POST-MEDIEVAL PERIOD

RESOURCE ASSESSMENT REVIEW

BY IAN MILLER

This chapter presents a summary of the archaeological and historic environment research undertaken in North West England since 2006 for this particular subject. The chapter is arranged using the same structure as the original resource assessment subject chapter for the first North West archaeology research framework published in 2006 (Brennand et al 2006). It is not a replacement of that work, but rather an addition and enhancement. The 2006 resource assessment text remains a key foundation document for regional research studies in North West England. Nor is this chapter merely a list of all work undertaken since 2006. Instead, it highlights key new data, emerging subject areas, and fresh synthesis in the decade or more since the original regional research framework was published. The chapter was compiled by the lead author and uses material provided by a variety of researchers who are also credited. The current consultation is designed to highlight any omissions in recent significant work. The chapter will be used as the framework for the Stage 2 Research Agenda Workshops to be held in the autumn of 2017 and spring of 2018. The revised chapter will be printed as a point-in-time document in 2019 through CBA North West. Any gaps identified in the research resource will be addressed through a new regional research frameworks website being developed by Historic England, of which this chapter will form a part.

1. Introduction

Commencement of the Post-Medieval period, in practice, varies between different areas in the region. For the purposes of the present update, the Reformation and the associated Dissolution of the monasteries during the 1530s has been taken as a broad commencement for the Post-Medieval period, continuing to the mid-18th century. This period witnessed the transformation of the North West from a relatively impoverished and sparsely populated backwater to a key region in the early stages of Britain’s industrialisation and globalisation, and the cultural developments of this period laid the foundations for the radical changes to society and the environment that followed.

A huge volume of data for Post-Medieval activity across the region has been gathered during the last ten years, reflecting the vast amount of archaeological work that has been undertaken in response to an accelerated pace of development,
particularly since 2012, but also from the introduction of more robust legislation that
deals with the historic environment, initially as PPS5 and latterly as the NPPF.
Another important factor is perhaps a widespread recognition and appreciation of
the importance of Post-Medieval remains, and the gradual application of
archaeological science. However, much of this new archaeological data is presented
solely in ‘grey literature’ reports, and synthesis is now required to provide thematic
overviews of the period.

The approaches to archaeology is perhaps more multi-faceted that it was in 2006,
often employing new technologies such as LIDAR, remote sensing and laser scanning.
In addition to the huge number of projects that have been undertaken within the
planning system, the past ten years have also seen a burgeoning amount of
community-led archaeology, which has often enabled the intrusive investigation of
sites that are very unlikely to be affected by development. This is exemplified by the
series of excavations undertaken as part of the ‘Dig Greater Manchester’ project,
some of which specifically targeted the sites of Post-Medieval halls across the
county.

Supervised metal detecting in Cheshire involving suitably-experienced volunteers
working under direct archaeological supervision has also produced interesting
assemblages of Post-Medieval material, including household items, coins and token,
dress fittings, numerous musket balls and tools, indicative of casual loss and the
spreading of middens and household waste on the fields. Particularly informative
projects are represented by reports on work at Farndon, Wrenbury, Winsford, and
Sandbach. It is acknowledged, however, that concentrations of material indicative of
below-ground remains have rarely been located (M Leah pers comm). Similarly, the
Portable Antiquities Scheme (PAS) has mapped and recorded a huge number of finds
located by metal detectorists.

Several important Post-Medieval sites have also been taken through to final
publication in the last ten years, such as the portfolio of investigative work
undertaken in Penrith (C) since the early 1990s (Zant 2015), and the excavations
carried out in 1980-81 at 75-87 Main Street in Cockermouth (C), which was published
in 2013 (Leech and Gregory 2013). These monographs contribute a fresh insight into
the Post-Medieval development of two small towns on opposite sides of the Lake
District, although a similar volume synthesising archaeological work in Kendal would
be a welcome addition to the corpus of material on Cumbrian market towns. Recent
years have also seen a surge of ‘popular’ publications, particularly in Greater
Manchester, where the established ‘Greater Manchester’s Past Revealed’ series
features several Post-Medieval sites that have been excavated.

2. Environment
The original Resource Assessment contains virtually no archaeological evidence for the Post-Medieval environment, and merely cites documentary accounts of ‘bog bursts’ between the 16th and 18th centuries. Little, if any, new archaeological data has been gathered on this topic since, and there are still many unanswered questions relating to the regional impact of the ‘Little Ice Age’ and the effects of coastal change on settlements patterns and farming regimes. However, this is an area of research that has been investigated by other disciplines, which await assimilation by the archaeological community.

