Melbourne Batch 19 - Ticknall to Melbourne Rising Main

Historic Environment Desk-based Assessment

February 2023

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Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
P01	30/11/2022	P. da Silva	E. Dennis	Z. Burn	First Draft
P02	14/12/2022	P. da Silva	Z. Burn	N. Summers	Update following change of alignment at Melbourne
P03	02/02/2023	P. da Silva	Z. Burn	N. Summers	For issue following route optimisation

Document reference: A7S13297-MMD-XX-ZZ-RP-EN-0007

Information class: Standard

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Executive summary

This report has been prepared by Mott MacDonald on behalf of Severn Trent Water, in advance of construction of a new rising main between Melbourne Sewage Treatment Works (STW) (National Grid Reference (NGR) SK 39265 25398) and a new Ticknall Pumping Station (PS) (NGR SK 36299 23801) in South Derbyshire. The route will terminate short of the STW and be connected to the existing sewage network east of Ashby Road at SK38476 25054.

The purpose of the report is to understand the archaeological and historical resource of the pipeline route. This will give a preliminary indication of the archaeological potential within the pipeline route, a preliminary indication of the potential project risk for the archaeological and heritage resource and draw up appropriate recommendations for further archaeological work

The pipeline route runs along the edge of the historical cores of Melbourne and Ticknall, which are designated conservation areas (MM076 and MM075). These conservation areas contain a number of designated heritage assets which demonstrate the towns' historical identity. The majority of designated assets identified within the study area fall within the Melbourne core where monuments such as Melbourne Castle (MM080) and Melbourne Hall (MM078) exemplifies the settlement's development throughout the medieval and post-medieval periods. The settlements also contain a number of non-designated assets relating to the town's industrial history including former quarry pits from lime and brickyard industries that were prevalent in the area until the 19th century.

Nearby archaeological investigations have identified continuous activity dating back as early as the Neolithic period. Archaeological works carried out elsewhere within the settlements of Melbourne and Ticknall have uncovered remnants of the towns' earlier phases, primarily from the medieval and early post-medieval periods, which showcase the extensive and multi-phased developments of these settlements. Outside the settlement cores, the potential for archaeological remains is generally considered lower.

Although the pipeline route runs through the edge of the Melbourne and Ticknall Conservation Areas where there are numerous listed buildings, the works which involve a buried pipe below ground will not cause any permanent changes to the ability to understand their significance and therefore no harm.

The decommissioning of Ticknall STW and the construction of a new PS is not anticipated to impact on any known or unknown archaeological remains. The PS will be located within the footprint of the existing STW which has already undergone significant ground disturbance during its construction. The pipeline is expected to be constructed via a cut trench and excavations associated with this will remove all potential archaeological remains within its footprint. There are currently no known archaeological remains within the route of the pipeline. Where the pipeline is within existing road corridors, there is likely to have been some previous disturbance and it is unknown what extent of archaeological remains may survive in these areas.

Following consultation with the Derbyshire Conservation, Heritage and Design Service, targeted archaeological monitoring (Watching Briefs) will likely be required along certain sections of the pipeline route where there is a higher potential for archaeological remains to be encountered. As much of the route travels along road corridors, archaeological evaluation will not be required in these areas. Three areas have been highlighted for the targeted archaeological monitoring including in the fields adjacent to Ticknall PS where the route runs through the edge of the historic core, along part of the road corridor where a former brickyard site (MM091) and possible windmill (MM092) have been recorded and at the eastern end of the route where it enters the historic core of Melbourne.

1   Introduction

1.1   Overview

This report has been prepared by Mott MacDonald on behalf of Severn Trent Water, in advance of construction of a new rising main between Melbourne Sewage Treatment Works (STW) (National Grid Reference (NGR) SK 39265 25398) and the new Ticknall Pumping Station (PS) (NGR SK 36299 23801) in South Derbyshire. Within Melbourne the new rising main will connect to the town's existing sewage network which will convey flows to the existing Melbourne STW. The route will terminate short of the STW and be connected to the existing sewage network east of Ashby Road at SK38476 25054. The report provides an overview of the historic environment baseline along the proposed route of the pipeline and outlines recommendations for potential further archaeological work.

1.2   Project background

Severn Trent is required to deliver project 'A7S/13297 Ticknall STW AMP7 Q WFD' (hereby referred to as 'the Scheme'), in order to meet the Water Framework Directive (WFD) requirements set out in the National Environment Programme (NEP).

1.3   Scheme description

To fulfil the above objective the proposed solution is the decommission of the existing Ticknall STW and construct a new Ticknall PS and c.2.9km long rising main (see Figure 1.1) which will allow for the transfer of flows to the Melbourne STW.

Figure 1.1: Pipeline route from Melbourne STW to Ticknall PS.
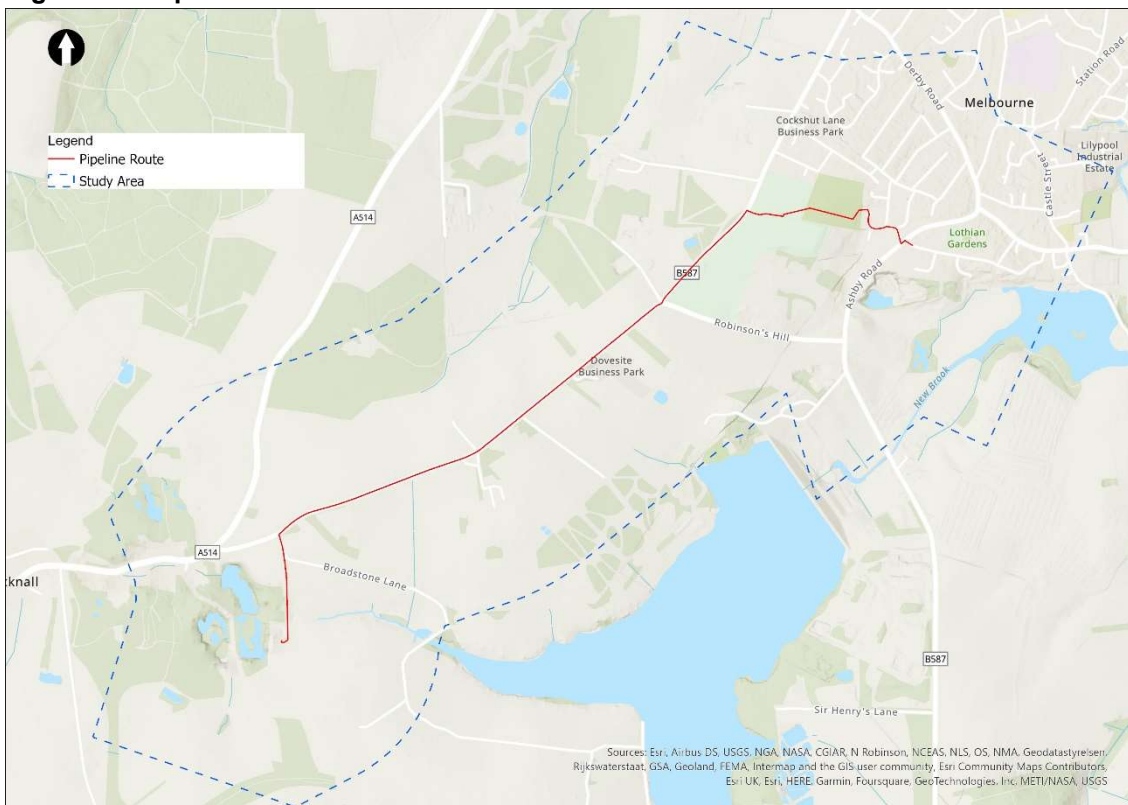
Source: Mott MacDonald, 2022

The new Ticknall PS will be constructed in the same location currently occupied by the existing Ticknall STW.

The works to connect the new Ticknall PS and Melbourne's STW will be undertaken through an open cut trench method. The cut trench will follow existing roads where possible but on average will measure between 0.5m and 1.7m with a depth of between 2m and 6m. The works will also require a construction easement of 15m wide with the pipe at the centre point of this.

The works being undertaken at the Melbourne STW will be covered by a separate Melbourne STW to Breedon Historic Environment DBA (Document Ref. No. A7S13514-MMD-XX-ZZ-RP-EN-0001)

1.4   Purpose of this report

This report identifies the designated and non-designated heritage assets and archaeological remains likely to be impacted by the scheme based on the information available to date.

It was recommended a report be undertaken to understand the archaeological and historical resource of the pipeline route as per Severn Trent Water's Design Manual for Archaeology and Heritage.[1] This report provides details on:

- local planning policy and how it relates to archaeological and heritage issues;
- an understanding of the archaeological and heritage resources (including designated and non-designated heritage assets within a defined study area);
- an identification of the significance of the archaeological and heritage resource;
- an understanding of the impact of the different types of development or other groundworks on the archaeological and heritage resource;
- an indication of the archaeological potential within the pipeline route;
- the potential project risk for the archaeological and heritage resource for this pipeline route; and
- draw up appropriate recommendations for further archaeological work.

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[1] Severn Trent Water, (2010), Severn Trent Water Design Manual for Archaeology and Heritage (Document Reference: DM0102-04)

2 Methodology

2.1 Study area

A search area of 500m radius from the route of the pipeline has been established, hereafter referred to as the 'study area'. This is considered to be proportionate to the scale and nature of the proposed works and the urban nature of the scheme through the towns of Ticknall and Melbourne. All designated and non-designated heritage assets from the Derbyshire Historic Environment Record (HER) within this area have been considered for their potential to be impacted by the pipeline route.

A plan showing all locations of heritage assets within the study area can be found in Appendix B. A full list of heritage assets is included in the gazetteer in Appendix A. Assets have been attributed a corresponding unique reference number, which is shown on the figures and referenced within the text (e.g. MM001, MM002 etc.).

