



Historic England

Transport Sites

Scheduling Selection Guide



Summary

Historic England's scheduling selection guides help to define which archaeological sites are likely to meet the relevant tests for national designation and be included on the National Heritage List for England. For archaeological sites and monuments, they are divided into categories ranging from Agriculture to Utilities and complement the [listing selection guides](#) for buildings. Scheduling is applied only to sites of national importance, and even then only if it is the best means of protection. Only deliberately created structures, features and remains can be scheduled. The scheduling selection guides are supplemented by the [Introductions to Heritage Assets](#) which provide more detailed considerations of specific archaeological sites and monuments.

This selection guide offers an overview of the sorts of archaeological monument or site relating to transport which are likely to be deemed to have national importance, and for which of those scheduling may be appropriate. It aims to do two things: to place these within their historical context, and to give an introduction to what overarching, and particular, factors are considered in assessing sites for designation.

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Front cover

A section of the Roman Watling Street between Crick and Kilsby, Northamptonshire.

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Introduction

This selection guide offers an overview of the sorts of archaeological monument or site relating to transport which are likely to be deemed to have national importance, and for which of those scheduling may be appropriate. It aims to do two things: to place these within their historical context, and to give an introduction to what overarching, and particular, factors are considered in assessing sites for designation.

Additional historical content is provided by the Historic England Introduction to Heritage Assets document on [Pre-Industrial Roads, Trackways and Canals](#). A parallel [Infrastructure: Transport](#) listing selection guide treats the selection of transport-related buildings, as well as such structures as bridges, which are more typically designated via listing; it also offers a fuller history of eighteenth-century and later transport and communications than is given here.

It should be noted that many transport-related historic assets are currently dual-designated, being both scheduled and listed; this guide sets out guidance on future practice. Some transport-related items are treated in other selection guides. For instance, mileposts and horse troughs

are considered in the [Street Furniture](#) listing selection guide; harbours, quays and waterfronts associated with the sea in the two [Maritime and Naval listing](#), and [scheduling](#), selection guides; and wagonways in the [Industrial Sites](#) scheduling selection guide. [Ships and Boats](#) have a separate selection guide.

Extensive scheduled archaeological areas, including military and industrial ones, and settlements – all treated in separate selection guides – will typically include roads and other transport systems, which both provided internal circulation and connected them to the world beyond: a reminder that transport systems did not exist in isolation, but were intimately connected with their wider surroundings.

1 Historical Summary

1.1 Prehistoric

The earliest physical remains of journeying in the country are the Lower Palaeolithic footprints, some 800,000 years old, discovered in 2013 on the beach at Happisburgh (Norfolk). These are the oldest human footprints to be found outside Africa and show a mixed-age group of hominins moving along a river edge. More recent prehistoric footprints, of Mesolithic and later date, are periodically uncovered in the sediments of river estuaries and on the coast.

Trackways are thought to have been created from the earliest times, as interconnected local networks rather than planned long-distance routes. Some standing stones, burial mounds and carved rocks are suggested to have been way-markers, a function that some retain to this day in moorland areas. There is now far less agreement that there were long-distance routes via the uplands, like the Clun-Clee Ridgeway in Shropshire. From the late Mesolithic, trackways were carried across marshland via artificial wooden walkways; those in the Somerset Levels, including the Early Neolithic Sweet Track, linking Westhay and Shapwick, made with timber cut down in 3807-3806 BC, are the best known (Fig 1).

About 50 tracks or groups of tracks are already known on the Levels; sections of the Sweet Track are among about 25 scheduled examples. Similar structures have also been found which appear to have been more akin to jetties extending out into open water: one Bronze Age example, on Thorne Moor in North Lincolnshire, has been suggested to have allowed the ritual deposit of offerings, although it could also have facilitated the use of boats. The same goes for the Iron Age causeway at Fiskerton, also in Lincolnshire. Elsewhere in the Welland Valley, islands of high ground appear



Figure 1

A section of the Eclipse Trackway on the Somerset Levels under excavation. Dating from the mid-second millennium BC, this is one of 50 currently-known prehistoric walkways which facilitated sometimes long-distance travel across these wetlands. Hurdles evidence woodland management.

to have been accessed by enhanced natural causeways from the late prehistoric period right through to the advent of widespread drainage in the post-medieval period.

In terms of bulk transport, the evidence of the distribution of archaeological finds shows that by later prehistory rivers, rather than land routes, had primacy. Dramatic evidence of this started to emerge in 2011 east of Peterborough (Cambridgeshire), where clay digging led to the discovery of eight logboats, dated to the Later Bronze Age, in a palaeochannel (infilled ancient watercourse) at the Fen edge.

Wheeled transport (evidenced, for instance, by Iron Age chariot burials) was also known in prehistory, but is not thought to have been common. However, the discovery at Sharpstones, near Shrewsbury (Shropshire), of a metalled (that is, stone-surfaced) and cambered (that is, with

a surface sloping down from the centre) road (which term is generally defined as an engineered structure, unlike most trackways) dated to the first century BC belies the long-held belief that engineered roads were unknown before the Roman invasion in AD 43 (Fig 2). Gridded and metalled streets have also been found within the later Iron Age tribal centres at Danebury and Silchester (both Hampshire).