3. Agriculture

A key characteristic of the onset of the period was the extension and intensification of agrarian activity, enabled by the Dissolution and made essential to sustain population growth. The medieval manorial system of land use was reorganised from the 16th century, leading to the enclosure of ‘waste’ and common land as a result of population pressure and innovations in agricultural practice. Where the resultant ‘piecemeal’ enclosure of fields, generally of irregular shape, survives as a landscape feature, it is usually bounded by hedges in the lowlands and drystone walls on the Pennine fringe.

The importance of the rural environment to the study of Post-Medieval archaeology has long been recognised in the Society for Post-Medieval Archaeology research agenda (1988), and yet this had not been reflected in archaeological research into the Post-Medieval agrarian landscape by 2006. Indeed, the paucity of excavation and survey work on Post-Medieval rural sites, and the need to investigate improvements in plant and animal varieties through palaeo-environmental evidence, was cited in 2006 as an important omission from the existing dataset. This has been addressed to some degree, as a considerable amount of archaeological survey, evaluation and excavation of Post-Medieval rural sites has been carried out since 2006. Large-scale investigations of rural landscapes that have furnished new evidence for Post-Medieval agricultural practice include those at the Kingsway Business Park near Rochdale (Gregory et al forthcoming a) and the former open-cast mining site at Cutacre, near Bolton (Gregory et al forthcoming b).

The work carried out at Kingsway and Cutacre (GM) examined relatively low-lying agricultural landscapes on the fringe of large urban areas, whilst the significant number of landscapes surveys carried out across the Lake District during the last ten years have provided detailed evidence for upland agricultural practices. During just one survey of a Western Lake District Valley, for instance, more than 60 sheepwash structures were identified (S5334), and several sheepfolds were identified along the edge of Post-Medieval enclosure during a survey at Black Beck in Longsleddale (S5275). In addition to sheep farming, the Lake District surveys have provided evidence for Post-Medieval woodland agriculture, such as bark peeling and peat
cutting, and charcoal and potash production. The East Coniston Woodland Survey, for instance, recorded 232 new such sites.

Another important study of an upland rural settlement was the comprehensive survey at Scordale undertaken by English Heritage (Historic England) in 2010 in response to increasing environmental damage from water run-off. This enabled several possible settlements and cattle-management systems to be identified, and whilst obtaining secure dating proved to be an issue in the absence of intrusive investigation, some of these sites were almost certainly of Post-Medieval origin. These included what are probably the remains of miners’ settlements and several shielings (Hunt and Ainsworth 2010). Similarly, the Lakes & Dales Project has been surveying the areas to be taken into the expanded national parks of the Yorkshire Dales and the Lake District, and has attempted to integrate research by the aerial survey teams with topographical surveys, geophysical surveys, and small-scale targeted interventions for dating and palaeo-environmental evidence. The survey identified a significant number of new sites, emphasising the previously under-researched/resourced uplands of the region.

Detailed archaeological surveys have also been carried out by OA North (2006), UMAU (2009) and, most recently, by the Holcombe Moor Heritage Group at Holcombe Moor, near Bury (GM). This relict early Post-Medieval farming landscape on the upland fringe retains much physical evidence for early field systems and farm sites across the landscape, together with early water-powered textile mills in the valley floor. The moor has been used by the Ministry of Defence as a training ground for many years, and public access to large swathes of land has only recently been made available by arrangement.

Interesting new evidence for Post-Medieval agricultural practice on a very different type of rural landscape was recovered from excavations near Hutton in Lancashire in 2010, where the discovery of fish traps highlighted the importance of fishing to the agricultural economy of lands on the edge of the Ribble Estuary. Two structures consisting of settings of upright stakes, representing the remains of the fish traps, were discovered in fields immediately adjacent to the south bank of the River Ribble. Radiocarbon dating suggested that they been in use for a prolonged period, including phases between the date ranges of 1610 to 1670 and 1730 to 1810 (Vannan and Plummer 2010).

Archaeological analysis of the rural landscape has also been undertaken across the region in the 21st century as part of the English Heritage-sponsored Historic Landscape Characterisation (HLC) projects, which have been carried out in Lancashire (Ede with Darlington 2002), Cheshire (Edwards 2007), Merseyside (Museum of Liverpool 2011) and Greater Manchester (Mitchell and Redhead (eds) 2012). The chronology and character of Post-Medieval enclosure in upland marginal
areas have formed a major part of the HLC Programme, and have demonstrated the complexity of Post-Medieval enclosure history in different parts of the North West.

The Greater Manchester HLC, for instance, examined the evolution of whole of the county’s landscape, using geo-rectified mapping, 54,000 polygon records and time-slicing to show how it transformed from the late Post-Medieval period. Notwithstanding the densely developed character of Greater Manchester, the rural fringes cover 445km² and represent some 35% of the county, incorporating lowland arable land and pasture to the west and the more marginal hill farms of the Pennine uplands of the north and east. The net result of the Greater Manchester HLC was the creation of a highly detailed interactive GIS map with related interpretations that chart the historical development and present-day historic character of the modern county (Mitchell and Redhead (eds) 2012).