2.2 Baseline research

2.2.1 Sources of information

The following resources have been consulted in the process of compiling the Historic Environment baseline information:

● a search of the Historic England National Heritage List for England (NHLE) dataset for World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, and Registered Battlefields within the study area;

● an examination of local, regional, and national planning policies in relation to the historic environment;

● a search of the South Derbyshire District Council local plans for conservation areas;

● a search of the Derbyshire HER (search Ref No. **CDR12465**) database for non-designated archaeological sites, find spots and non-designated historic buildings within the study area as well as mapped paleochannels;

● an inspection of geological (maps) relevant to the study area;

● a site walkover (see Section 2.2.3);

● previous archaeological surveys and investigations;

● an inspection of the cartographic evidence for the land use history of the site; and

  information on previous impacts to the pipeline route.

2.2.2 Baseline archaeological and historic periods

The following historical periods have been used to develop the archaeological and historic overview for each section of the pipeline routes. These historical periods are outlined in Table 2.1 and are based on those defined by Historic England.[2]

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[2] Historic England, *England's Historic Periods* [online] https://historicengland.org.uk/listing/the-list/historic-periods (last accessed November 2022)

Table 2.1: Archaeological and historic periods used for the purpose of this assessment

Prehistoric Period Dates	Historic Period Dates
Palaeolithic 500,000 to 10,000 BC	Roman AD 43 to 410
Late Glacial / Mesolithic 10 000 to 4,000 BC	Early Medieval AD 410 to 1066
Neolithic / Early Bronze Age 4,000 to 1,600 BC	Medieval AD 1066 to 1540
Middle Bronze Age 1,600 to 1,200 BC	Post-medieval AD 1540 to 1901
Late Bronze Age 1,200 to 700 BC	Modern AD 1901 to present
Early Iron Age 800 to 300 BC	
Middle Iron Age 300 to 100 BC	
Late Iron Age / Roman Transition 100 BC to AD 43	

Based on Historic England

2.2.3   Baseline surveys

A walkover survey was undertaken on the 21st of October 2022 to inspect the pipeline route, identify any assets recorded on the Derbyshire HER and identify any previously unrecorded assets. The survey allowed for a more detailed understanding of the setting of existing heritage assets. No previously unidentified assets were identified during the walkover survey. A second walkover survey was undertaken on 3rd November 2022 to inspect the Ticknall PS. The need and scope of further, more detailed archaeological fieldwork surveys following consultation with the Derbyshire Conservation, Heritage and Design Service have been detailed in Section 6.

2.3   Assessment of archaeological potential and risk

Based on the outline archaeological baseline developed for each section of the pipeline route, an assessment of the archaeological potential has been undertaken. Levels of potential have been assigned for each archaeological/historic period, based on the following criteria:

- High – Archaeological remains for this period are known to be present within the pipeline route or there is sufficient evidence from the wider study area to suggest that remains of this period will be present.

- Moderate – There is no evidence for this period within the pipeline route. However, there is sufficient evidence to suggest that archaeological remains of this period may extend into the pipeline route.

- Low – There is no evidence for this period within the pipeline route; within the study area there is either no evidence, limited evidence or evidence that is located far enough away that the potential is considered low.

In addition to the assignment of archaeological potential, a level of project risk has been assigned for each period, for each section of the pipeline. The level of project risk is based on the following criteria:

- High – Archaeological remains are present within the pipeline route from this period and due to the nature of these remains, substantial archaeological investigation and recording is very likely to be required (in advance of construction) if the pipeline is not re-routed, or the area of potential is somewhat unknown and there may be a significant risk to the project.

- Moderate – Archaeological remains are present or likely to be present and their nature means that some archaeological investigation is likely to be required in advance of construction.

- Low to negligible – Archaeological remains are known to have been disturbed or removed and as such little to no archaeological evaluation/investigation is likely to be required.

2.4   Assumptions and limitations

The following assumptions and limitations have been assumed for the Historic Environment DBA;

- The Historic Environment DBA is reliant on available data. All Designated data and non-designated data are up to date as of October 2022.

- Information provided by the HER can be limited because it depends on random opportunities for research, fieldwork and discovery. Should nothing of historic interest be shown in a particular area, this can be down to lack of targeted research or investigation rather than the genuine absence of sub-surface archaeological deposits. Where there is an absence of data, professional judgement has been used to reach informed decisions regarding the historic environment.

- The current understanding of the extent and survival of archaeological remains within the study area is based on data relevant to the assessment which has been selected based on professional judgement. However, the specific nature, extent, date, degree of preservation and significance of known and potential archaeological remains is impossible to predict without intrusive investigation. There is the possibility that further or more complex unknown buried archaeology exists on sites.

- Documentary sources are rare before the medieval period, and many historic documents are inherently biased. Older primary sources often fail to accurately locate sites and interpretation can be subjective. Historic maps provide a glimpse of land-use at a specific moment. It is therefore possible that short-term structures or areas of land-use are not shown and therefore not recorded within this assessment.

- Archival material was requested from Derbyshire Record Office in October 2022, which is still pending. If appropriate, this material will be incorporated into a later draft of this report.

2.5   Consultation

2.5.1   Local Authority Archaeological Officers

A meeting took place with the Derbyshire Conservation, Heritage and Design Service on the 31st January 2023 to discuss the pipeline route, known heritage assets, possible impacts and reccomendations for potential further archaeological work. It is likely that targeted archaeological monitoring (Watching Briefs) will be required across certain sections of the pipeline where there is known remains or there is a higher potential for unknown archaeological remains to be encountered. Geophysical Survey was discussed as an option however, as much of the route runs along a road corridor where there may have been some previous disturbance it was agreed that evaluation would be not possible in this instance. Areas for targeted archaeological monitoring would likely be focussed along the pipeline route where it runs through historic cores or adjacent to recorded heritage assets on the Historic Environment Record.

3   Legislation, policy and guidance

This section sets out the legislation and planning policy against which the pipeline routes will be considered during the planning process. These policies have been used to inform this Historic Environment Assessment.

3.1   Legislation

3.1.1   Ancient Monuments and Archaeological Areas Act 1979[3]

The Act imposes a requirement for Scheduled Monument Consent for any works of demolition, repair, and alteration that might affect a scheduled monument. For non-designated archaeological assets, protection is afforded through the development management process as established both by the Town and Country Planning Act 1990 and the National Planning Policy Framework.

3.1.2   Planning (Listed Building and Conservation Areas) Act 1979[4]

This Act sets out the protection given to buildings of special architectural or historic interest through its character or appearance, of which it is desirable to preserve or enhance listing. It also sets out the process for designation of conservations areas, being areas of special architectural value.

3.2   National Planning Policy

The National Planning Policy Framework (NPPF)[5] was published on 27th March 2012, revised on the 24th July 2018 and updated on the 20th July 2021, and replaced all previous national planning policy documents. Paragraphs 189 – 203 of the NPPF address the conservation and enhancement of the historic environment; these set out the local planning authority's responsibilities when dealing with planning proposals which have the potential to impact on cultural heritage assets. These policies emphasise the importance of balancing the need for the conservation of heritage assets with the desirability of new development. Those relative to this scheme are as follows:

189.   *Heritage assets range from sites and buildings of local historic value to those of the highest significance, such as World Heritage Sites which are internationally recognised to be of Outstanding Universal Value. These assets are an irreplaceable resource, and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations.*

190.   *Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account:*

a)   *the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;*

b)   *the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;*

c)   *the desirability of new development making a positive contribution to local character and distinctiveness; and*

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[3] Ancient Monuments and Archaeology Areas Act (1979) Available from https://www.legislation.gov.uk/ukpga/1979/46
[4] Planning (Listed Building and Conservation Areas) Act (1990) Available from https://www.legislation.gov.uk/ukpga/1990/9/contents
[5] Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework. Available from https://www.gov.uk/government/publications/national-planning-policy-framework--2

       d)   *opportunities to draw on the contribution made by the historic environment to the character of a place.*

194. *In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.*

197. *In determining applications, local planning authorities should take account of:*

       a)   *the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;*

       b)   *the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and*

       c)   *the desirability of new development making a positive contribution to local character and distinctiveness.*

199. *When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.*

200. *Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:*

       a)   *grade II listed buildings, or grade II registered parks or gardens, should be exceptional;*

       b)   *assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.*

202. *Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.*

203. *The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.*

3.3   Local Planning Policy

The proposed pipeline route is entirely contained within the district council of South Derbyshire.

3.3.1   South Derbyshire District Council

The South Derbyshire District Council Local Plan sets out the spatial strategy for the district up to 2028. Part 2 was adopted in November 2017 and consists of Policy BNE10 Heritage.[6]

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[6] South Derbyshire District Council, (2017). South Derbyshire Local Plan Part 2. Available at:https://www.southderbyshire.gov.uk/assets/attach/2523/Local%20Plan%20Part%202%20-%20reduced%20file.pdf

Applications for development that affects heritage assets as defined in Policy BNE2 (heritage assets), will be determined in accordance with national policy for conserving and enhancing the historic environment. In particular the following will apply:

- All applications should be accompanied by a heritage assessment, prepared with the appropriate expertise, to a level of detail proportionate to the asset's significance. The assessment should describe the asset's significance, identify the impact of the proposed development, and provide clear justification for the works. Where appropriate, the Council may also require historical research and archaeological recording to be undertaken before works to a heritage asset commence.

- Developments affecting a heritage asset or its setting, including alterations and extensions to existing buildings, will be required to demonstrate how the proposal has taken account of design, form, scale, mass, siting and setting of the heritage asset, in order to ensure that the proposed design is sympathetic and minimises harm to the asset.

- Effects of the development on the significance of other non-designated heritage assets on the local list will be assessed having regard to the scale of any harm and the significance of the asset.