Until recently the accepted wisdom has been that the earliest artificial river crossings were clapper bridges – flat stone slabs supported by stone piers – like the scheduled Tarr Steps over the River Barle in Exmoor. These are thought to have been built since prehistoric times in areas with suitable

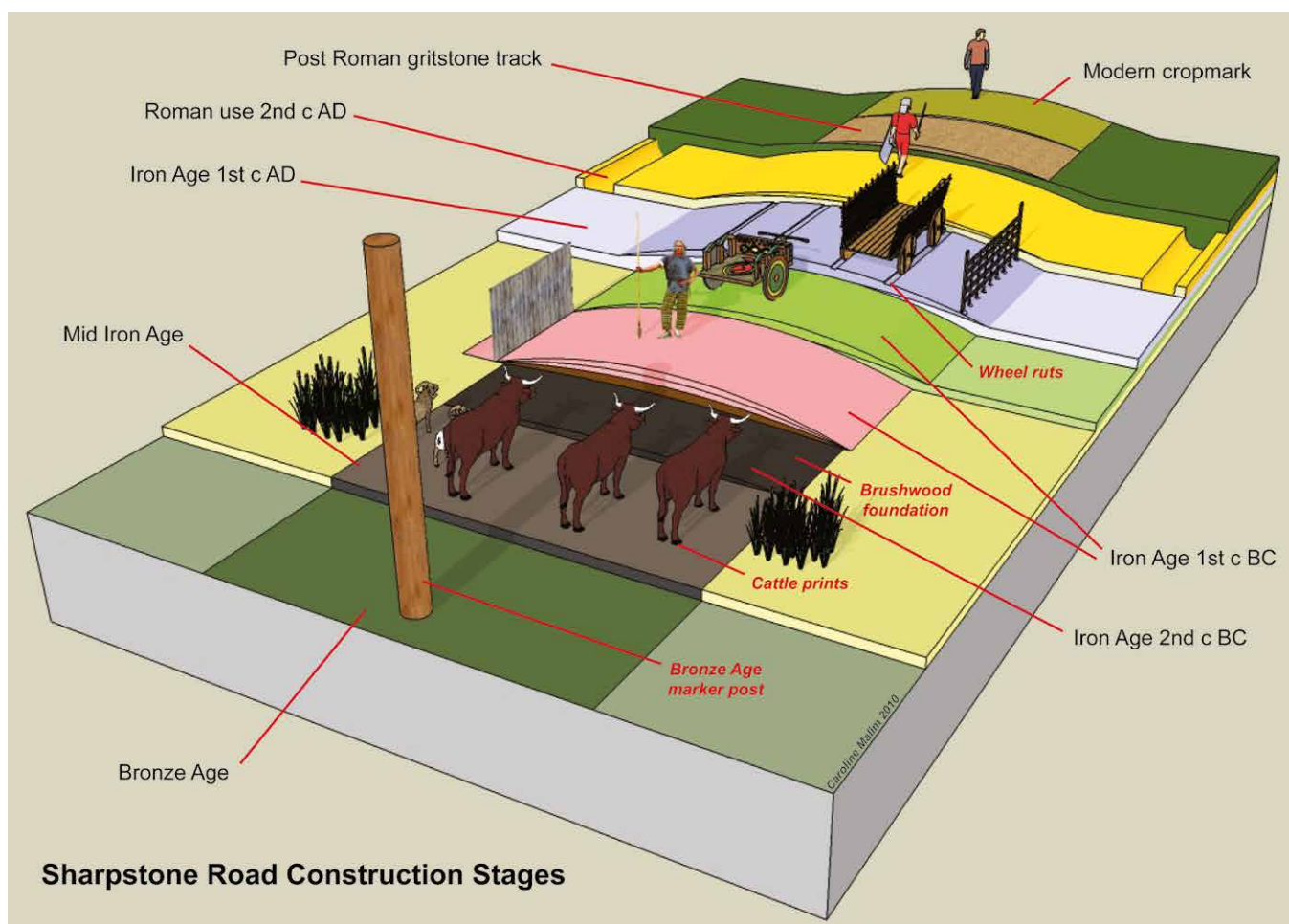


Figure 2
Excavation in advance of quarrying at Sharpstones, Shropshire found a routeway which was apparently in use from the Bronze Age to the Roman period and beyond.

In the Iron Age the surface was deeply metalled with stone, challenging the long-held belief that it was the Romans who introduced engineered roads.

stone slabs (in England, predominantly on Exmoor and Dartmoor), although most survivals are likely to be of medieval or later date. However, the discovery of a sequence of Middle Bronze Age to Iron Age (1400 to 300 BC) timber bridges across a former channel of the Thames at Dorney (Buckinghamshire), linking settlements with grazing land, suggests that many such prehistoric structures remain to be discovered, especially where the line of rivers and watercourses has shifted over time.

1.2 Roman

The Roman invasion marked a distinct historical watershed with the construction of a major network of engineered roads (see cover), the courses of many of which remain in use today: Watling Street, the old Dover Road, for example, is now the A2. There are also many examples at a more local level, such as King Street (Derbyshire), which again relate to renaming of the surviving paved Roman military roads in the Anglo-Saxon period. Initially constructed for military supply (allowing the rapid transit of messages, supplies and troops), roads were subsequently built and maintained by civil authorities. Roman roads were designed to accommodate wheeled traffic and typically had regular way-stations (*mansiones*) and mileposts as well as being the focus for forts, settlements and associated cemeteries.