Pipeline projects undertaken in the last ten years have offered an incredibly useful opportunity to investigate swathes across the region’s rural landscape. One of the largest such projects in the region was the West East Link Main water pipeline, which extended some 54km from Prescot in Merseyside to Bury in Greater Manchester (Gregory 2013), with similar projects in Cumbria including the Nether Wasdale Pipeline (S5250), the South Egremont Pipeline (S5280), the West Cumbria Pipeline (Schofield 2014) and the Quarry Hill to Stainburn and Cockermouth extensions (Peters and Newman 2015). Numerous archaeological and historic landscape features were recorded during these projects, although the overall contribution to a better understanding of Post-Medieval agricultural practice was limited largely to the presence of tracks, ridge and furrow cultivation scars and field boundaries.

Archaeological science has been usefully applied to some of these excavations. At Cutacre, for instance, palaeo-environmental sampling yielded important data on the medieval environment, which was seemingly dominated by oak woodland with significant open areas available for agricultural practices. In the 14th century, however, it was noted that cereal-type pollen was no longer present, and indicators of pastoral activity were recorded at the onset of the Post-Medieval period.

Palaeo-environmental data recovered from an excavation in 2007 at Chorlton Fold in Eccles (GM) similarly furnished some evidence for the character of the 17th- and 18th-century rural landscape from waterlogged plant remains. Whilst there was no direct evidence that the plant remains were from crops, seeds from arable weeds such as stinking chamomile and knotgrass were identified. The other seeds in these samples were from plants of grassland, ruderal communities, broad ecological groupings, waste ground and wet places. Palaeo-environmental data recovered from excavations at Openshaw West in East Manchester in 2010-11 also concluded that the late 18th-century landscape was probably a damp environment with some scrubby vegetation and areas of waste, open or cultivated ground. Amongst the
plant species present were bristle club-rush, rushes, sedges, creeping buttercup, black bindweed, and nettles (Miller 2013).

4. Rural Settlement

The fabric of Post-Medieval rural settlements has been analysed through the surviving buildings for many years, and studies of dated stone buildings in particular have shown that for the yeoman and lower classes, a rebuilding of timber or clay structures in stone did not occur across much of the North West before the late 17th century (Nevell and Walker 1998). The dramatic changes in agricultural practice was coupled with the creation of new estates from former monastic land, and the reconstruction of many high-status homes in the North West in response to changing living requirements amongst the ruling class. The ‘trickle-down’ effect also brought about the widespread remodelling and rebuilding of yeoman-class dwellings and farmsteads.

In was noted in 2006 that some very valuable thematic studies of Post-Medieval farm buildings had been completed, such as the clay dabbins on the Solway Coast, and several other studies of farm complexes, particularly in Cumbria. There had also been numerous surveys of barns in advance of residential conversion, a trend that has continued apace during the last ten years. There have also been numerous surveys and excavations of Post-Medieval halls, farm complexes and rural cottages carried out across the North West, many of which have yielded fresh evidence for rural settlement and activity across the region. Whilst it is debatable whether any additional data can be usefully obtained from additional fieldwork projects, there is a growing need to synthesise the body of information that has been generated.

Rural Estates, Halls and Manor Houses

Significant work has been undertaken on behalf of the National Trust across the Dunham Massey Estate in Trafford (GM) during the last ten years, building upon decades of earlier research. One major element of recent work comprised a large programme of archaeological and historic building survey to inform understanding and management of the Estate. UMAU then Matrix Archaeology, prepared detailed building surveys for the estate’s many farms and other historic buildings relating to the running of the estate. There are around 20 separate building survey reports, making this a study of potential regional importance. This was coupled with some excavation work, carried out partly as community-based projects (Gregory and Miller 2013).

Perhaps the most visible remains of the Post-Medieval rural landscape are the impressive timber-framed and stone-built halls and manor houses. Numerous surveys of standing structures and the excavations of buried foundations of these types of buildings have been carried out across the region in the past ten years.
Archaeological science has played an increasingly important role in understanding the dating and developmental chronology of Post-Medieval halls and manor houses. Dendrochronological analysis undertaken on 41 of the 45 samples obtained from timbers in different parts of Tonge Hall near Rochdale (GM), for instance, produced a single dated site chronology comprising 38 samples with an overall length of 239 rings. These rings were dated as spanning the years AD 1449–1687. Interpretation of the sapwood on the dated samples indicates that the roof, first-floor frame, and structural timbers of the hall range, as well as the roof and stair timbers of the cross-wing, were all cut as part of a single programme between AD 1589–1614. A ground-floor fire place bressumer of the hall range has an estimated felling date of AD 1609–34, while the timbers of a first-floor partition wall have an estimated felling date in the range AD 1640–65. The latest dated timbers are the floorboards of the crosswing attic, which have an estimated felling date in the range of AD 1697–1722 (Arnold and Howard 2014a).