3.4   Guidance

This Historic Environment DBA has been prepared adhering to the Chartered Institute for Archaeologists (CIfA) 'Code of Conduct: professional ethics in archaeology[7]. Mott MacDonald is a Registered Organisation with CIfA.

Guidance consulted includes:

- Chartered Institute for Archaeologists (CIfA), Standard and Guidance for historic desk-based assessments (2020); [8]

- Historic England, Conservation Principles, Policies and Guidance (2008); [9]

- Historic England, Good Practice Advice in Planning Note 2: Managing Significance in the Decision-Making Process (2015); [10]

- Historic England, Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2017); [11]

- Historic England, Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019); [12] and

- Severn Trent Water, Design Manual for Archaeology and Heritage (2010).[13]

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[7] Chartered Institute for Archaeologists, (2022), Code of Conduct: professional ethics in archaeology' Available at: https://www.archaeologists.net/sites/default/files/Code%20of%20conduct%20revOct2022.pdf

[8] Chartered Institute for Archaeologists, (2020), Standards and Guidance for Historic Desk-based Assessment. Available at: https://www.archaeologists.net/sites/default/files/CIfAS%26GDBA_3.pdf

[9] English Heritage, (2008), Conservation Principles, Policies and Guidance. Available at: http://modgov.southnorthants.gov.uk/ieDecisionDetails.aspx?Id=923

[10] Historic England, (2015), Good Practice Advice in Planning Note 2 (GPA2) – managing significance in decision taking in the historic environment. Available at: https://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/gpa2/

[11] Historic England, (2017), Good Practice Advice in Planning Note 3 (GPA3) – the setting of heritage assets. Available at: https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/

[12] Historic England, (2019), Statements of Heritage Significance: Analysing Significance in Heritage Assets. Available at: https://historicengland.org.uk/images-books/publications/statements-heritage-significance-advice-note-12/heag279-statements-heritage-significance/

[13] Severn Trent Water, (2010), Severn Trent Water Design Manual for Archaeology and Heritage (Document Reference: DM0102-04)

4 Baseline

4.1 Site description

The proposed pipeline route starts at the current Ticknall STW (Photo 4.1) travelling north through open agricultural fields until it reaches Broadstone Lane.

Photo 4.1: View of Ticknall STW, looking north

Source: Mott MacDonald, 2022

At the junction of Broadstone Lane and Melbourne Lane, the pipeline route shifts to a north-eastwards alignment and follows the Beightons Hill, The Common and Cockshut Lane for c. 2,000m. These roads are the main connection routes between Ticknall, and Melbourne and the pipeline route will run within the road between the two towns.

Photo 4.2: View of Broadstone Lane, looking north Photo

Source: Mott MacDonald, 2022

Photo 4.3: View of agricultural land north of Ticknall STW, looking south

Source: Mott MacDonald, 2022

As the pipeline reaches the edge of Melbourne the route shifts to an eastward alignment and crosses between the Melbourne Cricket club and the Rugby Club grounds (Photo 4.4). These playing fields are positioned on top of a prominent ridge in the landscape and presumably were levelled during creation. The pipeline route then heads into the Allotment Associations which sits on the slope of a hill running from the grounds of the rugby club to Selina Street residential area.

Photo 4.4: View of Melbourne Rugby Club grounds, looking west

Source: Mott MacDonald, 2022

From Selina Street, the pipeline continues into Penn Lane where it discharges into the existing Melbourne sewer network, which will convey flows to the existing Melbourne STW.

4.2   Historic map regression

Historic maps are used to better understand how the area surrounding the scheme has developed and changed over time. This section has been divided into Tables 4.1 and 4.2 to reflect the boundaries of surveying grids used when creating these maps.

Table 4.1: Historic map regression for Melbourne

Date	Map Name	Section of pipeline	Description
1646	Darbiensis comitatvs vernacule Darbie Shire	Melbourne to Cockshut lane	Mapping shows Melbourne as an established settlement during the 17th century though details of the existing buildings is not given.
1794	Cary's New Map of England and Wales, With Part of Scotland, Sheets 42-43	Melbourne to Cockshut lane	Map shows Melbourne as a small settlement. Cockshut Lane/ Melbourne Lane can be seen as having been established. Map shows the existence of a church in the town, although no detail is shown of the other buildings.
1881	Derby to Leicester Ordnance Survey	Melbourne to Cockshut lane	Mapping shows a predominantly rural landscape. There are areas of open field systems with small pockets of woodland. Open fields are present across

Date	Map Name	Section of pipeline	Description
	(Sheets LVIII. N. W.) 25 inch to the mile		Melbourne. There is small development along main streets such as Blackwell Lane, Church Street and High Street. Cockshut Lane appears on the map along its current alignment.
1899	Derby to Leicester Ordnance Survey (Sheets LVIII, NW) 25 inch to the mile	Melbourne to Cockshut lane	Mapping shows little change compared to the 1881 map. Melbourne has expanded slightly to the north-west. There is little change within the surrounding rural landscape, with field boundaries staying the same and small pockets of woodland from previous mapping remaining. Some of the previously open fields along Melbourne's main road have been developed into Cricket grounds and a pavilion has been established in the previously open fields between Salina Street and Cockshut Lane. Sewage farms have been established in the current location of Melbourne STW by Shardlow R. D. Council.
1920	Derby to Leicester Ordnance Survey (Sheet LVIII) 25 inch to the mile	Melbourne to Cockshut lane	Similar to the 1899 Ordnance Survey map, there has been further development on the west and northwest of Melbourne. No change in the field arrangements from the 1899 Ordnance Survey map. Filter beds and tanks have appeared in the Sewage farms. Allotment gardens have been established in the field next to the pavilion.
1937	Derby to Leicester Ordnance Survey (Sheet LVIII) 25 inch to the mile	Melbourne to Cockshut lane	By 1937, Melbourne and King's Newton have almost merged into one. Further developments appear to have been made to the sewage farms.
1955	Derby and Leicester Ordnance Survey (Sheet SK 32 NE) 1 inch to 1 mile	Melbourne to Cockshut lane	The 1955 survey does not present any large changes from the previous one. The pavilion has been converted into the recreation grounds. Field boundaries appear to have changed little in shape over the two decades since the previous survey,
1970	Derby to Leicester Ordnance Survey (Sheet SK 32 NE) 1 inch to 1 mile	Melbourne to Cockshut lane	Field boundaries appear to have changed with the merging of smaller plots into larger ones.

Table 4.2: Historic map regression for Ticknall

Date	Map Name	Section of pipeline	Description
1646	Darbiensis comitatvs vernacule Darbie Shire	Cockshut lane to Ticknall	Mapping shows Ticknall as an established settlement during the 17th century, with a possible church being marked on the map.
1794	Cary's New Map of England and Wales, With Part of Scotland, Sheets 42-43	Melbourne to Cockshut lane	Map shows Ticknall as a small settlement. Cockshut Lane/ Melbourne Lane can be seen as having been established. Map shows the existence of a church in the town.
1881	Derby and Leicester Ordnance Survey (Sheets LVIII. 6.) 25 inch to the mile	Cockshut lane to Ticknall	Mapping shows a predominantly rural landscape. There are areas of open field systems with small pockets of woodland. Old Quarries cover the Eastern part of Ticknall which later became the modern Calke Lime Pits Park. There are a number of lakes west of the later located Ticknall STW. The map depicts a small number of established residential properties along Cockshut Lane/ Melbourne Lane.

Date	Map Name	Section of pipeline	Description
1899	Derby and Leicester Ordnance Survey (Sheets LVIII, 9.) 25 inch to the mile	Cockshut lane to Ticknall	Mapping shows little change compared to the 1881 map. Field boundaries and small pockets of woodland remain the same.
1920	Derby and Leicester Ordnance Survey (Sheet LVIII. 9.) 25 inch to the mile	Cockshut lane to Ticknall	Small changes have been made in the field arrangements from the 1899 Ordnance Survey map. Some development can be seen at the intersection of Melbourne Lane and Broadstone Lane.
1938	Ordnance Survey (Sheet LVIII) 25 inch to the mile	Cockshut lane to Ticknall	By 1938, mapping shows that the area around Ticknall appears largely unchanged with field arrangements having only undergone slight changes by which smaller plots were amalgamated into larger ones.
1956	Derby and Leicester Ordnance Survey (Sheet 121) 1 inch to 1 mile	Melbourne to Ticknall	No significant differences can be seen from the previous map
1966	Derby and Leicester Ordnance Survey (Sheet 121) 1 inch to 1 mile	Melbourne to Ticknall	No significant changes can be seen in the development of Ticknall and its surrounding areas.
1970	Derby and Leicester Ordnance Survey (Sheet SK 32 SE) 6 inch to 1 mile	Cockshut lane to Ticknall	Ticknall's STW appears on the map in its current location. Some changes have taken place in the field boundaries in the rural areas around the town.

4.3   Geology

According to the British Geological Survey (BGS) the underlying bedrock of the study area comprises a mixture of sandstone and mudstone, which is detailed in Table 4.3 below. [14]

Table 4.3: Bedrock geology

Area of Route	Bedrock Geology
Melbourne WTW to Cockhuts Lane	● **Morridge Formation** – Mudstone, siltstone and sandstone. Formed during the Carboniferous period between 329 and 320 million years ago. ● **Rough rock** – Sandstone. Formed during the Carboniferous period between 320 and 319 million years ago. ● **Pennine lower coal measures formation** – Mudstone, siltstone and sandstone. Formed during the Carboniferous period between 319 and 318 million years ago.
Cockhuts Lane to Ticknall	● **Morridge Formation** – Mudstone, siltstone and sandstone. Formed during the Carboniferous period between 329 and 320 million years ago. ● **Chatsworth Gritt** – Sandstone. Formed in the Carboniferous period between 321.5 and 320 million years ago. ● **Unknown Sandstone of Kinderscoutian Age** – Sandstone. Formed In the Carboniferous period between 322 and 321.5 million years ago.

