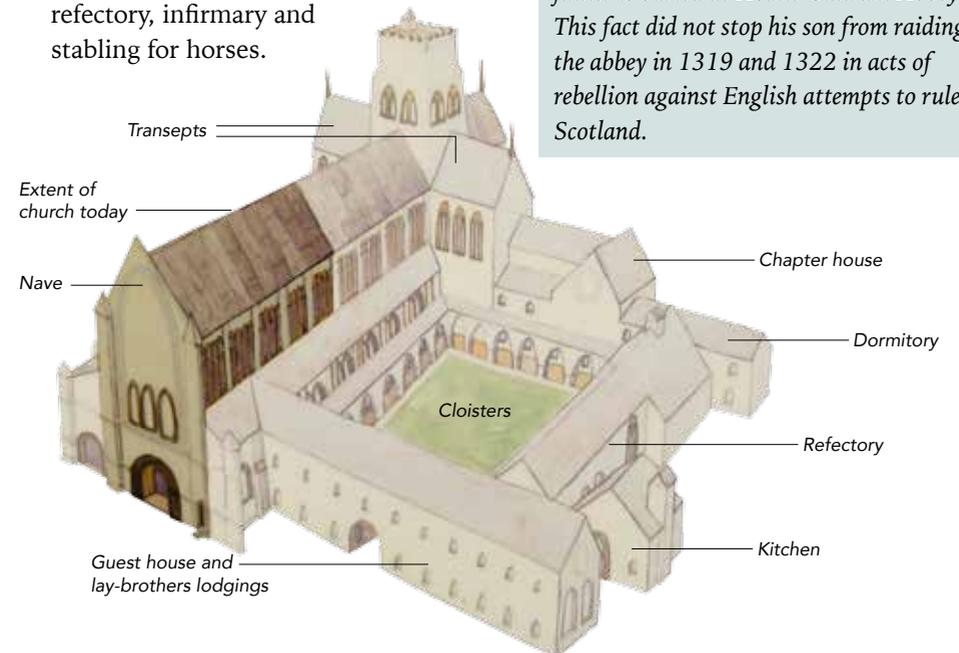
All was to change in 1538 with the dissolution of the monastery by Henry VIII. Local people petitioned the king's chancellor, Thomas Cromwell, to preserve the church for worship. This was granted but only the lowered nave of the church and some outbuildings were left standing. The cloisters, transept and chancel beyond were demolished, leaving the abbey church much reduced in size.

Today, the abbey has undergone extensive renovation following a major fire in 2006 and is in better shape now than for many years. Inside the porch, a fine Norman archway welcomes visitors and a spiral staircase provides access to a viewing gallery. An exhibition on the abbey and its impact on the local area can be viewed in the southwest range, along with various artefacts from recent archaeological digs.

HOLME CULTRAM ABBEY

The abbey became hugely wealthy on the proceeds of sheep farming and wool production and, in the 15th century, was much larger than you see today. The chancel extended further to the east, and to the south were the cloisters, refectory, infirmary and stabling for horses.

Did you know that Robert the Bruce's father is buried at Holme Cultram Abbey? This fact did not stop his son from raiding the abbey in 1319 and 1322 in acts of rebellion against English attempts to rule Scotland.





St John's Church, Newton Arlosh

ST JOHN'S CHURCH, NEWTON ARLOSH

After the destruction of Skinburness in 1304, the inhabitants were relocated to Newton Arlosh by the monks of Holme Cultram Abbey. One of their first acts was to build a new church with thick walls and a defensible tower and nave.

After the dissolution of the abbey in 1538, the church was neglected and became a ruin.

'...the Chapel of Newton Arlosh did decay, the door stood open and sheep lay in it ... the roof fell down and the lead was taken away ... and converted into salt pans.'

In startling contrast to the exterior, the interior creates a light, airy space. The restoration work was undertaken in 1843, thanks to the generosity of Sara Losh of Wreay. She enlarged the church, added a semi-circular apse and inserted ram's heads in stone to mark the original position of the altar.

The church is normally open, otherwise a key can be obtained from the rector – see church noticeboard for contact details.

ST MICHAEL'S CHURCH, BOWNESS-ON-SOLWAY

The headland at Bowness stood at one end of a 'wath' or crossing point over the Solway Firth into Scotland. This may have been the route early Christian missionaries such as Saint Kentigern (or Saint Mungo) and Saint Ninian sailed between Scotland and England. Although St Michael's Church is of Norman construction, it is built of recycled stones from the Hadrianic fort of *Maia* and probably stands on a site of religious significance dating back to Roman times.