The lines of the main and secondary roads have been well-established by scholars (not least Ivan Margary, working in the 1950s and 1960s), and it is reckoned that by the mid-second century roughly 9,500 miles of Roman road had been built; the line of 7,400 is known, while the precise routes of a further 2,000 miles remain to be found (Fig 3). Cornwall is seemingly the only county without a confirmed Roman road. The identification of minor routes is less certain, and not everywhere was accessed by road. Some forts, for instance, were probably supplied by river (such as Roall on the River Aire near Selby, North Yorkshire) or by pack animal (Cawthorn Camps near Pickering, also North Yorkshire). Also, inevitably given the scale of the network, questions remain over

some stretches. Some monuments previously identified as lengths of *agger* – the raised and cambered embankment which carried a road – are now considered more likely to be long-distance linear boundaries, while the Roman origin of the scheduled cross-country road at Wheeldale, on the North York Moors, is now less certain than once supposed.

The lines of Roman (Military) roads are archetypally straight, but they should not be understood as simple straight lines between planted settlements and military installations. Rather, they appear to be surveyed with a clear object or route in mind that delivered a direct course, but one that on closer examination is formed from a series of short straight sections strung between pre-existing landmarks and foci. Some of these are Iron Age enclosures, which in turn might have seen conversion in the Roman period into small towns or *mansia* (as perhaps at the crossing of the Fosse and Watling Street at High Cross/Venonis in Leicestershire), whilst others are natural or funerary landmarks such as the Neolithic barrow at Minninglow (Derbyshire).

In addition to engineered roads, the Romans employed water transport, facilitated and improved via the construction of harbours, wharfs, and artificial water courses. The last were particularly found around the Wash, such as the 35 mile-long Car Dyke (many sections of which are scheduled) between Lincoln and Peterborough, which probably also served as a catchwater drain, preventing water from higher ground inundating summer fenland pastures. Flash locks, designed to temporarily raise the water level to allow boats to pass over shallows, were also in use, and this has been advanced as an alternative interpretation for the scheduled Roman structure at Piercebridge on the Tees, conventionally described as a bridge. Roman lighthouses are covered in the [Maritime and Naval](#) scheduling selection guide.

Roman engineers were renowned for their accomplishments: the earliest London Bridge across the Thames remained in use for centuries. Some Roman bridge foundations – stone and timber abutments and piers – have been located,

although dating can be problematic; it ranges from the speculative on the one hand to the precise (via dendrochronological samples from piers) on the other. Most large bridges, like the scheduled example at Chesters (Northumberland) are assumed to have been constructed by the military, although with smaller examples like that crossing the River Nene at Aldwinckle (Northamptonshire; also scheduled) other agencies may have been responsible. Only a hundred or so bridge sites are known; this must represent only a fraction of the total.

1.3 Anglo-Saxon

Although some Roman roads, especially secondary and minor ones, fell into disuse, most principal routes continued to be used during the following centuries. Paved roads survived to be noted by Bede in the eighth century, and three of the four national roads protected by the King's Peace (enforced by Knights of the Peace, predecessors of later Justices of the Peace) in the twelfth century were major Roman roads: Watling Street, Ermine Street and the Fosse Way. That said, in general terms, the eleventh-century road system in England differed significantly from the Roman. New routes linked new settlements, such as the late ninth- and early tenth-century *burhs* (or fortified centres), shire towns, manufacturing centres and more locally the huge numbers of nucleated villages which were a new feature of the late Anglo-Saxon countryside.

Less certainty is today attached to the meaning of the term *herepath*, used to describe particular roads linking important places, sometimes including hundred meeting places. Historically these roads were seen as designated routes used by the army, but that idea has now been set aside although that is not to deny the importance of these routes to the administrative and political geography of Anglo-Saxon England.

Locally, holloways (hollowed tracks created through usage and natural erosion), whether in use or abandoned, are sometimes claimed to be Anglo-Saxon because of the route they follow (say

between places known to have been in existence before the Norman Conquest) or because they appear to be mentioned in documents such as charters. Firm proof, however, will generally be lacking. Where roads are encountered in the excavation of settlements, like Raunds (Northamptonshire), it is rarely possible to trace their course outwards from the investigated area.

Most Roman bridges seem to have disappeared soon after the end of Roman rule, and there may have been two or three centuries with little maintenance and even less new work. The earliest archaeologically-known large-scale Anglo-Saxon crossing is a large piled causeway of about AD 700 linking the Essex mainland to Mersea Island. David Harrison has recently argued that the construction of major bridges began again around 750, often it seems at the initiative of the state, with laws and charters laying the responsibility for maintenance upon the public. One period when there was probably major, state-promoted, bridge building was in the later ninth and early tenth century when bridges were clearly constructed in association with *burhs* as part of the strategy to reclaim at first Wessex, and then England beyond, from the Scandinavians. This was when the second London bridge, documented from about AD 1000, was built; physical evidence for it may be represented by two large timbers from a tree felled about 987-1032 found re-used in the foundations of a later bridge.

By the time of the Norman Conquest there were timber bridges at most major crossings, and at almost all by 1250: to give but one example, the great bridge across the River Cam at Cambridge existed by the ninth century. However, the relative poverty of the documentary record before the thirteenth century means that mentions of Saxon bridges are infrequent and coincidental; for instance, Orderic Vitalis records that in 1069 King William's progress north was delayed at Pontefract as the bridge across the Aire was broken.