Source: BGS, 2022

According to the BGS, there is a lack of superficial deposits within the study area. Alluvium is present around Melburne Pool. The BGS also maps pockets of head around Melbourne and diamicton towards Ticknall.

The waterlogged nature of alluvium is conducive to the preservation of organic remains such as timber trackways and other waterside activity, as well as paleoenvironmental remains such as

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[14] BGS, 2022 *BGS Geology Viewer* [online] https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/

seeds, pollens and molluscs. The latter is invaluable for the reconstruction of past environments. Deposits of alluvium can also seal in former land surfaces, potentially masking and protecting archaeological features that pre-date the deposits.

4.4   Designated Heritage Assets

The study area from Ticknall STW to the Melbourne STW contains the following designated heritage assets, which are listed within Appendix A and shown on Drawing A7S13297-MMD-XX-ZZ-DR-EN-0001:

- One scheduled monument:
  - Melbourne Castle fortified manor and earlier medieval manorial remains (MM077). The monument is in the centre of Melbourne and is located 473m north of the pipeline route,
- Two Grade I listed buildings (MM001 and MM002), which are located within or close to the grounds of Melbourne Hall Registered Park and Garden (MM079), the closest to the pipeline route is the church of St Michael and St Mary which is west of Melbourne Hall (MM078) 325m away.
- One Grade II* listed buildings:
  - MM074
    - Tithe barn (MM074).
- Seventy Grade II listed buildings:
  - MM003 to MM070. The following are located the closest to the alignment of the pipeline:
    - Thomas Cook almshouse, chapel and railings (MM021);
    - 84, 88 and 90 High Street (MM022); and
    - 23 High Street (MM042).
- Three conservation areas, two of which the pipeline runs through:
  - Melbourne (MM072, detailed below);
  - Ticknall (MM073, detailed below); and
  - Woodhouses (MM074).
- Two registered parks and gardens
  - Melbourne Hall, Grade I listed (MM075); and
  - Calke Abbey, Grade II* listed (MM076).

4.4.1   Melbourne Castle scheduled monument (MM077)

Melbourne Castle is a very well documented example of a fortified manor built on the site of, and incorporating, an earlier royal manor house. Its importance as a royal manor lasted from the 11th to the mid-13th century when it was granted to the Earls of Lancaster. During the early 14th century, it played an important role in the political history of England when it was associated with the most powerful baron in the country, Thomas, second Earl of Lancaster, who was a leading opponent of King Edward II. When Henry Bolingbroke, third Duke of Lancaster, became King Henry IV it again became a royal possession until sold by the Crown in 1604. Although the fortified manor does not survive well as a standing structure, limited excavation carried out in key areas has demonstrated that the buried remains of the manor house and other medieval features are extremely well preserved. [15]

The setting of the castle ruins is predominately urban, including Melbourne's historical core and in close proximity to other buildings of historical importance. The remains stand as the primary reminder of the town's historical importance as a royal manor and the centre of administration

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[15] Historic England at: https://historicengland.org.uk/listing/the-list/list-entry/1008610?section=official-list-entry

for the surrounding landscape. The setting contributes positively to the scheduled monument as it demonstrates the towns medieval centre and how the area developed from the medieval into later periods.

4.4.2   Melbourne Conservation Area (MM073)

Melbourne started off in recorded history as a royal manor, visited on occasion by kings. In 1133 part of the royal manor was given to Adelulf, first Bishop of Carlisle, by King Henry I, as a place of refuge. The Coke family acquired the freehold of Melbourne Hall from the Bishop of Carlisle in 1704 and steadily continued to develop their estate. As the remainder of the freehold property belonging to the Lord of the Manor was eventually dispersed in the early 19th century, it set the scene for the development of the town during the late Georgian period. The settlement changed dramatically at the turn of the 19th century when industrial development within the East Midlands reached out to Melbourne and started the process of the transformation of a village into a Georgian town, with the development of factories, chapels, public buildings and housing. The industrial development was based around the finishing of textiles; worsted, silk and lace, but there were further spin-off industries once a skilled working population was housed within the settlement.[16]

The area has a number of distinctive characteristics including:

- very ancient origins as an important settlement, centred upon the church;
- one of the best-preserved historic settlements in Derbyshire;
- high architectural quality, with the highest concentration of listed buildings in the district;
- one of the best-preserved 18th century country house gardens in England, complemented by adjacent landscaped grounds including the former mill pool;
- streets of "working Georgian" character, dominated by red brick town houses, interspersed with factories and workshops;
- a series of distinct enclosed spaces framed by buildings and tight-knit, dense development, which contrast with a looser, spacious character and substantial gardens; and

a long market garden history, which is still apparent in the setting of the town.

The setting of the conservation area is predominately urban comprising Melbourne's historical core and the streets radiating from it. The conservation area showcases the development of the town from its earliest phases as a medieval royal manor through to its later development as an industrial Georgian town through well-preserved historical buildings. The setting contributes positively to the conservation area as it allows an understanding of the development of smaller medieval settlements into Georgian 'working' towns, evidence of which has rarely survived in this area of Derbyshire.

4.4.3   Ticknall Conservation Area (MM072)

First recorded in AD 1004, Ticknall has a long-established history. The settlement's history appears recorded in documents throughout the medieval and post-medieval periods, having continued to grow and develop under a number of established families and religious figures.

Although often identified as an estate village, it was only between 1765 and the 1830s that the Harpur (later Crewe and Harpur Crewe) family of Calke Abbey finally bought out most of the lesser freeholders, it being a well-established settlement long before then (first recorded in 1004). The estate still owns a number of properties, but many of them have been sold off and

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[16] South Derbyshire District Council, (2013), Melbourne Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1911/Melbourne-Statement-adopted-2011-updated-2013.pdf

they are now in individual private hands. The village retains a strong historic identity, reinforced by an unusually high degree of preservation of traditional windows, although the "estate" character usually denoted by uniform window and door colours has been largely lost.

Within the brick and stone envelopes of the buildings are the remains of some early structures including timber framing, largely hidden from view by radical periods of redevelopment during the 18th and 19th centuries.[17]

The distinctive characteristics of Ticknall can be summarised as follows:

- an historic settlement originally with two or three manors, with origins at least as old as 1004;
- two long streets with medieval origins meeting near the parish church;
- a wooded setting - both historic tree planting by the Calke estate within and adjoining Calke Park and at the brick and limeyards, and recent tree planting under the National Forest tender scheme. The dense tree-cover is important to the setting of the village and a backdrop to some important views, while evergreen trees (mature Yew and Corsican Pine) provide year-round interest. To the south, old oaks stand in the neighbouring fields;
- a large number of small cottages, which supported several cottage industries – pottery, brickmaking, coalmining, lime burning and processing, and malting;
- areas of high ecological and landscape interest hidden from the main views – e.g. the Limeyards and the tree-lined entrance to Calke Park; and
- lions-head, cast-iron pillar fountains throughout the village are a constant reminder of the Harpur Crewe estate's influence there, having been installed by Sir Vauncey Harpur Crewe in 1914.

The setting of this conservation area is urban and woodland spaces which showcases the towns relationship with its surrounding landscape and its industrial past as a centre of lime working, coalmining and pottery. The setting positively contributes to the significance of the conservation area by demonstrating its relationship with the surrounding landscape and how this was used as a resource for the town's development and growth in the past.

4.4.4   Woodhouses Conservation Area (MM074)

Woodhouses is a small hamlet situated south of Melbourne. The hamlet was established on the edge of the wooded part of Melbourne Common. A few buildings were gradually built on small pieces of land encroached from the edges of the common land, and Woodhouses began as a cluster of these encroachments, established in the 16th century. There is evidence for charcoal burning, stone quarrying of Millstone Grit and clay extraction in the vicinity, but there is no evidence that the hamlet started in association with any of these industries and to begin with it was probably based purely around agriculture. The hamlet expanded up the hill during the 17th and 18th centuries. The remains of a timber-frame structure exist inside Tutholme, probably early 17th century in origin. The section of coursed stone at The Malthouse, which incorporates a stone band and plinth, also indicates 17th century origins. [18]

In 1789 all of the Woodhouses properties were transferred to the estate of the Lamb family at Melbourne Hall. With the exception of "The Cottages" on the south-west side of the road, the estate retained sole ownership of the hamlet until the 1980s. [19]

The distinctive characteristics of Woodhouses can be summarised as follows:

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[17] Southern Derbyshire District Council, (2013), Ticknall Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1915/Ticknall-consultation-draft-2013.pdf

[18] Southern Derbyshire District Council, (2014), Woodhouses Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1917/Woodhouses-Statement-adopted-2014.pdf

[19] *Ibid.*

- a small rural hamlet with 16th century origins, established at the boundary between an "assart" and the edge of the former common;
- very well-preserved group of vernacular buildings, dominated by a mixture of brick and sandstone, with traditional joinery and clay tiled roofs;
- hamlet perched on the hillside within a rolling, open, largely pastoral landscape, with wooded areas to the north and east; and
- entirely dominated by its landscape setting and relationship with the adjacent fields, which interweave with the buildings.

The setting of the conservation area is predominantly agricultural land with long descents into Woodhouses along the B587 from the Severn Trent Water Treatment Works. These views into the conservation area and approaches allow an appreciation of the relationship between the conservation area and its rural setting. The setting makes a positive contribution to the conservation area and allows an understanding of the agricultural context for the historical development of the hamlet.