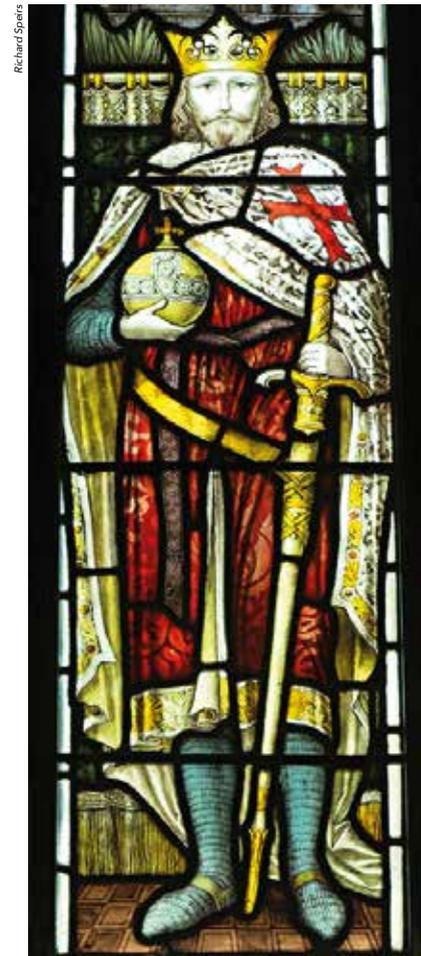
The ornate font is one of the treasures of the church. It is richly decorated on all four sides with vines and intercrossing strapwork.

A right old ding-dong!

In 1626, Scottish raiders stole the bells from the church and were given chase. To lighten their load, they jettisoned the bells into the Solway at a place now called 'Bell Dub'. Shortly afterwards, men from Bowness mounted a counter-raid to replace their bells by stealing those from churches on the Scottish side of the Solway. These bells can be seen at the back of the church to this day.



The font at St Michael's Church, Bowness-on-Solway



Stained glass window of King Edward I, St Michael's Church, Burgh-by-Sands

ST MICHAEL'S CHURCH, BURGH-BY-SANDS

Erected upon the Roman fort of *Aballava* on Hadrian's Wall, the church's original foundations are of unknown date but the visible sections are Norman. Not surprisingly, many Roman stones are used in its construction. The stone carvings of mythological beasts in the undercroft of the church are believed to be Anglo-Saxon and probably came from an earlier church that stood on this site.

Burgh Church is unusual in originally having two towers at either end of the church. The western tower housed the bells, whilst the eastern tower (commonly described as the vicar's pele) protected the priest from Scottish raids. The east tower had the effect of blocking the chancel, so the church is devoid of an east window.

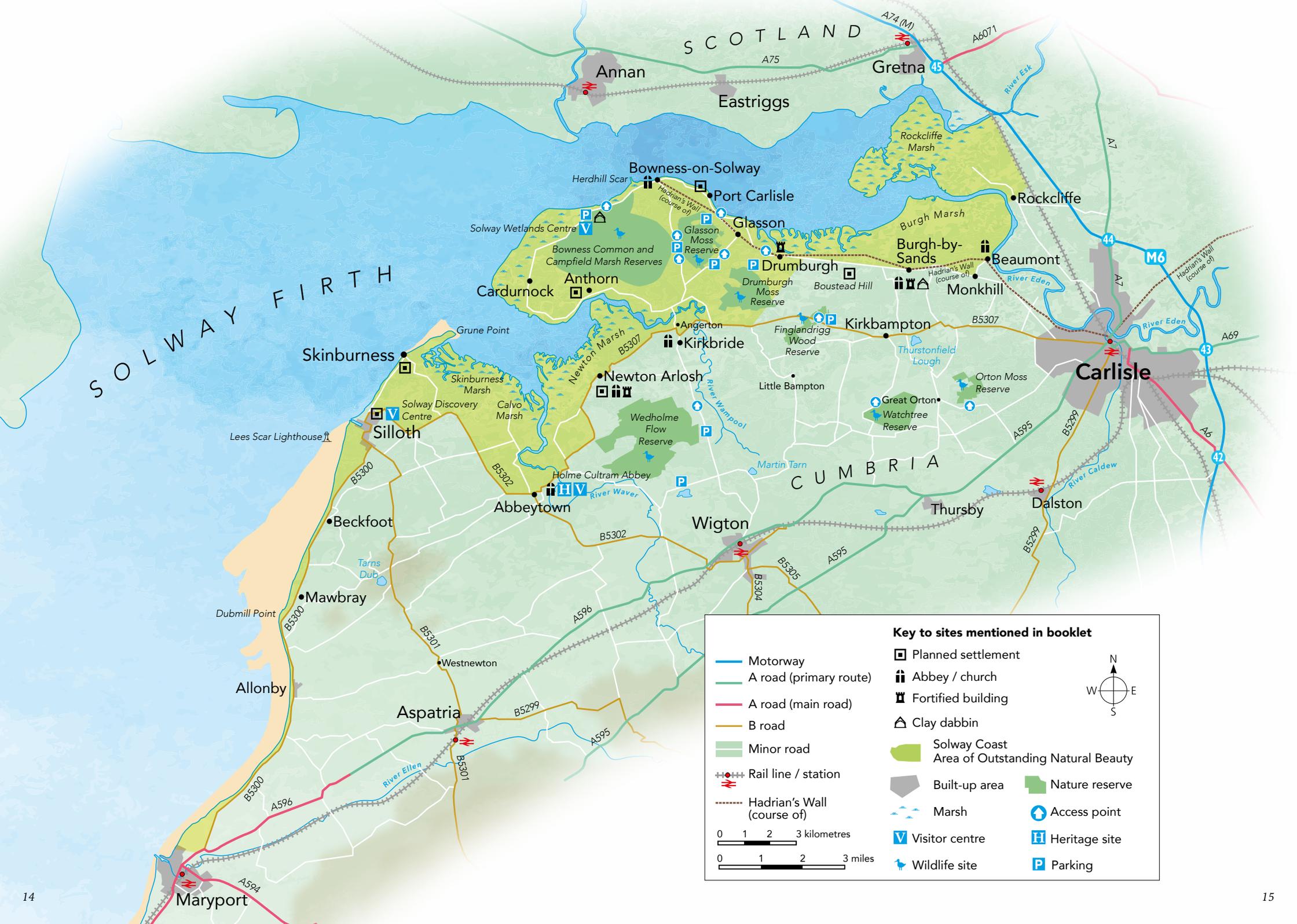
It was to this church that the body of Edward I was brought following his death on Burgh Marshes on 7 July 1307.