One feature of the late Saxon period was the proliferation of channels dug for mainly local water carriage, typically under five metres wide and only a metre deep. These were commonest

in places that were flat and wet, such as the Somerset levels and parts of East Anglia, where such ‘water roads’ were called lodes. A number of more ambitious enterprises are known, such as Cnut’s Dyke which runs for 16 km to the south-east of Peterborough, and the cut which by-passed a loop in the River Thames at Abingdon, funded in the 1050s by the abbot of Abingdon. In a few instances, notably the Foss Dyke in Lincolnshire, Roman canals seem to have remained open, and by inference, maintained, through to the better-

documented Middle Ages when periodic clearance is recorded. With all such waterways, jetties would presumably have facilitated transhipment.

1.4 Medieval

In the Middle Ages, documents refer to different types of road – *Strata Regalis* (Royal Road), *Magna Via* (Great Road) and *Via Communa* (Public Road) – but few if any were engineered structures.

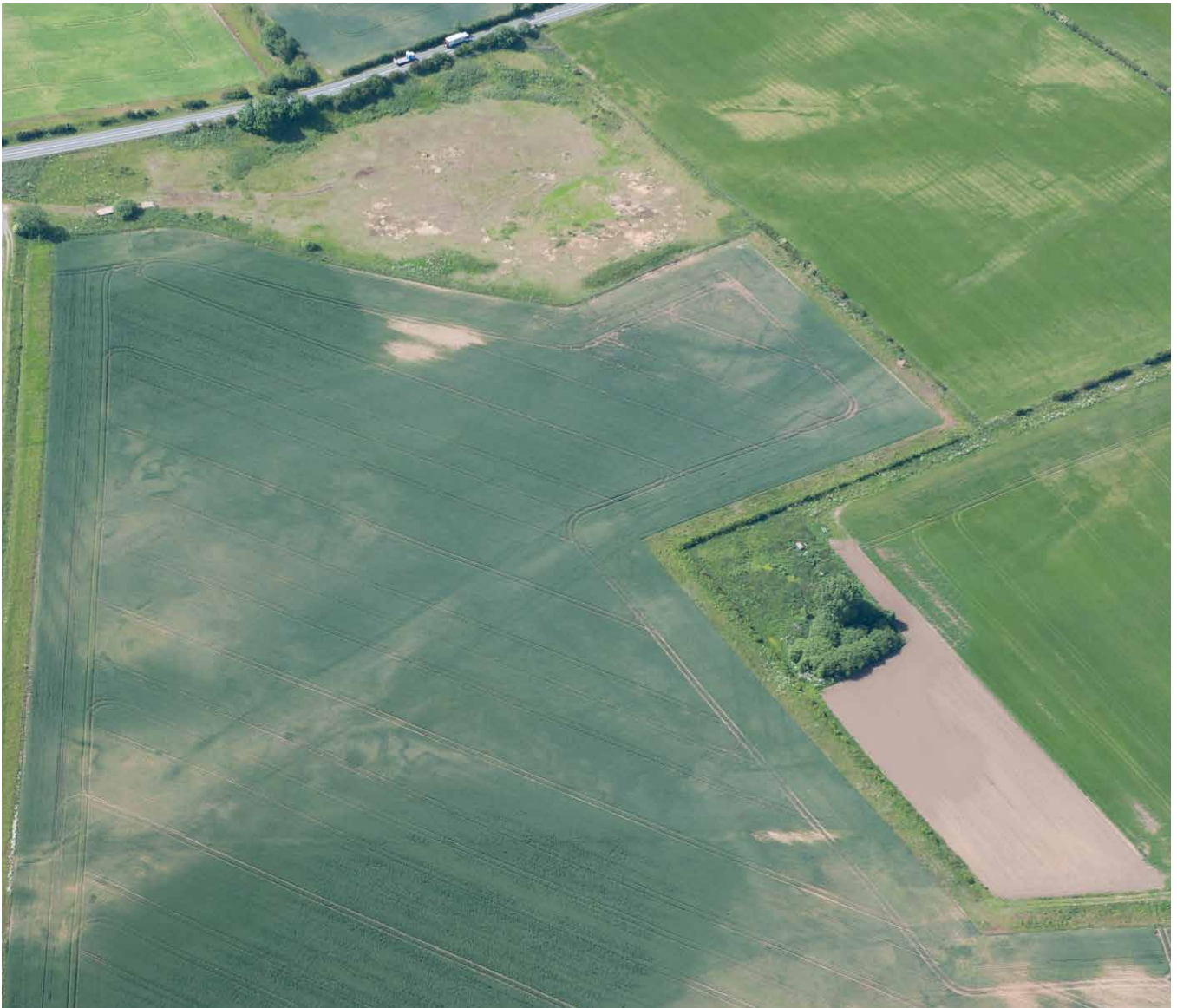


Figure 3
A length of Roman road is a component of the Old Winteringham Roman settlement, North Lincolnshire. Running from bottom left to top right, the metalling

shows as a pale line; to either side are dark lines of the infilled roadside ditches.