4.4.5   Melbourne Hall Grade I Registered Park and Garden (MM075)

Melbourne Hall Registered Park and Garden is located 12m south of the pipeline route. The gardens were laid out by Thomas Coke in 1704 and are considered to be the best-preserved 18th century gardens in England. One of the earliest parts is Melbourne Pool, located within the grounds. Architectural interest derives from a series of long vistas, laid out on a series of straight axes with wide, intersecting paths. The large open space on the east side of Melbourne Hall is enclosed by tall brick walls, providing a sheltered and tranquil area. At the end of the vista is The Birdcage (MM025), an iron domed structure which is the principle focal point in the garden. The Registered Park and Garden is set within pasture fields to the east of Melbourne where earthworks of surviving ridge and furrow can be seen. The setting of the park provides a positive contribution to its significance, allowing an understanding of its intended design within the rural landscape.

4.4.6   Calke Abbey Grade II* Registered Park and Garden (MM078)

Calke Abbey Registered Park and Garden is located 427m south of the pipeline route. The park is located on the site of a previous Augustinian priory established between 1115 and 1120. By 1172 the canons had moved to Repton and Calke was subsequently a dependency of Repton. Following the Dissolution Calke was granted to the Earl of Warwick and after several changes of ownership it was sold to Henry Harpur in 1622 and remained in the family until it was given to the National Trust in 1985. The original parks were designed from 1702 to 1713 by London and Wise but suffered multiple alteration until the current format was designed in 1776 by Williiam Emes. The park includes a variety of features including a chain of lakes, ponds, wooded areas, and a Grotto across its close to 210 hectares.

The Registered Park and Garden is surrounded by open space providing a tranquil space which blends with the south Derbyshire landscape. Its historical significance and setting provide a positive contribution to its significance, allowing an understanding of its intended design within the rural landscape.

4.5   Archaeological investigations

Archaeological investigations that have taken place within the study area are predominantly focused within the Melbourne area. The majority relate to extensive building surveys within Melbourne to better understand its historical development (MM116 to MM131). A single building survey in Ticknall is within the study area (MM132).

Excavations carried out in 1973 by Department of the Environment (D.O.E). in Castle Street (MM78), Melbourne in advance of factory development uncovered two shallow Neolithic pits containing sherds of a late Neolithic vessel with cord-impressed decoration and three fragments of quartzite, apparently from an axehead. A V-shaped ditch was also discovered; however, dating could not be determined. The ditch was thought to possibly be a drainage ditch for a medieval fishpond. A wall foundation trench was found below the present-day pavement and recorded as being medieval in date.[20]

Other archaeological works carried out in Melbourne (MM133, MM134, MM135, MM136, MM138, and MM139) did not identify any archaeological deposits or remains.

At Ticknall, the National Trust carried out an extensive archaeological survey of Calke Abbey between 1987 and 1988 (MM142). The survey was followed by another survey in 2009 by AOC Archaeology (MM140) who sought to investigate and record the 18th and 19th century limeyard and brickyard complex. Works included the completion of a gazetteer of features, a walkover inspection of the area to see the condition of the assets, the production of updated maps of the site by plotting features using a hand-held Global Positioning System (GPS), and finally the recording of each feature through the use of photographs and a measured sketch. [21]

4.6   Geophysical Surveys

Geophysical Survey was undertaken across a 60m wide corridor for the Church Wilne to Melbourne Pipeline route during August and September 2022. Across Section One of the Church Wilne to Melbourne Pipeline which lies 260m from the Ticknall to Melbourne pipeline. The majority of the features across Section One relate to agricultural activity, including former field boundaries depicted on Ordnance Survey maps, drainage features and green waste. Interference from electricity infrastructure, the division of horse paddocks and the underlying sands and gravels were also identified. There was limited archaeological interest apart from a handful of possible linear anomalies (immediately south of Hall Leys Lane) which may be conceivably archaeological in nature in the area south of the River Trent.[22]

4.7   Archaeological and historical background

This section aims to highlight the key archaeological features by period based on the NHLE, local HER data, map regression, site walkover and additional research.

4.7.1   Prehistoric (500,000 BC to AD 43)

Geological stratigraphy during this period suggests alluvial deposits from the river spread during periods of flooding, therefore prehistoric remains may be sealed by or contained within the alluvial deposits associated with the river Trent and other smaller waterways.

Prehistoric activity is usually close by to water courses or situated in high positions overlooking the river landscape; activity dating to the early prehistoric period, predating the neolithic period, is commonly represented by isolated finds and lithic scatters.

The earliest dated evidence of human occupation in the study area recorded on the Derbyshire HER comes from two pits excavated during an archaeological investigation in advance of a factory development (MM078). The site of the excavation is located 494m north-west of the proposed pipeline route. One of these pits contained sherds of a Neolithic vessel with cord-

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[20] Courtney, T (NDAC). 1976. 'Excavations at Melbourne, Derbyshire, 1973', Derbyshire Archaeological Journal. Volume 96, pp 62-69. Vo. 76, pp. 62-9

[21] Watson, C (AOC Archaeology). 2009. Calke Abbey Limeyards and Brickyards, Ticknall, Derbyshire - Survey Report.

[22] Magnitude Surveys, (2022) Geophysical Survey Report of Church Wilne Distribution Main, Derbyshire (Ref No. MSSK1353)

impressed decorations as well as three fragments of quartzite which were possibly part of an axehead. No other Neolithic finds are recorded within the study area.

The Derbyshire HER also records various prehistoric quartzite implements found around Castle Street in Melbourne (MM111), 473m from pipeline route. Little information is given regarding their period or discovery.

4.7.2   Roman (AD 43 to 410)

There is a clear lack of Roman evidence within the proposed pipeline route. Within the study area, no assets from this period are recorded on the HER.

The lack of Roman evidence within the study area appears to suggest activity dating to this period was likely confined to more beneficial locations, such Shardlow Wharf or Aston Cursus, where existing settlements could be occupied or where transportation links where easily accessible.

4.7.3   Early Medieval (AD 410 to 1066)

The Domesday Survey references an early settlement at Melbourne as the Land of King William, indicating that the village was passed over to William the conqueror after the conquest in 1066. It has been suggested that due to archaeological evidence and its more strategic location connecting the north and southsides of the Trent valley, the entry attributed to Melbourne in the Domesday Survey could have been centred on King's Newton rather than modern day Melbourne.[23]

Similarly, to Melbourne, the Domesday Survey also refers to the existence of the settlement of Ticknall. Ticknall is recorded as early as 1004 in the will of Wulfric Spot, who gave his lands there to Burton Abbey.[24]

The recording of both Melbourne and Ticknall as established settlements during King William's Domesday Survey suggests both had early medieval or even earlier establishments.

The South Derbyshire HER does not appear to have any recorded early medieval assets within the study area; however, some evidence of Anglo-Saxon presence was found just north of Melbourne in the area surrounding King's Newton.

4.7.4   Medieval (AD 1066 to 1540)

Melbourne is recorded in the 1086 Domesday survey. The village consisted of 20 villagers, six smallholders and one priest, with an estimated population of 3.9 households.[25] The name 'Melbourne' derives from a mill stream mentioned in the Domesday book, 'myln burna'. [26]

Just like Melbourne, Ticknall is recorded in the Domesdasy survey of 1086. The survey lists the Lords of the settlement in 1066 as Earl Algar and Burton Abbey. During the survey in 1086, the lands previously belonging to Earl Algar appear as having been divided between King William I and Nigel of Stafford while Burton Abbey was allowed to retain its holdings. The settlement is

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[23] South Derbyshire District Council, (2013), Melbourne Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1911/Melbourne-Statement-adopted-2011-updated-2013.pdf

[24] Southern Derbyshire District Council, (2013), Ticknall Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1915/Ticknall-consultation-draft-2013.pdf

[25] Open Domesday, n. d. Available online at: Home | Domesday Book (opendomesday.org)

[26] South Derbyshire District Council, (2013), Melbourne Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1911/Melbourne-Statement-adopted-2011-updated-2013.pdf

recorded in the survey as having consisted of two freemen, five villagers and one smallholder, with an estimated population of eight households.[27]

In the 12th century the first Bishop of Carlisle, Adelulf, received part of the Melbourne estate from King Henry I; it was at this time the development of the parish church in Melbourne began.

The Scheduled Melbourne Castle (MM077) is located within the study area, 402m north-east of the pipeline route. The asset is a fortified manor dating from the early 14th century, it is believed to have incorporated part of the royal manor house recorded in 13th century documentation. The castle grounds also hold a farmhouse (MM035), constructed around 1605.

Aside from Melbourne castle, a few other structures within Melbourne are recorded as being extant during the medieval period. The parish church of St Michael and St Mary (MM001) was established c. 1133; however, records of the building indicate the structure was not completed until the 13th century. The church still stands 60m south of church street. Further along Church Street, stands an early 14th century stone cottage (MM016). The structure was altered in the mid-18th and late 19th centuries but retains some 14th century timber features.

Ticknall appears to not have undergone many developments in the period immediately after the Norman Conquest of Britain in 1066. The settlement once again appears in the historical record in c. 1115 when several parcels of land around Ticknall were given by the Earl of Chester to the newly established Priory at Calke. The Earl's heirs would continue this tradition and by the Dissolution in 1538, Repton Priory, which had succeeded Calke Priory, held considerable tracks of land in Ticknall.

Near Ticknall, the Derbyshire HER maps medieval ridge and furrow field systems centred around SK3567 2356, SK3547 2361 and SK3607 2346 (MM95). The remnants of these field systems are located 350m south-west of the Ticknall STW.

4.7.5 Post-medieval (AD 1540 to 1901)

Located on the southern outskirts of Melbourne is the Registered Park and Garden of Melbourne Hall (MM075). The pipeline route terminates 330m to the east of the Registered Park and Garden. The site is part of a royal manor (Melbourne Hall, MM075) granted to the bishopric of Carlisle in the 12th or 13th century. In 1629 the leasehold was taken over by Sir John Coke and was subsequently inherited by Rt Hon Thomas Coke in 1704. Coke planned and developed the garden to what we see today; completed in the 18th century.