ST BRIDE'S CHURCH, KIRKBRIDE

The church stands on top of a Roman camp that was linked to a small wharf on the River Wampool below. The present church was built around 1189, largely of stones from the camp. However, by the early 1700s, the church had deteriorated so much that the Bishop of Carlisle remarked that *'it looks more like a pigsty than the house of God'*. The narrow north door, slim lancet windows and deep bar holes on the main south doorway are defensive features that were probably inserted to protect the congregation from Scottish raids in the early 14th century.

The last person to die in the Battle of Waterloo of 1815 is buried here.

Lt Joseph Taylor Clark's headstone states 'he fell gloriously fighting for his king and country on 18 June 1815'. To find it, count three rows eastwards from the porch and look for the inscription on the rear of the gravestone.



Key to sites mentioned in booklet

Motorway	Planned settlement	North arrow
A road (primary route)	Abbey / church	
A road (main road)	Fortified building	
B road	Clay dabbin	
Minor road	Solway Coast Area of Outstanding Natural Beauty	
Rail line / station	Built-up area	Nature reserve
Hadrian's Wall (course of)	Marsh	Access point
0 1 2 3 kilometres	Visitor centre	Heritage site
0 1 2 3 miles	Wildlife site	Parking

FORTIFIED SOLWAY



Drumburgh Castle

For 2000 years, the Solway has been a frontier zone. Its position on the border between what is now England and Scotland, with easy access to the sea and major north-south trade routes, resulted in the area being fought over for strategic control from Roman times.

In 122 AD, the Romans began construction of a military frontier across northern England. Hadrian's Wall, as it became known, stretched from Wallsend in the east to Bowness-on-Solway – a distance of 80 Roman miles (73 English miles). The Wall was punctuated by milecastles every Roman mile with two turrets set between each milecastle. These structures, along with the forts at Bowness (*Maia*),

Drumburgh (*Congabata*) and Burgh-by-Sands (*Aballava*) have since provided a convenient source of dressed stone for later buildings.

The Normans arrived on the Solway in 1092 and exerted their control with the establishment of the Barony of Burgh. A Norman motte and bailey 'castle' at Beaumont was built on top of a Roman turret (a site now occupied by St Mary's Church).

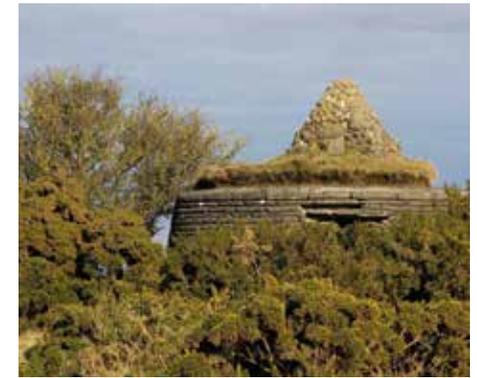
Edward I's attempts to quell the Scottish nation led to great resentment and vengeful raids on