The work undertaken at Tonge Hall (GM) was one of several similar scientific dating reports produced by English Heritage (now Historic England). Another example can be drawn from Lytham Hall in Lancashire. A tree-ring dating programme was commissioned on oak and softwood timbers from Lytham Hall. This building is an 18th-century manor house on the site of an earlier manor house and Benedictine Priory. The Hall is set in 30 hectares of mature parkland within which a further programme of sampling was undertaken on living oaks. The results identified that oak and pine timbers from the roof of the 18th-century building were datable by tree-ring dating techniques, with the earlier ranges to the west containing some oak timbers from the 16th century, and further oaks and pines from the mid-18th century. Oaks that were two centuries old were identified from the park (Tyers 2013).

Other important recent archaeological surveys of Post-Medieval halls include the Grade II listed timber-framed Monks Hall in Eccles (GM), where a timber-framed wing has been dated to the 1580s (UMAU 2007 and EH 2010). At Ordsall Hall in Salford, the roof was studied during repairs when the batons and slates were removed. The roof timbers comprise elements from the 14th to 19th centuries. This work adds to a significant corpus of archaeological investigations at Ordsall Hall, examining the 14th-century moat and former kitchen wing and the 16th-century remodelling of the hall complex. Perhaps the most important of the recent surveys of Post-Medieval halls, however, is that at Bramhall Hall, Stockport (Matrix Archaeology 2017).

Archaeological excavations across the North West have also contributed to an enhanced understanding of Post-Medieval halls. Many of these excavations have been carried out as community-led projects, such as ‘Royton Lives Through the Ages’, led by the local history society and UMAU, involving total excavation of the mainly Post-Medieval hall of Royton in Oldham (GM). The excavation was carried out
over several seasons, culminating in 2009. It is a significant site in terms of being an example of a fully excavated hall yielding well-preserved remains which demonstrate the hall’s evolution from the medieval period to 19th-century decline (CfAA 2009).

The Dig Greater Manchester community archaeology project, funded by the Association of Greater Manchester Authorities (with Blackburn and Darwen Council in Lancashire), also involved the excavation of several Post-Medieval halls, many of which originated as private parks associated with now demolished halls or mansions. During the course of this major community-led project, significant remains were discovered at: Moss Bank (Bolton), Balderstone Hall (Rochdale), Etherstone Hall (Wigan), Eastwood House Cheetham Park (Tameside), Chadderton Hall (Oldham), Wood Hall (Stockport), Hart Hill Mansion (Salford), Longford Hall (Trafford) and Witton House (Blackburn with Darwen). The accompanying desk-top study forms an important resource this type of site in Greater Manchester (UMAU 2015).

One of the challenges facing the excavation of Post-Medieval halls is that many were comprehensively rebuilt during the 19th century, reflecting a trend that has been noted at many halls across the region when ownership changed as wealthy industrialists expressed their new high status. This was very apparent, for instance, during the excavation of the well-preserved buried remains of the southern wing of Sale Old Hall in Trafford (GM) in 2011.

Barns and Farms

There has been a huge volume of work carried out on Post-Medieval agricultural buildings, particularly barns and farms, since 2006. Of particular interest is the comprehensive review of historic farmsteads that was carried out on a national level by English Heritage (now Historic England) between 2004-15, which led to the publication of an assessment framework in 2015 (Lake 2015). A regional report for the North West was published in 2006, and provides an extremely useful overview of the key characteristics of the agricultural buildings across the region.

One of the finest aisled barns in the North West is undoubtedly Gawthorpe Great Barn, a large aisled barn near Padiham in Lancashire that has statutory designation as a Grade I listed building. The barn dates to c 1605 and has been subject to some alteration, but an historic building investigation in 2013-14 concluded that the timberwork is substantially original, and it has been suggested that the ox stalls might be the earliest examples in Britain (OA North 2014).

One of the earliest surviving brick-built threshing barns in the Tameside (GM) was recorded at Audenshaw Lodge, Audenshaw. This dated to the 17th century (Haigh 2009). Dry Gap Barn near Ramsbottom (GM), an interesting stone-built former threshing barn, has also been recorded by archaeological survey ahead of conversion. Dendrochronology samples taken from the well-preserved internal timber framing provided a felling date of c 1530 (Minerva 2009). Other examples of
archaeological science being applied to Post-Medieval farm buildings include Storeton Hall Farm on the Wirral (M). A tree-ring dating programme on timbers from an outbuilding identified that timbers in both the floor and roof of one area of the building were datable by tree-ring dating techniques, with these areas using timbers felled during the late 17th century. This dating programme was commissioned to inform future planning decisions on this Building at Risk (Tyers 2010).