Directly south of Melbourne is Melbourne Pool (MM094). The extent of the body of water is unknown during the medieval period; however, historic mapping illustrates its existence by at least the early 17th century. Originally utilitarian, it was used to serve a mill. Coke intended to drain the pool and convert it into a meadow, in association with the works carried out on Melbourne Registered Park and Garden during the 18th century. However, he was persuaded otherwise by water engineer George Sorocold.[28]

Ticknall continued to grow after the Dissolution, while the domains surrounding the settlement remained primarily as agricultural land. Following the Enclosure of Ticknall in 1765 by private agreement, the Harpur family of Calke began an extensive buying program and by the 1830s they owned much of the land in the parish. The family was a driving force behind further

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[27] Open Domesday, n. d. Available online at: Home | Domesday Book (opendomesday.org)

[28] Southern Derbyshire District Council, (2013), Ticknall Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1915/Ticknall-consultation-draft-2013.pdf

developments within Ticknall by funding the construction of edifices such as an almshouse and school.[29]

The growth of the settlement also led to further industrial development in the form of brickyards and lime quarries mostly located in the eastern side of Ticknall, located in what is today Calke Park (MM96). The development of these industries, originally established in the 15th century, continued to fuel growth into the 1800s.[30]

Aside from the brickyards and lime quarries (MM079 and MM082), Ticknall also developed a well know pottery industry (MM087 and MM088) which was at its hight in the 16th and 17th centuries. The last such pottery making business survived in the town until the late 1880's before closing down.[31]

4.7.6   Modern (AD 1901 to present)

Melbourne expanded considerably in the modern period, most of which is focused on the north-west side of the settlement.

Harpur Crewe family continued to own a majority of Ticknall until in 1981 when the death of Charles Harpur Crewe saw his brother transfer large parcels of land to the National Trust in order to cover death duties.

During the 1940s the New Park area was utilised by the Army for training purposes. Evidence of this activity sits just outside the 500m study area near Ticknall where existing earthworks are recorded as the remnants of a searchlight battery.

The land between Melbourne and Ticknall has changed little since the closure of the industries in the post-medieval periods. Most of the land remained as open pastoral or agricultural fields with small pockets of tree coverage. Existing buildings have also remained largely the same.

4.8   Archaeological potential and project risk

4.8.1   Prehistoric

The potential for archaeological remains dating to the prehistoric period is assessed as **medium**. Evidence recoded in the Derbyshire HER appears to suggest prehistoric remains have a higher potential to be found in Melbourne, where excavations have uncovered features dated to the Neolithic period. Prehistoric settlements often favoured locations with easy access to waterways such as Carr Brook.

The project risk has been assessed as **low**. Due to the new rising main joining the existing pipeline on the western edge of Melbourne, excavations are not anticipated to take place in areas where prehistoric activity has been identified.

4.8.2   Roman

The potential for archaeological remains dating to the Roman period is assessed as **low**. There is little evidence for Roman activity and only a single sherd of pottery has been recorded within the study area.

Th project risk has therefore been assessed as **low**.

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[29] Southern Derbyshire District Council, (2013), Ticknall Conservation Area Character Statement, Available online at: https://www.southderbyshire.gov.uk/assets/attach/1915/Ticknall-consultation-draft-2013.pdf

[30] *Ibid*

[31] *Ibid*

4.8.3   Early medieval

The potential for archaeological remains dating to the early medieval period is assessed as **low**. There is no physical evidence of early medieval activity within the study area, although Melbourne and Ticknall likely had early medieval origins.

The project risk has therefore been assessed as **low**. The pipeline route generally follows the road corridors through the early medieval settlement where archaeological remains would have been removed.

4.8.4   Medieval

The potential for archaeological remains dating to the medieval period is assessed as **moderate**. Both Ticknall and Melbourne have developed from the medieval cores, and the pipeline route is close to the Ticknall medieval core.

The project risk has been assessed as being **low**. The pipeline route runs through a small segment of Melbourne's historic core before joining the existing sewage network, and will likely require an element of archaeological investigation, either in advance or during construction.

4.8.5   Post-medieval

The potential for archaeological remains dating to the post-medieval period is assessed as **high/ moderate**. Evidence attests to the development of both Melbourne and Ticknall throughout the post-medieval period due to the growth of extensive lime, brick, and pottery industries. The growth of the towns resulted in extensive building works with several of these edifices still extant today. The post-medieval structures make up the core of Melbourne's historical identity and as such it is of vital importance to conserve their setting. Outside the towns, records show the land was predominately utilised for a mixture of agricultural and industrial purposes.

Areas of industrial use, primarily for lime and brickyards, were located in the outskirts of the towns and the Derbyshire HER records a large amount of industrial activity surrounding Ticknall. The lime burning complex in what is now the Calke lime pits park formed the backbone of an extensive industrial development in Ticknall centred around the lime, brick, and pottery industries, during the post-medieval period. The setting of these features is important to the towns historical identity and should be preserved.

The project risk has been assessed as **medium**. The current alignment of the proposed pipeline passes through both Melbourne and Ticknall Conservation Areas. Construction is expected to be short term and the works which involve the provision of a buried pipe are not anticipated to cause harm to the significance of the assets. However, there is a higher potential for post-medieval remains within the route of the pipeline due to the extensive industries which formerly occupied the areas.

4.8.6   Modern

The potential for archaeological remains dating to the modern period is assessed as **low**. Little has changed in the modern period from the post-medieval period with land on the edge of Melbourne and Ticknall remaining as agricultural fields and settlement around the towns expanding from the medieval and post-medieval cores. Evidence from the First and Second World Wars is located on the edge of the study area and away from the route of the pipeline.

The project risk has therefore been assessed as being **low**.

5 Impact Assessment

This assessment looks at the impact of the proposed pipeline route on the archaeological and built heritage resource. Recommendations for further archaeological investigation are outlined in Section 6.2.

5.1 Design Mitigation

Efforts have been made through the design process to reduce the impact on the archaeological resource. The pipeline route follows the alignment of existing roads, thus lowering the potential of encountering archaeological remains or where archaeological remains are encountered, they are likely to have been disturbed or truncated.

The pipeline route has been altered in order to terminate on the edge of Melbourne where it will be connected to the existing Sewage Network and therefore limit the change of encountering archaeological remains where previous evidence has indicated a high potential for remains to survive (Figure 5.1).

Figure 5.1: Change in pipeline alignment following first revision of the report
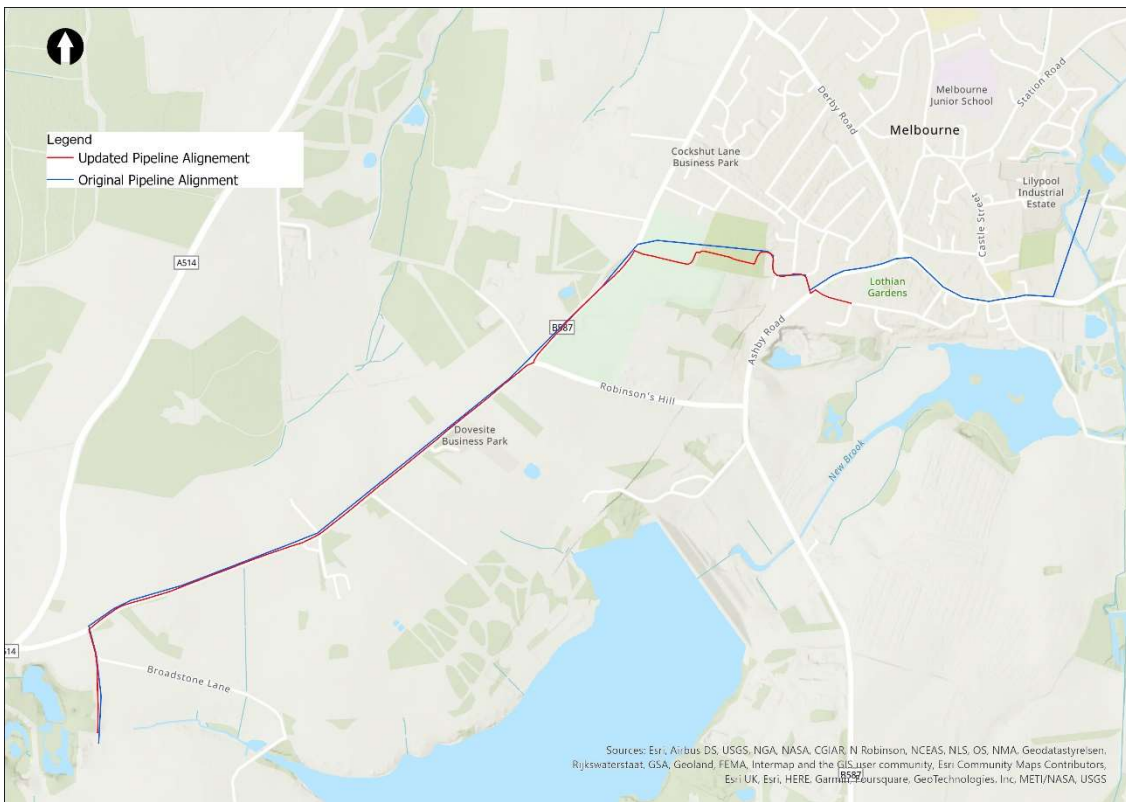
Source: Mott MacDonald, 2022

5.2 Temporary works

Ground disturbance caused by easement stripping, construction compounds and temporary access roads have the potential to remove archaeological remains that survive close to the surface.