Nevertheless, numerous pointers such as the speed with which the royal and other households routinely moved around the country, the preparation of written itineraries, and the creation of itinerary maps (that is, ones that show places on a route, with topographical considerations secondary) such as the mid- to late fourteenth-century Gough Map (now in the Bodleian Library, Oxford), all indicate that long-distance travel was routine for many.

In general, it seems that from around the thirteenth and fourteenth centuries road transport became more important, while the use of rivers declined for many purposes other than freight. A few examples of engineered minor routes are known, for instance the stone-paved trods (packhorse routes) across the North York Moors. Some of those (such as the Kirby Bank Trod, a Scheduled Monument (Fig 4)) may represent monastic investments, for instance to enable the carriage of fish from coastal fishing villages to York.

Before the twelfth century most bridges were of timber, employing stone, if at all, for piers and abutments. From soon after 1100 bridges – such as the strategically important bridge across the Medway at Rochester (Kent) – began to be constructed with stone vaults, and most major bridges had been rebuilt in this way before 1500. Especially where rivers had wide floodplains, lengthy causeways, again of either timber or stone, were common features on the approaches to bridges. Some medieval bridges possessed a pronounced architectural character: a number incorporated wayside chapels along their length, as at St Ives (Cambridgeshire).

Many medieval bridges were demolished and replaced in the century between 1770 and 1870; nevertheless, large numbers survive (Fig 5). The ancient bridges of England and Wales, some 5,000 in all, were systematically surveyed in the 1930s by Edwin Jervoise for the Society for the Protection of Ancient Buildings; in an introduction to Jervoise's published regional compendiums the Chief Inspector of Ancient Monuments announced that the underlying purpose was to enlist public interest in the bridges' preservation. Most of the 5,000 still survive, despite some high-profile



Figure 4
Volunteers clearing the Kirby Bank Trod, a medieval and later packhorse route on the North York Moors.

losses. The increasing weight and volume of road traffic following the arrival of motor transport took an inevitable toll on some of these centuries-old bridges, although official policy when they were widened or strengthened was remarkably sympathetic to their historic character; even when bridges were widened, the facing stones of original facades were often numbered to facilitate an accurate reconstruction.

The potential for bridge archaeology has been best demonstrated by the excavation at Hemington (Leicestershire) of the massive timbers and stone foundations which formed the bases and lower structures of successive early medieval bridges which had carried the King's Highway from Leicester and the south across the Trent to northern England. The earliest of the three bridges was of the late eleventh century. Its



Figure 5

The bridge at Medbourne, Leicestershire is under two metres wide and a reminder of the type of modest yet vital local structures which facilitated travel in

medieval England. A thirteenth-century date is possible on stylistic grounds.

footings comprised two lozenge-shaped caisson bases – wooden boxes filled with sandstone rubble – supporting a trestle superstructure which calculation showed supported a 2.8-metre wide carriageway carried 5.5 metres above the river, thought to be the most complete Norman timber structure found in Britain. Sometime after 1111, following major flood damage, this bridge was replaced with one whose stone foundation bases were underpinned by oak piles. Bridge III was constructed in the mid-thirteenth century, and four of its regularly-spaced piers were found crossing a 50-metre wide former course of the Trent: the two outer ones of masonry, those nearer the centre of the flow with stone piers supported on deeply-driven piles.

The extent to which English rivers were navigable in the Middle Ages remains uncertain, although

there is a consensus that river traffic was greater in the eleventh to thirteenth centuries than it became after the fourteenth century. Maintenance of waterways was often a problem (as was encroachment and interference from mills, fisheries and the like), and as well as dredging, banks sometimes required embanking or piling. Examples are known (or suspected) from across England where sections of rivers were straightened, or loops by-passed by cuts. More ambitious schemes are also known, such as the canalisation of the River Don in South Yorkshire, certainly by the early fifteenth century, and perhaps before 1344. These larger schemes were often investments by the church; monasteries also continued, as in the later Saxon period, to dig canals to transport stone for construction projects and to support estate management, especially the transport of agricultural produce.

1.5 Post-Medieval

Many bridges had been administered by monasteries. With their Dissolution in the mid-1530s, it fell to other bodies to assume responsibility for bridges' upkeep. This was to be a source of dispute until the later nineteenth century, when newly-established local government structures assumed the responsibility they still have today. With roads, maintenance problems were partly resolved by the development of turnpikes: trusts that collected tolls to pay for the construction and maintenance of roads. 'Turnpike mania' of 1750-1772 saw 500 new trusts founded and 15,000 miles of turnpiked roads constructed. However, these only covered trunk routes, extending to just 17 per cent of the national road network by 1838.

The great age of road building in the later eighteenth and early nineteenth centuries saw the introduction of new techniques, new materials – like iron for bridges (Fig 6) and macadam road surfaces – and the emergence of what would later be called civil engineers. The first President of the Institute of Civil Engineers, founded in 1820, was Thomas Telford (nicknamed the 'Colossus of Roads'; d.1834), who oversaw several major road infrastructure projects including the construction of the London to Holyhead route in the 1820s, as well as a wide range of other projects including St Katherine's Dock in London (1824-1828), and the Birmingham and Liverpool Junction Canal (1826 onwards). But it should be remembered that despite improvements to national, regional and county roads, most local routes remained



Figure 6
The Iron Bridge, Shropshire. Built in 1777-78 by Abraham Darby III to the designs of Thomas Farnolls

Pritchard, it is a key feature of the Ironbridge Gorge World Heritage Site.

unimproved tracks, maintained to varying standards by the parishes they passed through.