At Tomlinson Barn, Torkington, Stockport (GM), a detailed English Heritage Level IV building recording exercise of this semi-derelict farm building revealed that the earliest phase comprised a two-bay yeoman’s house, of which fragments of three cruck blades survived. Dendrochronology dated the earliest construction phase to the last half of the 16th century, followed by a rebuild during the early 18th century when it was encased in brick, and subsequent changes related to internal subdivision and rebuilding in parts of the brick outer walls (Matrix Archaeology 2015).

Gatesgarth Farmstead at Buttermere (C) was subject to an archaeological investigation in 2007, which comprised desk-based assessment, metric and geophysical surveys, and the excavation of 12 trial trenches across the site. Below-ground remains of a Post-Medieval farmstead were uncovered, together with cobbled yard surfaces and earthworks of narrow ridge and furrow. However, as is frequently an issue for excavations of this type of site, precise dating of the remains was not possible.

Another Post-Medieval farmstead that has been subject to archaeological investigation is Chorlton Fold in Eccles (GM). An historic building survey of the farm concluded that the farmhouse was built as a two-unit dwelling during the 18th century, together with a barn and range of outbuildings. The farmhouse was expanded subsequently with a further bay to the west elevation, followed by a rear wing during the late 18th or early 19th century. Excavation of the site following the demolition of the buildings in advance of a new residential development revealed the stone foundations of a rural cottage dating to the 16th or 17th century, together with associated features (OA North 2007).

In July 2009, the footprint of a tithe barn to the south of Booth Road in Waterfoot, Rossendale (L), was subject to full excavation. The building is identified as a tithe barn on 19th-century mapping, whilst excavation identified three main phases of development. The earliest of these was dated tentatively to the 16th century, based on the date ascribed to a single sherd of pottery, and appeared to comprise a stone-built structure that measured approximately 16 x 7m. The building was used subsequently for domestic purposes, as attested by a large assemblage of 19th-century pottery, providing interesting evidence for the adaptation of a Post-Medieval tithe barn (Bradley and Miller 2009).
An important study of Post-Medieval farms has also been carried out by OA North at Cutacre (GM) between 2006-14, and included comprehensive desk-based research, geophysical survey, evaluation trenching and excavations. Amongst the sites that were subject to full excavation were Wharton Hall, which formed the highest-status settlement in the Cutacre area, and Ashes Farm, which represented a farmstead that was probably typical of several others that were established in this region during the Post-Medieval period. Several other abandoned farmsteads across this landscape have been subject to an archaeological survey, including Spout Fold and Mills Brow. Desk-based research traced the origins of Spout Fold to at least the 17th century, with buildings in the approximate positions of the extant farmhouse and threshing barn shown on a Bridgewater Estate plan of c 1800. This plan also shows the farmhouse and barn at Mills Brow, and whilst the barn has been largely demolished, the extant cowhouse within its southern bay revealed significant timber carpentry and hand-cut beams, suggesting an early construction date (OA North 2015).

Other Rural Houses and Cottages

There have been several archaeological investigations of Post-Medieval rural sites in Cheshire include those at Woolston near Warrington, Tattenhall, and Oakhanger (Leah 2014). Well-preserved remains were recorded in all cases, whilst at Woolston and Tattenhall there was clear evidence of earlier phases of a Post-Medieval building. It is clear, however, that these were relatively high-status sites, and attempts to locate low-status buildings, often on the fringes of former mossland and heath, have in many instances been unsuccessful.

There has been similar work carried out in Lancashire. At Stanhill near Oswaldtwistle (L), for instance, two early 18th-century weavers’ cottages were excavated in advance of development (Stitt and Miller 2013). The stone-built foundations of both cottages were exposed, although little physical evidence survived for any internal fixtures or fittings, other than substantial stone partitions that separated the front and back rooms of the cottages. The lack of any fixtures and fittings is frequently the case with the excavation of these types of site.

At Openshaw West (GM), excavations in 2010 unearthed the foundations of a cottage that had seemingly been built for agricultural workers’ in the 18th century. Ivy Cottage was of particular interest in that the cottages continued to be occupied by agricultural workers into the 20th century, indicating that farming on the fringe of industrial Manchester had not been superseded entirely by industrial activity. The original house comprised a small double-pile house, seemingly typical of a small rural house of 18th- to mid-19th-century date, and representing relatively large accommodation for a family.

At Lowes, in the Walmersley area of Bury (GM), a trial excavation by Bury Archaeology Group revealed the margins of an early 16th-century domestic
habitation site, partly buried beneath a shallow deposit of ‘hill-wash’, which contained a group of 17th-century ceramics. Overlying this, an early 18th-century yard, with drainage gully and remains of building foundations, appeared as a possible extension to an earlier building (BAG 2015).