Statue of King Edward I, Burgh-by-Sands

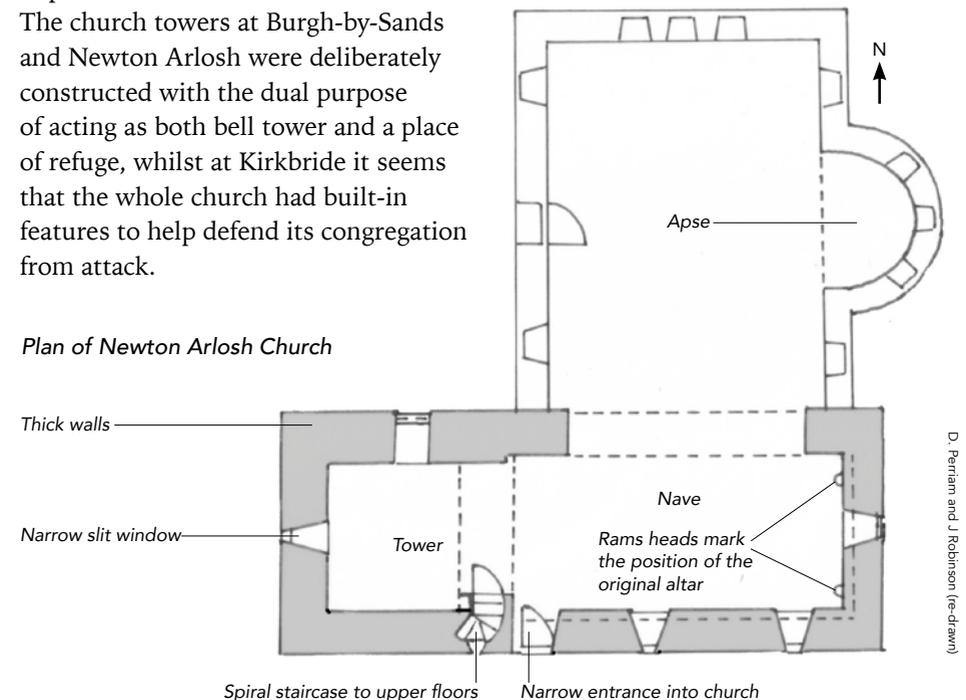
English property from the 14th century onwards. The Scots, led by Robert the Bruce, attacked Holme Cultram Abbey in 1319, followed by another raid in 1322. Over time, the Anglo-Scottish Wars deteriorated into family feuds and a culture of endemic lawlessness by the notorious Border Reivers for the next 300 years. This was a time when self-defence was required in the form of thick-walled towers or bastle houses (a type of defensive farmhouse). These fortified farmhouses are relatively scarce in a region with little natural building stone, and the only surviving examples are conveniently close to (and built of) the Roman wall. The mighty edifice of Drumburgh Castle (more correctly a large bastle) is the best example of a fortified structure on the Solway.

For ordinary people, their only hope of protection was in the local church. The church towers at Burgh-by-Sands and Newton Arlosh were deliberately constructed with the dual purpose of acting as both bell tower and a place of refuge, whilst at Kirkbride it seems that the whole church had built-in features to help defend its congregation from attack.



Pill box at Grune Point

During and after the Second World War, further defences were installed on the Solway. Fields were requisitioned to build airfields; a machine-gun pill box was constructed at Grune Point and radio masts erected at Anthorn as a Cold War early warning system. Nowadays, Anthorn broadcasts the Greenwich time signal used by banks, GPS devices, train operators, navigators and the BBC 'pips'.



D. Periam and J. Robinson (re-drawn)



St Michael's, Burgh-By-Sands church tower

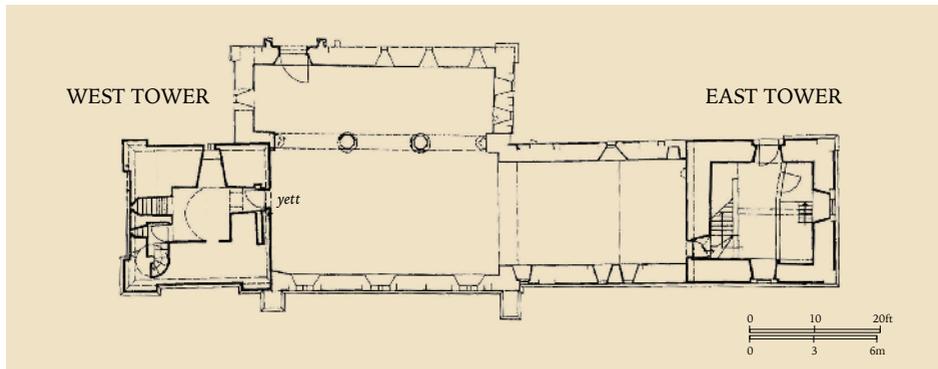
BURGH-BY-SANDS CHURCH TOWER

This massively thick-walled tower was built in the 14th century out of what remained of the Roman fort. At the time, the Solway was subject to periodic attacks by the Scots, so the tower was always intended to double up as a bell tower and a place of refuge. Entry was through a heavy iron-barred

gate (or 'yett') that could only be accessed from inside the church.