The locations of construction compounds and access roads are not currently finalised. The locations of these should be informed by the results of this assessment and any archaeological evaluation that is undertaken.

5.3   Permanent works

Although the pipeline route runs through the edge of the Melbourne and Ticknall Conservation Areas where there are numerous listed buildings, the works which involve a buried pipe below ground will not cause any permanent changes to the ability to understand their significance and therefore no harm. By connecting the new rising main to the existing sewage network in Penn Lane the project will also avoid the need for archaeological works to be undertaken within Melbourne's historical core.

The decommissioning of Ticknall STW and the construction of a new PS is not anticipated to impact on any known or unknown archaeological remains. The PS will be located within the footprint of the existing STW which has already undergone significant ground disturbance during its construction.

Works required for the new pipeline will require an open cut trench excavation across the full c.2.9km length. There are currently no trenchless crossings or directional drilling being considered. The open cut trench excavations are expected to measure between 0.50m up to 1.70m in width and have a varying depth from 2m up to 6m in places. These excavations will remove all known and unknown archaeological remains. Where the pipeline is located within existing roads, the impact is considered less as archaeological remains are likely to have already been truncated or disturbed during construction and modifications to the road corridors.

During the construction of the pipeline, archaeological remains outside of the pipeline footprint may also be impacted through rutting and compaction, as a result of heavy plant tracking across soft ground.

6 Conclusions and recommendations

6.1 Conclusions

This report has been compiled to assess the likely historic environment impacts of construction of a new rising main from Melbourne STW (NGR SK 39265 25398) to Ticknall STW (NGR SK36299 23801), including the construction of the new PS at Ticknall following decommissioning of the current Ticknall STW. The route will terminate short of the STW and be connected to the existing sewage network east of Ashby Road at SK 38476 25054.

The pipeline route runs through both urban and rural contexts on the edge of the historical cores of Melbourne and Ticknall, which are designated conservation areas (MM073 and MM074). These Conservation Areas contain numerous designated heritage assets which demonstrate the towns' historical identity. The majority of designated assets identified within the study area fall within the Melbourne core where monuments such as Melbourne Castle (MM077) and Melbourne Hall (MM075) exemplifies the settlement's development throughout the medieval and post-medieval periods. The settlements also contain a number of non-designated assets relating to the town's industrial history including former quarry pits from lime and brickyard industries that were prevalent in the area until the 19th century.

Nearby archaeological investigations have identified continuous activity dating back as early as the Neolithic period. Water courses such as Carr Brook would have been favourable locations for early settlements and evidence recovered from excavations close to these waterways within the study area appear to corroborate this. Archaeological works carried within the settlements of Melbourne and Ticknall have uncovered remnants of the towns' earlier phases, primarily from the medieval and early post-medieval periods, which showcase the extensive and multi-phased developments of these settlements. Outside the settlement cores, the potential for archaeological remains is generally considered lower.

Although the pipeline route runs through the edge of the Melbourne and Ticknall Conservation Areas where there are numerous listed buildings, the works which involve a buried pipe below ground will not cause any permanent changes to the ability to understand their significance and therefore no harm. Within Melbourne the new rising main will connect to the town's existing sewage network at Penn Lane which will convey flows to the existing Melbourne STW and will remove the need for archaeological work to take place within the historical core of the town.

The decommissioning of Ticknall STW and the construction of a new PS is not anticipated to impact on any known or unknown archaeological remains. The PS will be located within the footprint of the existing STW which has already undergone significant ground disturbance during its construction. The pipeline is expected to be constructed via a cut trench and excavations associated with this will remove all potential unknown archaeological remains within its footprint. There are currently no known archaeological remains within the route of the pipeline. Where the pipeline is within existing road corridors, there is likely to have been some previous disturbance and it is unknown what extent of archaeological remains may survive in these areas.

6.1.1 Summary of archaeological risks

A summary of the archaeological potential for Ticknall to Melbourne Rising Main is provided in Table 6.1.

Table 6.1: Summary of archaeological risks

Period	Archaeological potential	Summary of known risks/potential
Palaeoenvironment	Low	There is potential for paleoenvironmental remains to survive within the alluvial deposits, however these are mapped outside the pipeline route and towards Melbourne pool and therefore the potential is low.
Early Prehistoric (Mesolithic, Neolithic, Bronze Age)	Low	There is evidence of Neolithic activity east of the pipeline route, focused east of Carr brook. However, in general across the area there is a lack of evidence for prehistoric activity, which may be due to a lack of archaeological investigations.
Iron Age/Roman	Low	There is very little evidence for activity during this period.
Early medieval	Low	There is very little evidence for activity during this period.
Medieval	Low	Ticknall and Melbourne date back to at least the medieval period, and medieval structures remain extant in places in Melbourne. Much of the archaeological remains dating to the medieval period within the towns are likely to have been removed by later development, but there is a potential for some archaeological remains from this period to be found in the less developed sections of the pipeline. Ridge and furrow of possible medieval date was identified within the Derbyshire HER. It is also possible that these ridge and furrow cropmarks are 'masking' earlier archaeological remains.
Post-medieval	Medium	There is a high concentration of post-medieval designated and non-designated assets dating to the post-medieval period in Melbourne and Ticknall, reflecting the towns' growth during this time. There is also the potential for ridge and furrow in the undeveloped areas of the pipeline route. Following design alterations the pipeline will join the existing sewage system on the eastern end of Melbourne thus avoiding areas of know high concentration of remains from this period.
Modern	Low	The area has remained largely the same since the late post-medieval period, with development being centred within the established boundaries of both Ticknall and Melbourne.
Unknown	Medium	Much of alignment has not been subject to intrusive archaeological investigation. There is generally a medium potential for unknown archaeological remains to survive.

Source: Mott MacDonald, 2022

6.2   Recommendations

A meeting took place with the Derbyshire Conservation, Heritage and Design Service on the 31st January 2023 to discuss the pipeline route, known heritage assets, possible impacts and reccomendations for potential further archaeological work. It is likely that targeted archaeological monitoring (Watching Briefs) will be required across certain sections of the pipeline where there is known remains or there is a higher potential for unknown archaeological remains to be encountered. Geophysical Survey was discussed as an option however, as much of the route runs along a road corridor where there may have been some previous disturbance it was agreed that evaluation would be not possible in this instance. Areas for targeted archaeological monitoring would likely include three areas (Figure 6.1):

● In the fields adjacent to Ticknall PS where the route runs along the edge of the historic core of Ticknall;

● Along part of the road corridor where the South Derbyshire HER has recorded the remains of a Brickyard (site of), Melbourne Common, Melbourne (MM 091) and Windmill (site of), Ticknall Road, Melbourne (MM 092); and

● The eastern end of the route where it enters the historic core of Melbourne.

Figure 6.1: Areas of proposed targeted archaeological monitoring (Watching Briefs)
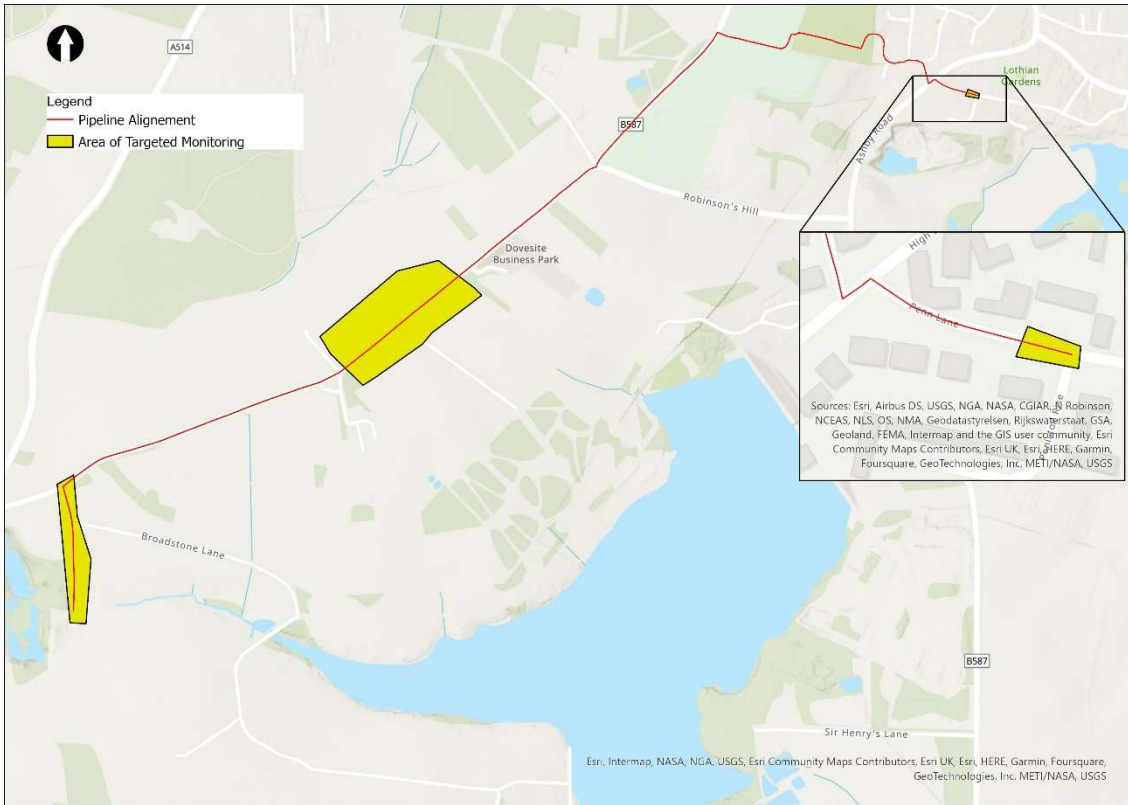
Source: Mott MacDonald, 2022

Areas targeted for Archaeological Monitoring (Watching Briefs) should be discussed and agreed with the Derbyshire Design and Conservation Team, and a Written Scheme of Investigation be produced detailing the scope of this further work.