As is the case with recent research into many different types of Post-Medieval sites and monuments, the pressing need moving forward is thematic synthesis of the huge volume of data that has been generated. This will allow those areas that have been researched thoroughly to be identified and, most importantly, will enable gaps in the current understanding of the Post-Medieval North West to be highlighted.

5. Urban Settlement

Excavations ahead of regeneration development have yielded a wealth of evidence for urban settlement in the Post-Medieval period. Greater Manchester has provided one important focus for development in urban areas, with major schemes having been carried out in Manchester, Salford and Stockport. However large-scale projects that have led to the excavation of Post-Medieval remains have also been delivered in the region’s other large urban centres, such as Liverpool, Carlisle and Chester. The investigation of Liverpool’s river frontage in the 2000s was focussed on the expansion of the docks from the mid-18th century, but also provided some evidence for the 17th-century settlement (Gregory et al 2014). Important evidence for Post-Medieval activity in Chester has been obtained from the major programme of excavation undertaken on the site of the Roman amphitheatre (Wilmott and Garner forthcoming).

The series of multi-period excavations carried out along Church Street in Lancaster from the late 1980s onwards still await full publication, although the results of dendrochronological analysis of 38 conifer samples from the Post-Medieval brewery that occupied part of the excavated areas were placed in the public domain in 2010. Three of the five site sequences identified from the analysis were dated as spanning AD 1627–1754, AD 1551–1733, and AD 1605–1737 (Arnold and Howard 2010).

In Greater Manchester, several open-area excavations on Greengate and at Chapel Wharf in Salford’s historic core yielded physical remains of urban houses from this period, together with large assemblages of pottery. The Chapel Wharf development site in particular uncovered a regionally important assemblage of Post-Medieval pottery, together with evidence for the re-use of medieval burgage plot ditches, and Post-Medieval infill (Gregory and Miller 2015). More recently, excavation on the site of the former Exchange Station in Salford (GM) revealed building remains and quantities of finds (Haslam et al 2017), whilst some Post-Medieval features and fragments of pottery activity were recovered from large-scale archaeological excavation in 2017 that were targeted on the suspected hamlet of White Cross,
situated beyond the fringe of Salford’s historic core (Salford Archaeology forthcoming).

Elsewhere in Greater Manchester, a large excavation undertaken in 2008 in advance of a new Joint Service Centre on Millgate in Wigan yielded Roman remains of regional importance, but also yielded evidence for activity on the site between the 15\textsuperscript{th} and 18\textsuperscript{th} centuries, and a large assemblage of Post-Medieval pottery. This group included fragments of Midland Purple-type wares, several Blackware multi-handled cups or posset pots, and some large fragments of trailed slipware, with a date range spanning the 16\textsuperscript{th} to early 18\textsuperscript{th} centuries (Zant 2011). Another small but nevertheless important assemblage of Post-Medieval pottery from an urban setting was recovered from limited excavations on Lower Hillgate in Stockport (GM) in 2011. The foundations of a substantial stone building were also exposed, together with a vaulted brick-built conduit for the Tin Brook. This represented an early stage in the culverting of the watercourse to facilitate an urban expansion of Stockport (Vannan 2011a).

Also of note is the recently published account of excavations carried out by the former Cumbria & Lancashire Archaeological Unit in 1980-81 at 75-87 Main Street in Cockermouth (C). This comprised historic building survey and excavation across three former burgage plots along one of the town’s principal streets, providing important evidence for a continuous sequence of activity ranging from the 13\textsuperscript{th} to 19\textsuperscript{th} centuries. Physical remains of 15\textsuperscript{th}-century buildings, including two dwellings, an outbuilding and a cruck-framed barn, all with clay walls, were uncovered, together with evidence for their replacement in the late 17\textsuperscript{th} and 18\textsuperscript{th} centuries by a series of densely-packed stone and brick-built dwellings (Leech and Gregory 2013).

In addition to the established medieval towns, new centres of population began to be established across the region during the Post-Medieval Period. Work carried out at Bottling Wood near Wigan (GM), for instance, traced the origin of this community of nail makers to be traced to at least the early 18\textsuperscript{th} century, centred on a corn mill that utilised the power of the River Douglas.