Another tower (the vicar's pele) was built at the east end of the church to protect the priest. Only the base remains today (part of the vestry). In 1703, Bishop Nicholson commented: *'...the bells hang in a good square steeple at the west end, and there has been another in the east. But this is now half broken down.'*

D. Periam and J. Robinson



Ground-floor plan of church showing location of both towers

NEWTON ARLOSH CHURCH TOWER

The church here owes its existence to the misfortune of Skinburness when the village was totally destroyed during a storm in 1304. A 'new town' was established further inland at Arlosh, centred on the church of St John. The early 14th century was a turbulent time, so the tower was deliberately constructed to act as both stronghold and belfry.

The entrance into the church is just 31 inches (79 cm) wide. Only one person can pass through at a time, which makes forced entry very difficult. Access to the tower was through an iron-framed internal door designed to resist attack by fire. A spiral staircase led to the upper floors, with daylight entering through narrow slit windows. A lookout would be stationed on top of the tower to alert everyone to a possible raid. The villagers would then herd their livestock into the church itself and find refuge in the tower until the danger had passed.



St John's Church, Newton Arlosh



Drumburgh Castle

DRUMBURGH CASTLE

The stones of the Pict Wal wer pulled down to build Drumburgh. For the Wal is very near it.

Largely constructed of stones from Hadrian's Wall, Drumburgh Castle was built to guard the Sandwath ford over the Solway. It began as an unfortified house in the 13th century with a ground-floor entrance (the arch can still be seen behind the external stairs). In 1307, a licence was granted to crenellate (add battlements) to the house. By 1593 it was described as 'neither castle nor tower, but a house of strength and a very fit place for defence.' Viewable from road.

See if you can spot two Roman altars, a cast-iron pump and stone eagles on the roof. Stone eagles can also be seen on the churches at Bowness-on-Solway, Holme Cultram and Newton Arlosh.

FARMS & WORKING BUILDINGS

The Cistercian monks of Holme Cultram Abbey were the first to increase productivity of the land by draining the wetlands to create fields for sheep and cereal crops. Once the abbey had been dissolved in 1538, many farmers could start reaping the rewards of farming through their own efforts.

From about 1650 onwards, tenant farmers gained more freedom from the lord of the manor and were able to keep more of their profits. Farmers expressed their growing wealth by rebuilding their houses and farm buildings in stone and

later in brick, and proudly acknowledged their new status by often inserting a datestone recording the event along with their

initials. Many elegant and substantial farmhouses on the Solway date from this period.

The oldest farmhouses took the form of a 'long house' (a house with adjacent byre separated by a cross-passage). This layout kept humans and animals apart, though the cross passage was shared.

Farm layouts can vary enormously. Some are ranged around a courtyard. Others can be U- or L-shaped, linear, parallel, or simply an assortment of dispersed buildings with no recognisable pattern. The choice of farm layout was related to local topography, type of farming and the availability of space and money.