Commercial interests in improving the transport of bulk commodities (especially coal) led to the development of new transport links. The simplest were packhorse routes, minimally engineered and little different to medieval precursors, although provided with narrow bridges with low or no parapets. The earliest horse-drawn wagonways (using timber rails to keep wagons to a levelled route) were constructed in the Northumberland and Durham coalfields in 1604-1605, and there was at least one in the Coalbrookdale coalfield in Shropshire by 1608. By the mid-seventeenth century industrial wagonways were fairly common, linking collieries to the rivers Tyne and Wear and with smaller networks in parts of

Cumberland, Shropshire and Yorkshire. A notable later example was the mile-long railway built 1729-1731 by Ralph Allen at Bath to bring Bath Stone down from his Combe Down quarries to the Kennet and Avon Canal. Around 1800 iron rails began to be used, for instance with the horse-drawn Surrey Iron Railway (opened 1803) which carried goods from the Thames at Wandsworth via Mitcham to Croydon.

Water transport via rivers was improved by the construction of pound locks (which comprise a water-tight chamber with a gate or gates at either end, like most modern canal locks) on the River Lea (1571), the Thames (1624-1635), the Warwickshire Avon (1636-1639) and eight or nine others. In the same period several small canal projects had been successful; for instance, the



Figure 7

The Anderton Boat Lift, Cheshire. Built in 1875 to a design by Edward Leader Williams and Edwin Clark, it stands at a key interchange between the River Weaver and the

Mersey Canal. It is one of only two working boat lifts in the United Kingdom. It was restored to full hydraulic operation in a major restoration programme in 2000-02.

three mile-long Exeter Ship Canal, constructed between 1698 and 1701, succeeded an artificial waterway of 1564-1566 which included three pound locks, while the ambitious Aire and Calder Navigation, opened in 1700, connected Leeds with Hull (and from there with Northern Europe).

The true Canal Age is generally taken to be heralded by the six mile-long Duke of Bridgewater's Canal of 1759-1761 linking Worsley and Manchester. By 1830 there were 4,000 miles of canals, many supported by networks of horse-drawn wagonways which brought raw materials and manufactured goods to quays for transshipment. Viaduct, aqueduct and tunnels could assume dramatic lengths and dimensions, such as the scheduled Pontcysyllte Aqueduct built across the Dee Valley in 1795-1805 as a collaborative venture by Thomas Telford, the canal engineer William Jessop, the mason John Simpson and the ironmaster William Hazeldine: Pontcysyllte's renown warranted its inscription as a World Heritage Site.

Britain's pioneering role in developing a railway system in the last years of the Georgian age is well-known. The Middleton Railway in Leeds, constructed in 1812 to bring coal from the colliery to the centre of the city, can be seen as the world's first steam locomotive route. The development of the steam locomotive precipitated the rapid development of the national rail network between 1825 and 1850; the standard track gauge is thought to have been adopted from the most common gauge used by north-eastern wagonways. The enterprise of railway-related engineering works was on a vast and heroic scale, with many of its component elements approaching a neo-Roman ambition.

A few later structures associated with transport are scheduled, mostly where they were especially innovative: a good example is the Anderton Boat Lift (Cheshire; Fig 7). Built in 1875, this lifted boats 15 metres between the River Weaver and the Trent and Mersey Canal.

2 Overarching Considerations

2.1 Scheduling and protection

Archaeological sites and monuments vary greatly in character, and can be protected in many ways: through positive management by owners, through policy, and through designation. In terms of our designation system, this consists of several separate approaches which operate alongside each other, and our aim is to recommend the most appropriate sort of protection for each asset. Our approach towards designation will vary, depending on the asset in question: our selection guides aim to indicate our broad approaches, but are subordinate to [Department for Digital, Culture, Media and Sport \(DCMS\)](#) policy.

Scheduling, through triggering careful control and the involvement of Historic England, ensures that the long-term interests of a site are placed first. It is warranted for sites with real claims to national importance which are the most significant remains in terms of their key place in telling our national story, and the need for close management of their archaeological potential. Scheduled monuments possess a high order of significance: they derive this from their archaeological and historic interest. Our selection guides aim to indicate some of the grounds of importance which may be relevant. Unlike listed buildings, scheduled sites are not generally suited to adaptive re-use.

Scheduling is discretionary: the Secretary of State has a choice as to whether to add a site to the Schedule or not. Scheduling is deliberately selective: given the ever-increasing numbers of archaeological remains which continue to be identified and interpreted, this is unavoidable. The Schedule aims to capture a representative sample of nationally important sites, rather than be an inclusive compendium of all such assets.

Given that archaeological sensitivity is all around us, it is important that all means of protecting archaeological remains are recognised. Other designations such as listing can play an important part here. Other sites may be identified as being of national importance, but not scheduled. Government policy affords them protection through the [planning system](#), and local authorities play a key part in managing them through their archaeological services and Historic Environment Records (HERs).

The Schedule has evolved since it began in 1882, and some entries fall far short of modern standards. We are striving to upgrade these older records as part of our programme of upgrading the National Heritage List for England. Historic England continues to revise and upgrade these entries, which can be consulted on the [Historic England website](#).