6. Religion, Ritual and Ceremony

In 2013, an archaeological watching brief was maintained during a re-ordering scheme at the Grade I listed St Bartholomew’s Church in Wilmslow (Ch). A church has occupied the site since at least the mid-13\textsuperscript{th} century, although the present building dates largely to the early 16\textsuperscript{th} century. The principal element of the re-ordering scheme required the removal of existing stone and timber surfacing in the nave to enable the installation of a new limecrete floor with under-floor heating. The existing timber floor was suspended over a void that was c 320mm deep, and overlay an earthen deposit that derived from the reuse of the church interior for burials since at least the early 16\textsuperscript{th} century (OA North 2013).
St Bartholomew’s Church is just one example of a religious building that was subject to alterations and improvements during recent years. Another example can be drawn from St Mary’s Church in Deane (GM), which was built in the 13th century and remodelled in the 15th and 16th centuries. An urgent need to upgrade the rainwater drainage from the church required limited excavation across the churchyard, leading to the discovery of early 17th-century ledger stones that were concealed at a shallow depth beneath the modern ground surface. Whilst Deane was one of the 11 parishes in the Medieval Hundred of Salford, and covered approximately half of the modern borough of Bolton, the ledger stones in the churchyard provide a reminder of Deane’s importance during the Post-Medieval period, prior to its absorption with industrialised Bolton.

Amongst several instances of applying archaeological science to the study of religious buildings is the tree-ring analysis from timbers in the Church of St Mary, Stockport (GM). Dendrochronological analysis of ten core samples obtained from timbers to the vestry roof concluded that the timbers represented were probably cut as part of a single episode of felling in AD 1623 (Arnold and Howard 2014).

Recent years have seen several large-scale excavations of cemeteries, particularly in urban environments, and it is likely that further cemeteries will be uncovered as pressure for development in the urban centres increases. Recent excavations include those at Walker’s Croft and St Peter’s Square in Manchester (GM), and Blackburn (L), Darwen (L), Hazel Grove (GM) and Swinton (GM), although these were all predominantly of a 19th-century date. Excavation has been carried out, however, of the cemetery associated with the non-conformist Cross Street Chapel in Manchester. Established as a Unitarian chapel in 1694, the building was surrounded on three sides by a well-used burial ground that probably put to use shortly after the chapel opened (Marsden 2014, 76-7).

Numerous burials recorded on Cross Street have been dated to the 1720s and 1730s, and analysis may provide earlier dating; the earliest surviving burial register dates from 1785 (ibid). It is hoped that analysis will also shed light on the diet, health and lifestyle of the people of the period and together with the growing body of information from cemeteries in Manchester, contribute to the building up of a detailed picture of century life in the town on the cusp of industrialisation.

A community-led project at Halton Castle in Runcorn, comprising geophysical survey and the excavation of two trenches unexpectedly revealed two burials that have been dated to the 15th and 16th/17th century. The discovery of burials within a castle is very rare; Halton is the only Castle site in the North West known to have contained burials, and they may have derived from the Post-Medieval use of the castle as a gaol, or from the Civil War.

7. Technology and Production
It is widely accepted that most industrial / craft-working activity across the region prior to the late 17th century followed Medieval traditions. Such activity was almost certainly widespread, with distribution networks being largely local, unless connected to the sea. Industrial enterprises were for the most part small concerns and, in broad terms, not concentrated in specific locations. The situation changed subsequently with market growth, capital investment and improved transport infrastructure, initially from river navigations and, from the mid-18th century, the introduction of canals.

**Extractive Industries**

A considerable amount of important work on historic extractive industries has been carried out since 2006, particularly in Cumbria and Greater Manchester. Several small-scale projects in the Lake District National Park, for instance, have enabled features associated with the region’s extractive industries to be recorded. Several features at the Silver Gill lead/silver mine near Caldbeck, for instance, have been investigated by the Mines of Lakeland Exploration Society (MoLES), including a new level above the open coffin-level. Excavation revealed another hand-cut coffin level, cross-cut to the Silver Gill vein. At the intersection, a wooden jack roll with iron handles was discovered. This re-excavated level was identified as the (Elizabethan) Emanuel Stolne level. Several timber artefacts *in-situ*, possible Rowle Wagons used by the Company of Mines Royal c 1586, represent a possible tramway (S5372). Work has also been carried out at Goldscope copper and lead mine in the Newlands Valley (C), where physical evidence for fire-setting was identified (S5309).

**Coal Mining**

Coal was being mined in small quantities from accessible seams in many parts of the Manchester and Wigan coalfields during the 14th and 15th centuries, corresponding with its increased use for domestic purposes. Mine works that exploited seams beneath surface outcrops appear to have been introduced to the area in the 16th century, and very few have been investigated archaeologically. One of the few early coal-mining sites in the region to have been excavated was that at Windle Ashes, near St Helens, where some evidence for 17th-century coal mining was identified. Evidence for coal mining dating to the 15th and 16th centuries was identified during archaeological excavations at Gadbury Fold, near Wigan, in 2007. This excavation also produced a significant assemblage of pottery that has been dated to the 16th and 17th centuries (UMAU 2006).