Carved datestone, Hillside House, Boustead Hill

Open-fronted hay loft

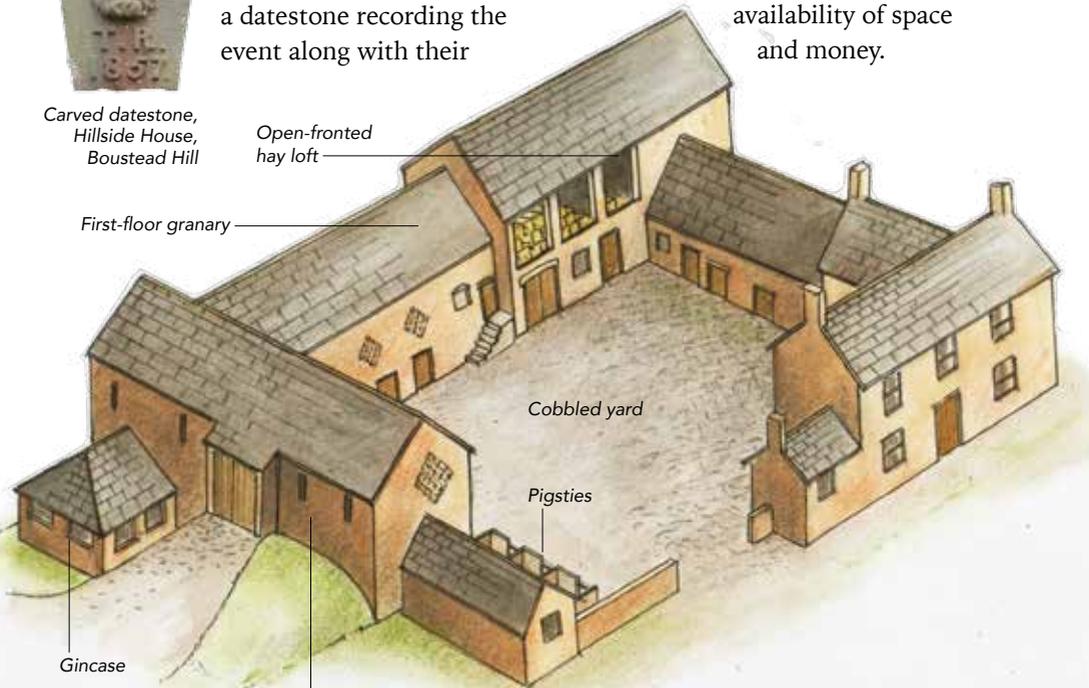
First-floor granary

Cobbled yard

Pigsties

Gincase

Bank barn



Part of a farm courtyard at Burgh-by-Sands



Mill Grove farmhouse, Abbeytown

Power to work the farm came initially from humans and horses, and later from wind or water power. Gincases provided shelter for horses to drive a horse engine (or gin) and could be semi-circular, square or polygonal.



A former gincase at Wormanby Farm

The type of farming determined what buildings were needed. Arable farms had barns and granaries, pastoral farming required accommodation for animals and lofts for animal feed. Mixed farming needed both. Farm buildings can usually be identified from their typical features, e.g. a hay barn will often have open sides to allow air to circulate, while a threshing barn is usually orientated to face the prevailing wind to aid the process of separating the grain from the chaff.

Other 'working' buildings include windmills, watermills, forges, tileworks and breweries. These were once common on the Solway but, as times change, their existence can often only be inferred through the remains of old buildings, photographs, historical records and place names.

EASTON HALL

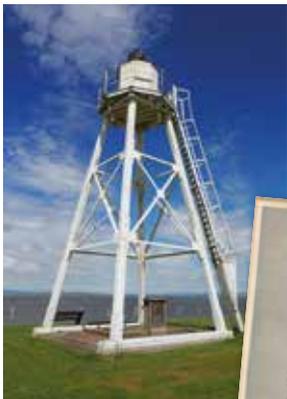
This grand façade with its nine windows, swan-necked pediment over the door (dated 1724) and finely-moulded architraves is one of the finest in the area. Such decoration was meant to proclaim the family's wealth and status. Viewable from road.



Easton Hall

EAST COTE LEADING LIGHT

The rear of two lights that helped to lead ships towards the approach channel for the port of Sillioth. It was originally built in 1864 as a mobile structure laid on a short rail track,



East Cote leading light



allowing the light to be re-positioned if the channel shifted its course. The lighthouse was withdrawn from service in 1959. It was rebuilt in its original style in 1997.

HANDMADE BRICKS

At East Farm in Newton Arlosh, a remarkable collection of hand 'stamped' bricks can be seen inserted into a barn wall. Close inspection reveals the repeated signature of 'Robert Waite' and the date of 1755 on bricks adorned with hearts and scrollwork. Other bricks depict a man and a woman holding a heart, whilst another proclaims: 'Your consent is my content'. This 'marriage proposal' must rank as one of the most unusual ways of professing love.

These hand-made bricks were probably made nearby. The clay would be extracted from a local pit and shaped in wooden moulds to form rectangular blocks. Once the blocks had dried out, they were placed in a kiln to be fired.

Please ask permission from the owners before viewing the barn wall.