2.2 Heritage assets and national importance

Paragraph 194 and footnote 63 of the [National Planning Policy Framework](#) (July 2018) states that any harm to, or loss of, the significance of a designated heritage asset should require clear and convincing justification and for assets of the highest significance should be wholly exceptional; ‘non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets’. These assets are defined as having National Importance (NI). This is the latest articulation of a principle first raised in PPG16 (1990-2010) and later in PPS5 (2010-2012).

2.3 Selection criteria

The particular considerations used by the Secretary of State when determining whether sites of all types are suitable for statutory designation through scheduling are set out in their [Scheduled Monuments Policy Statement](#).

3 Specific Considerations

Some transport related items such as Palaeolithic footprints, prehistoric ridgeways, isolated sections of medieval holloways and simple mooring places on riverbanks cannot be designated because they fall outside the scope of the legislation, it being difficult to define them as ‘works’ under the terms of the Ancient Monuments and Archaeological Areas Act, 1979. However, tracks and holloways that form part of a wider area of settlement or a field system can and should be considered as part of that wider monument. Indeed some monuments (such as Romano-British ladder settlements) are focused on a trackway, so that the exclusion of the track would be perverse.

3.1 Crosses and waymarks

In the Middle Ages and beyond routes were sometimes marked by stone crosses, boundary stones or other markers, with crosses often being erected at parish boundaries as pious reminders to the wayfarer. Some have been listed, some scheduled, even where all that remains is a base. Scheduling will normally be favoured if the cross or other marker and its site (notably the ground it stands on) is thought to have the potential to be better understood through archaeological investigation. Where a cross or other marker has sufficient intrinsic interest to be designated but has been re-set, listing is likely to be more appropriate. Large unmodified boulders, often placed to mark manorial, parish or other boundaries, fall outside the scope of the legislation as they are not ‘works’.

Saxon and later charters and other sources, including early maps, often define natural features such as trees and rock outcrops as waymarks and boundary markers. Again, as these are unmodified, and not ‘works’, they fall outside the scope of the legislation.

3.2 Selective designation of linear assets

Engineered routes

Roads, canals and railways can be defined as works under the 1979 Act and frequently extend for long distances across the landscape. Although the route that they take is often of interest and significance, the archaeological interest of the way that the route was engineered can be quite repetitive. Consequently, it is generally appropriate to schedule well-preserved sample sections, rather than trying to capture the route as a whole. Similarly, it may also be appropriate to designate sections of a route that survive as one or more short sections of upstanding earthworks, even if intervening sections have been destroyed. These surviving sections will thus represent samples and provide an understanding of the rest of the route.

Prehistoric wetland trackways

These are principally composed of organic material preserved by combinations of waterlogging, anaerobic conditions and soil chemistry, and are especially vulnerable to loss or decay. They vary considerably in form and construction, and have

great potential to preserve evidence of the local prehistoric environment and early construction techniques, while rarely-preserved objects – whether lost or deliberately placed – sometimes survive in their immediate vicinity. Accordingly, even the simplest examples, where they are positively identified, will be strong candidates for designation. Later examples, certainly from the Roman and medieval periods, may also be candidates for designation because of their archaeological potential. Structural interest, and association with other features, will be key guiding factors.

Roman roads

As noted above, it is thought that there were some 9,500 miles of Roman road nationally; while much of the network has been mapped, a much smaller proportion is known to survive physically. Many sections of Roman roads have been fossilised in the landscape by roads and tracks still in use, as well as parish and other boundaries. Such fossilisation does not provide justification for designation. Where designation is more appropriate is in instances where the Roman road survives as an upstanding earthwork because the later road diverges from this line (for instance, the 575-metre scheduled section of the Roman road between Carlisle and Papcastle, lying between Pattenfoot and Waverbridge in Cumbria) – although consideration should be given to the likelihood that the Roman road surfacing may have been robbed for hardcore, in which case designation will be less likely.

Roman roads formed the focus for other features including settlements, way stations, roadside shrines, and burials. Evidence of such associations is likely to add to the significance of that section of road and if in a close spatial relationship may be embraced in a single scheduled area. When considering Roman forts, settlements and other sites associated with roads for scheduling, it will often be appropriate to include an adjacent sample of the road to capture its alignment, even if it is very poorly preserved. It should also be noted that Roman cemeteries typically extended alongside roads outside the settlement. These are rarely expressed as upstanding earthworks,

but may nevertheless have considerable archaeological potential. For similar reasons to prehistoric wetland tracks, sections of Roman road which cross waterlogged ground may also be good candidates for designation if they are likely to retain organic remains of timber piling and rafting.

Later roads

Engineered roads constructed between the Roman period and the eighteenth century are considered to be much rarer than Roman roads, and may be candidates for designation where they survive well. Thus the road on Blackstone Edge near Littleborough (Greater Manchester) was scheduled even though its dating is uncertain, and is possibly post-medieval rather than Roman, as is traditionally thought. It may also be possible to make a case for designating sections of later turnpike and other roads that retain the original style of their surfacing, although authenticity will need careful consideration.