**Iron Working**

The 17th and early 18th centuries brought significant development of the iron industry, which emerged as one of the principal driving forces of industrialisation. One of the key iron-working sites in the region that retains significant archaeological
remains in Cunsey Forge, near Hawkshead, in South Lakeland, where the immense significance of the buried archaeological resource was confirmed by an initial archaeological excavation in 2017. This identified elements of the 17th-century water-powered bloomforge, and exposed extensive structural evidence for the remodelling of the site as a refining forge in 1715. The principal components of the refining forge comprised at least one waterwheel pits, the stone-built foundations for mechanical bellows, an anvil base associated with a trip hammer, retaining walls composed almost entirely of large lumps of iron-working debris, or ‘mossers’, and a thick surface of indurated metal-working waste that derived from the refining process (Quartermaine and Miller 2017).

**Water-Powered Mills**

Important works has been undertaken on Post-Medieval water-powered mills, especially on the Lake District. One of the largest archaeological surveys in the area was carried out as part of ‘Windermere Reflections’, a Heritage Lottery Fund supported Landscape Partnership Scheme that ran between 2011-14. This examined five possible fulling mills, four of which are located within an area documented as important for fulling and weaving. The condition of the mills was variable, with one at Sourmilk Gill being an exceptional survival. Two of the mills, that at Sourmilk Gill and Stickle Ghyll, were originally stone-founded structures, associated with well-defined water supply systems, comprising head race, wheel pit and tail race, and, at Sourmilk Gill, a launder platform also. Both mill structures were potentially reused and their operational life is uncertain (SS427) (Schofield and Vannan 2012).

**Pottery**

An industry that will have been widespread across the region throughout the Post-Medieval period is the manufacture of pottery. Prior to the ‘industrialisation’ of pottery manufacturing in the 18th century, it was very much a domestic industry, which usually involved the whole of the potter’s family. It was frequently carried out in buildings alongside the family dwelling, and often ancillary to farming or other craft occupations. Potters of yeoman status were able to establish a potworks as a part of their farmsteads, either using existing agricultural buildings or erecting purpose-built structures (Baker 1991, 8). Despite the widespread occurrence of these potworks in the Post-Medieval landscape, however, very few production sites have been subject to archaeological excavation, hampering attempts to identify the provenance of pottery fragments from excavations as the product of a specific production centre.

Establishing the exact provenance of pottery in the absence of data for the production centres and their products is particularly challenging with fragments of utilitarian, dark-glazed earthenware, which have formed a large proportion of assemblages recovered from the excavation of Post-Medieval sites across the region.
An excavation of the Grimshaw Pottery at Grimshaw Park, Blackburn (L), in 2010 provided a large assemblage of dark-glazed earthenware, allowing a type series to be identified that can be linked to a specific kiln (Plummer 2011). Whilst historical documents indicate that the pottery was in production before the late 18th century, the excavated kiln and outbuildings dated to the early 19th century after a fire reportedly destroyed the original buildings. Nevertheless, the excavated kiln is likely to be of a form that had been used widely during the late Post Medieval period, and its products characteristic of the utilitarian Post-Medieval wares across the region.

Particularly valuable information has derived from the series of archaeological excavations in Rainford (M), a village near St Helens where the manufacture of pottery and clay tobacco pipes became an important cottage industry from the 17th century. Carried out between 2011-14 as part of the Rainford’s Roots Community Archaeology Project, the excavations produced regionally significant groups of 16th- and 17th-century pottery. The project culminated with the publication of a monograph that presents the results of the archaeological and meticulous historical research into the area’s pottery industry from the 17th century (Philpott (ed) 2015).

A distinct type of pottery that is often recovered from early 18th-century levels in archaeological excavations is tin-glazed earthenware. Liverpool emerged as the principal centre of the production of tin-glazed earthenware in the North West, although a few manufacturing sites existed elsewhere. The Pot House on St George’s Quay in Lancaster provides a very rare example of one such site. This 18th-century kiln has been subject to archaeological excavation, which yielded a regionally significant assemblage of pottery together with an important group of kiln furniture fragments. However, this assemblage has yet to be assessed, analysed and published.

8. Trade, Exchange and Interaction

The introduction of an effective transport network was a prerequisite for industrial growth, and whilst the introduction of canals, and subsequently railways, occurred during the Industrial Period, these developed from the river navigations of the 18th century. Significantly, the river navigations were the first large-scale financing of the local infrastructure by the merchant class to help develop trade, and their success stimulated the development of canals subsequently.

Those of particular significance to the development of the North West included the Mersey & Irwell Navigation, the Weaver Navigation, the Dee Navigation and the Douglas Navigation. These employed simple chamber locks and short sections of man-made channels to avoid existing water mills and where the slope of the river demanded.
Documentary studies of these early navigations have been carried out, although very little archaeological investigation has been undertaken recently, other than in respect of the River Dee, where good evidence has been provided for a rapid shift in the active channel of the river. This evidently led to the need for new revetments, canalisation and construction of inlets for docks/wharfs and slipways.

9. Defence

Little, if any, new archaeological data has been gathered on Post-Medieval defences since 2006.