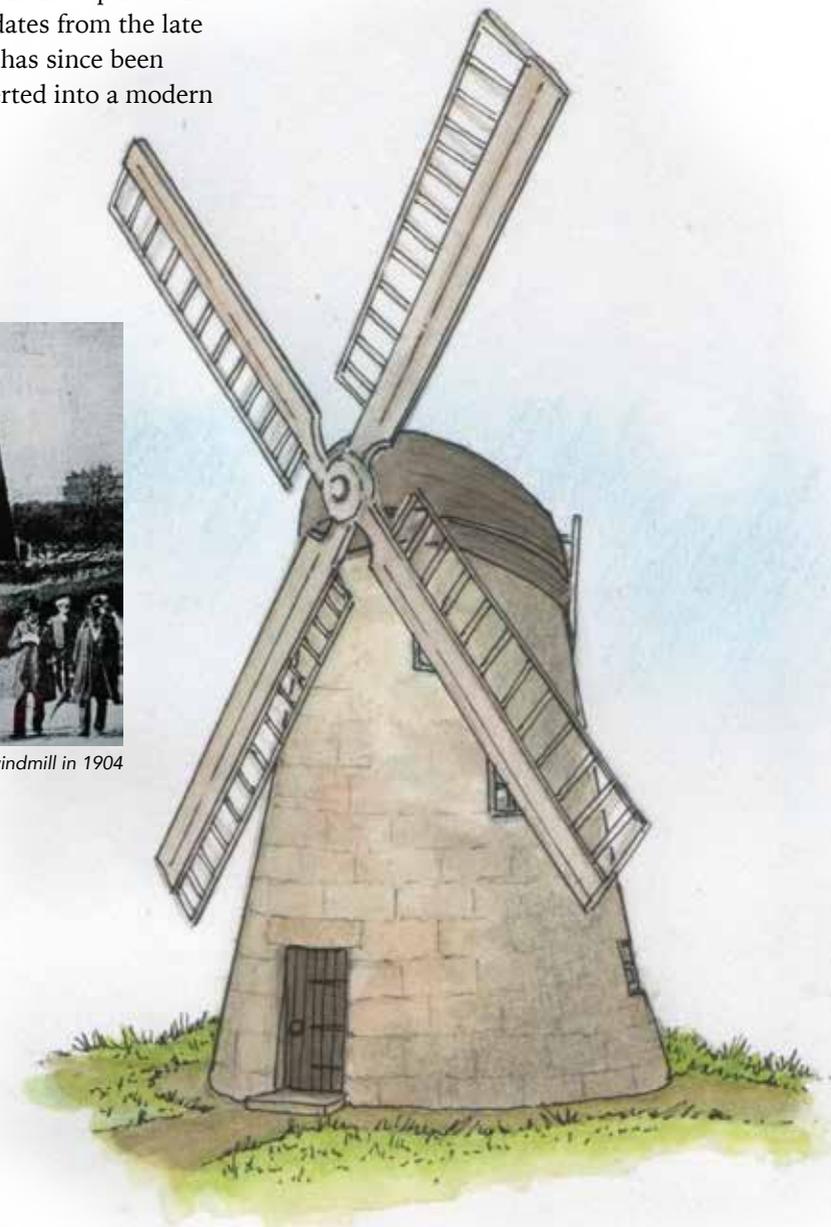


MONKHILL WINDMILL

Monkhill once had two corn mills: one powered by water, the other by wind – the latter being used for grinding corn when drought conditions meant the watermill could not operate. The windmill tower dates from the late 18th century and has since been sensitively converted into a modern home. Viewable from road.



Monkhill windmill in 1904



CLAY DABBINS

Local buildings were built of materials that were close at hand and, more importantly, free. In north Cumbria that meant clay, cobbles and boulders for walls; timber for a roof frame; and turf, reeds, straw, heather or bracken for the roof. The most common structure built was a clay dabbin – for cottages, houses and farm-buildings. They are still a distinctive feature of the Solway Plain. Over the centuries, thousands were built, often using the communal labour of the whole village. On such occasions, the walls of a small cottage could be erected within a day and covered with thatch before nightfall. The

workers were rewarded with a party when the work was finished.

Before the First World War, there were at least 1300 dabbins in existence, but today scarcely more than 300 survive. Some are in a derelict condition, but others have been lovingly restored by their owners.

To make a clay dabbin, a basic roof frame had to be prepared first. This was made of curved timbers (crucks), pegged together at the top and resting on large boulders. The cruck frame was

propped up while the walls were then built. The first part was to build a low cobble plinth as high as the boulders. A clay dabbin mixture of clay and straw was laid on this low wall and covered with a thin layer of straw. Alternating layers were then built on top until the required height was reached. Openings were left for windows and doors. Once built, the walls were covered with a lime render (mix of lime putty, sand and animal hair) as weatherproofing. Finally, a thatched roof (made of reed, straw, heather or bracken laid on a bed of turf) would be added.

In earlier buildings, the roof was supported by crucks. In later years, the crucks were replaced with triangular trusses that rested directly on top of the clay wall. A prominent feature of thatched clay dabbins are deep overhanging eaves that protect the walls from rain.