Medieval and pre-industrial roads were not always designed for wheeled traffic: narrow paved paths were laid as packhorse routes such as the ‘trods’ of the North Yorkshire Moors. These paths are relatively common in upland areas and dating them is difficult; even if the route is referred to in a medieval document, any paving may be a much later improvement. A case for designation can be strengthened if the paved route has associated features such as guide stones or pack horse bridges, or if it links to associated sites also considered for designation such as an area of early mining remains. Designating sample sections of such routes may also be appropriate. However, in general, the designation of trackways and the like, especially of medieval and later date, is likely to be very exceptional, whereas many key structures associated with the great age of road building have been designated via listing and scheduling.

3.3 Bridges

Where they have been found, prehistoric wooden bridges are typically integral with other structures such as trackways, and designation assessment is likely to extend beyond the bridge itself.

In the past, scheduling has frequently been used to provide protection to bridges, particularly those of especially early date. For bridges of more recent date, both scheduling and listing have been utilised for their protection, often resulting in designation for individual structures under both protection regimes. Recent designation approaches promote a more integrated approach to the management of the historic environment and require a careful consideration of which designation regime is most appropriate to secure the future management of the structure. It is important to remember that listing, suitably deployed, can uphold the protection of archaeological interest.

Scheduling is reserved for those sites of manifest national importance which retain considerable evidential value and which will benefit from the close management of the national heritage body in ongoing management. For bridges, in particular, those sites which survive largely as archaeological features, such as the remains of Roman bridges, are generally scheduled as are bridges of particularly modest construction such as clapper bridges. Bridges may also be scheduled where they form part of a larger site of national importance, for instance as part of an industrial processing site of archaeological significance.

Bridges may also exceptionally be scheduled where their interest is so vulnerable to change that it is only secured through the application of tight controls, with the general (but not absolute) presumption against alteration that scheduling brings. For the majority of bridges, however, listing will be the preferred designation. Whatever the designation, a carefully-specified management agreement can be an efficient way of a local authority managing its stock of historic bridges. This may define the specifications for routine works (such as parapet repairs) which can be agreed in advance, as well as identifying more invasive works where specific consent (Scheduled Monument Consent or Listed Building Consent) would still be required.

3.4 Pre-industrial canals and river transport

Evidence of early waterborne transport (including canals, flash locks, wharfs) rarely survives because of river erosion. Surviving stone structures are now usually considered for designation via listing. Earthwork or buried remains are more appropriately scheduled although the level of survival and archaeological potential should be considered. To date, such sites have only been designated as part of wider monuments such as the medieval canal associated with Rievaulx Abbey (North Yorkshire). However, such direct associations are not a prerequisite for designation. Features such as barge gutters, flash locks or overland haulage routes which would have allowed the continued use of a river for transport at watermill sites or fish weirs may add to the interest of those sites. So too may the presence of vessels or parts thereof, whether abandoned or incorporated in waterside structures. An example is the Waltham Abbey Royal Gunpowder Factory (Essex), where powder barges and punts are included in the scheduling. The intrinsic interest of particular vessel types is considered in the [Ships and Boats](#) selection guide.

3.5 Industrial waterborne transport

Previously, standing structures such as sluices, locks and aqueducts have often been scheduled; now listing is generally considered more appropriate, especially if structures remain in use. However, in some cases scheduling may be appropriate. Instances include: abandoned inclined planes now largely surviving as earthworks; ruined structures; or canal basins forming part of a wider industrial landscape that is scheduled. Extensive lengths of canal cuts, even where embanked, are unlikely to be appropriate for scheduling, especially if still in use. Disused sections may be considered, although scheduling the entire length of a disused canal is unlikely to be appropriate. Designation will be more likely where sections have engineering interest, or association with a range of significant canal structures. An alternative approach is the designation, by the local authority, of a section

of a canal as a conservation area; a section of the Stroudwater Canal in Gloucestershire is one of England's longest conservation areas.

3.6 Wagonways to railways

Built structural features will typically be more appropriately protected via listing. Good runs of sleeper stones marking courses of wagonways may be considered for scheduling, especially if associated with engineered cuts or embankments or other contemporary features. However, simple earthwork embankments and cuttings are unlikely to be deemed to be of national importance in their own right because they are relatively common nationally. Rarer earthwork features, such as non-locomotive hauled inclines, may exceptionally be of national importance.

3.7 Underground

Many railways and canals (such as the Bridgewater Canal in north-west England) include tunnels. In general, only the portals, where of architectural interest, are designated, through listing. However, some tunnels actually start underground within

mine workings, often with loading and other facilities. Such remains should be included in designation assessments despite difficulties in access and identifying ownership; the Dudley Tunnels on the Dudley Canal (West Midlands) is an example of such a scheduling. However, difficulties in mapping underground remains – often complex and three-dimensional – can often constrain designation aspirations. Nor will scheduling necessarily be appropriate even if the remains are deemed nationally important; other management options may be more beneficial. Careful consideration will be needed on a case-by-case basis.

3.8 Vehicles and aircraft

Under the 1979 Act it is possible to schedule the remains of a transport-related item such as a vessel, vehicle or aircraft. Only a very few exceptional cases have been taken forward. The designation of vessels is considered more generally in the [Ships and Boats](#) selection guide. Civil aircraft and vehicles have never been hitherto considered for scheduling, and it is hard to think of any circumstances in which this would be an appropriate response.

4 Select Bibliography

The division of books between categories is difficult, as several, and most notably Harrison's and Blair's (two of the most useful) extend far more widely in terms of date – backwards and forwards – and subject than their titles suggest.

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5 Where to Get Advice

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