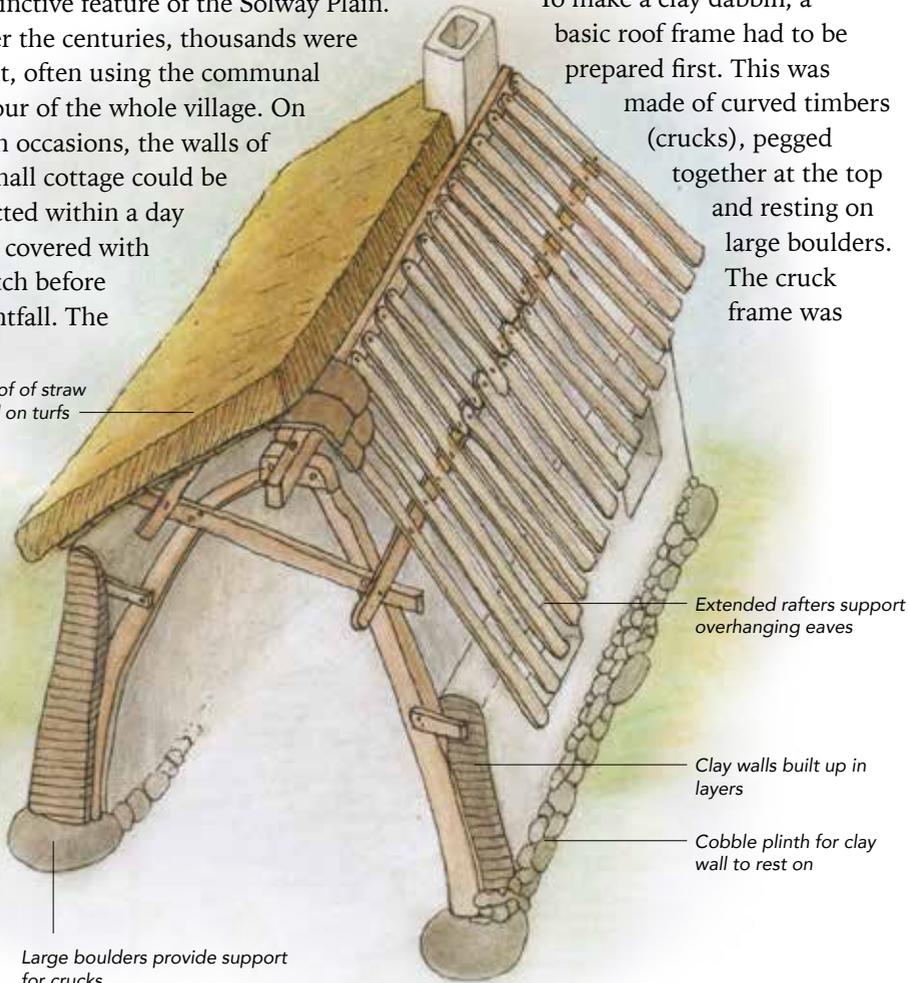
When covered with render, clay dabbins are not easy to spot. Look for walls that may have bulges or uneven surfaces. Boulders are usually visible, and the window and door recesses are deep with rounded edges.

Interior of a cruck barn, Great Orton



Historic England

Thatched roof of straw or reeds laid on turfs



Extended rafters support overhanging eaves

Clay walls built up in layers

Cobble plinth for clay wall to rest on

Large boulders provide support for crucks



Location of clay dabbin cottages in Burgh-by-Sands

1) LEIGH COTTAGE

Here you can see the techniques used to build this clay dabbin cottage. Notice the large corner stone and the boulder plinth. Close inspection of the exposed 'dabbin' reveals numerous small pebbles held within the clay matrix. You might even be able to pick out the thin layers of straw that separated the clay dabbin mix as each course was laid one on top of another. Viewable from road.



Leigh Cottage, Burgh-by-Sands



Edna's Cottage, Burgh-by-Sands

2) EDNA'S COTTAGE

A fine example of a restored clay dabbin cottage with a thatched roof and deep overhanging eaves. The lime render protects the clay wall behind. Compare this with nearby Leigh Cottage, which has exposed clay walls while in the process of being restored. Viewable from road.



Lamonby Farm, Burgh-by-Sands

3) LAMONBY FARM

This clay dabbin is typical of a Cumbrian longhouse (where animals and humans lived under the same roof). Both animals and humans used the cross-passage that divides the byre from the house. At a later date, a separate door was created for the byre. Note the small windows and overhanging eaves. Viewable from side lane.



Campfield Marsh clay dabbin under construction

CLAY DABBIN AT CAMPFIELD MARSH RSPB RESERVE

In 2016, the first clay dabbin to be built for over a century was completed

at Campfield Marsh. Volunteers used traditional materials and techniques throughout the whole process under the guidance of an expert in earth buildings. An exhibition on the history, construction and maintenance of clay dabbins can be found inside the building.



Campfield Marsh clay dabbin completed

Clay dabbin maintenance

- Protect clay walls with a lime render. Never use cement render.
- Ensure water cannot penetrate the top of the wall by regularly examining the roof cover and guttering.
- Remove plant growth close to the wall and, where the ground level is high outside, reduce this where possible.
- Cracks and voids in clay walls can be repaired, but find a professional earth-walling contractor to do this.



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Solway Coast Area of Outstanding Natural Beauty (AONB)

Solway Coast Discovery Centre, Liddell Street, Silloth-on-Solway, Cumbria CA7 4DD

T: 016973 33055

E: info@solwaycoastaonb.org.uk

W: www.solwaycoastaonb.org.uk