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Appendices

A. Gazetteer

MM No.	Name	NHLE/HER Ref	Period	Type	Description
MM001	Church of St Michael and St Mary	1204556	Medieval	Grade I Listed Building	Parish church, c1133, when the living of Melbourne was given to the Bishop of Carlisle, but the building was not completed until early C13. C15 alterations, tower probably heightened in 1602, when the present bells were hung, and chancel partly rebuilt at similar date. Major restoration by Sir G G Scott from 1859 to 1862, also with later repairs. Ashlar with some rubble stone and shallow-pitched leaded roofs hidden behind plain parapets with ridgeback copings, aisles and chancel with coved eaves string courses and plain eaves bands elsewhere. Unusual plan with aisled nave, western narthex with flanking towers, crossing tower with transepts and lower two-bay chancel.
MM002	Aisled barn attached to north of stables at Melbourne Hall	1281386	Post-medieval	Grade I Listed Building	Aisled barn, possibly tithe barn, now partly workshops. C15, encased in early C18 and mid C19, with minor later alterations. Timber frame with red brick side walls on stone plinth and stone rubble gable walls with steeply pitched plain tile roof, plus roof lights to eastern pitch. Single storey and seven bays. West elevation has a pair of full height double plank doors to north with a small pane timber cross window to south. Melbourne Hall was built on the site of the original rectory, so this is probably the tithe barn, rather than the one at the west end of the church.
MM003	14 Market Place	1088382	Post-medieval	Grade II Listed Building	House and cottage, now one house. Late C18 and early C19 with C20 alterations. Rendered brick with painted stone dressings and plain tile roof with brick gable stacks, plus moulded stone cornice to No 14 and dentilled brick eaves band to former cottage.
MM004	17 and 18 Market Place	1088383	Post-medieval	Grade II Listed Building	Row of four houses, now two. Late C18 with minor C20 alterations. Red brick, with coursed stone to ground floor of No 18. Plain tile roofs with brick gable stack to east and brick ridge stack to west, plus dentilled eaves bands. Each house three storeys, No 18 with two bays, and No 17 with three bays.
MM005	26, Market Place	1088384	Post-medieval	Grade II Listed Building	House and shop. Early C19, but probably with earlier core. Rendered brick on stone plinth with painted stone dressings and flush quoins. Plain tile roof with central brick ridge stack and sawtooth eaves band. Two storeys and three bays with double range plan. Attractive late C19 advanced shop front to east with central, recessed, glazed panelled door under a plain overlight, flanked by canted single pane shop windows, plus moulded and dentilled cornice over, with iron cresting.
MM006	Workshop To Rear of Number 28a	1088385	Post-medieval	Grade II Listed Building	Lace workshop. Early C19. Red brick with slate roof and brick gable stack to east. Two storeys and two bays with single storey addition to south. Two segment headed doorcases to ground floor with two large 2-light horizontal sliding glazing bar sashes above. Stone steps up to first floor plank door to east gable wall. Addition has two segment headed plank doors.

MM007	Nos. 51, 53, and 55, Penn Lane	1096362	Post-medieval	Grade II Listed Building	Terrace of four cottages, now three. Early C19 with C20 alterations. Ashlar with stone dressings and slate roofs with two brick ridge stacks and one brick gable stack to west, plus stepped eaves band. Each cottage has two storeys and a single bay, and to centre there is a central through passage. Nos. 55 and 57 to east have been converted into one house (No. 55).
MM008	National school	1096363	Post-medieval	Grade II Listed Building	School, now workshop. 1822 with late C19 additions. Red brick, with stone dressings to the addition, and slate roof with brick coped gables, brick gable stack to west and a dentilled eaves band. Two storeys and five bays plus late C19 addition to south.
MM009	Exchange house	1096365	Post-medieval	Grade II Listed Building	House. Late C18 with minor later alterations. Coursed squared stone to facade with rubble stone elsewhere. Stone dressings and plinth. Steeply pitched plain tile roof with brick gable stacks, stone coped gables on plain kneelers and moulded eaves cornice. Two storeys plus garrets and three bays. Central doorcase with panelled door and divided overlight below raised rusticated wedge lintel with raised keyblock. To either side C20 3-light timber cross, casement windows below similar rusticated lintels. Above, two similar windows and a similar central 2-light window.
MM010	Wesley hall	1096366	Post-medieval	Grade II Listed Building	Savings bank and Athenaeum, now Wesleyan Hall. 1853-4 by H I Stevens of Derby in Italianate style with minor later alterations. Red brick with stone dressings and plinth, rusticated stone quoins and wide plain first floor stone band with similar ground floor sill band and narrower first floor sill band. Hipped slate roof with moulded stone cornice Two storeys and four bays with tower attached to southeast corner.
MM011	26-28, potter street	1096367	Post-medieval	Grade II Listed Building	Pair of houses, with shop to ground floor of one. Late C18, altered in late C19. Red brick with brick plinth to facade, stone rubble elsewhere, and gauged brick dressings. Plain tile roof with brick gable stack to east, plus stepped and dentilled eaves band. Three storeys, each house single bay.
MM012	Shaw house	1096368	Post-medieval	Grade II Listed Building	House. 1793 and 1839 to 1842 with minor later alterations. Stuccoed brick with stone dressings and red brick. Hipped plain tile roof with brick side and ridge stacks plus moulded cornice to front range and plain tiled roof with gable stacks and dentilled eaves band to rear range. Early C19 front range has three storeys and four bays, whilst C18 rear wing has two storeys and three bays.
MM013	Surgery and attached range of outbuildings to north of close house	1096381	Post-medieval	Grade II Listed Building	Barn and cowsheds, now surgery and outbuildings. Mid C18 and mid C19 with minor later alterations. Red brick, on stone plinth to southern range, and plain tile roofs, with gable brick stack and dentilled eaves band to western range, plus two brick ridge stacks to southern range. Single storey, plus garret to the surgery and L-plan.
MM014	The dower house	1096382	Post-medieval	Grade II Listed Building	House. 1829 with late C19 alterations and C20 addition. Ashlar with hipped slate roof and ashlar ridge stack, plus moulded eaves cornice. Two storeys and four bays, plus C20 addition to west.

MM015	Tithe cottage	1096383	Post-medieval	Grade II Listed Building	House. C17, with early C20 addition and early C19 and C20 alterations. Rubble stone with flush quoins and stone dressings, plus rendered plinth. Plain tile roofs with large rendered central ridge stack to C17 house and rendered side wall stack to the addition. Owing to the difference in the land levels the south elevation has three storeys plus attics and the north elevation has two storeys. Four bays, with lobby entrance plan, and two bay western addition.
MM016	51, church street	1096384	Medieval	Grade II Listed Building	Cottage. Early C14 and mid C18 with late C19 alterations. Rendered rubble stone and red brick with plain first floor band. Plain tile roofs with brick coped gable to north, and brick gable stacks to south and east, plus stepped eaves cornice to west front. Two storeys and L-plan. South gable front has a flat headed 3-light horizontal sliding small pane sash to ground floor and a 3-light small casement window above. West front has a segment headed doorcase with plank door to south, a ruinous window to north and a blank wall above.
MM017	Chantry house and attached outbuildings	1096385	Post-medieval	Grade II Listed Building	House and attached outbuildings, which are partly incorporated into the house. Mid C18 house enlarged and refronted in early C19 with C20 alterations and C15 outbuildings, encased in C18 and C19, also with C20 alterations. Cruck frame outbuildings, encased in red brick and stone, with plain tile roof. Red brick house with brick and stone dressings and plain tile roof with brick gable stacks, that to west external, and stone coped gables.
MM018	17, derby road	1096386	Post-medieval	Grade II Listed Building	House. Mid C18, altered in early C19, also with minor later alterations and additions to rear. Red brick with stone plinth, flush quoins and painted stone dressings. Steeply pitched plain tile roof with brick gable stacks and stone coped gables on brick kneelers, plus moulded stone cornice. Two storeys plus garrets and two bays. Central plain doorcase with C20 flush door and plain overlight below wedge lintel with slightly arched bottom edge to either side of raised keyblock. Plain sashes below similar lintels to either side and two similar windows above.
MM019	41, derby road	1096387	Post-medieval	Grade II Listed Building	House. C18, refronted in early C19. Red brick with rendered plinth and painted stone dressings. Slate roof with brick gable stacks and central brick ridge stack, plus simple timber cornice. Two storeys and two bays. Central doorcase with hood on moulded brackets and panelled door with traceried overlight. To the north side of the doorcase there are the large stone quoins of an earlier doorcase. To either side there are plain sashes below wedge lintels, which have the bottom edges slightly arched to each side of a corniced keystone. Above, two similar sashes below similar lintels except the lower edges are straight.
MM020	United reform church	1096388	Post-medieval	Grade II Listed Building	Church. 1871. Rock faced stone with stone dressings, flush hands at impost level to east and west elevations, ceramic tile band at similar level to north elevation and stone plinth. Slate roof with crested ridge tiles, bands of hexagonal slates and small gabled vents with trefoil headed openings, plus stone coped gables on moulded kneelers and coved eaves bands. Nave, with transept and chancel bays and small tower to north-east corner.

MM021	Thomas Cook almshouses, chapel and railings	1096389	Post-medieval	Grade II Listed Building	Almshouses, chapel and railings. 1891 by G Burgess for Thomas Cook, the famous travel agent. Red brick with tile hanging and applied timber framing to the attics and some terracotta dressings. Steeply pitched red clay tile roof with large brick ridge stacks with semi-circular headed panels to sides, and moulded brick coped gables to caretaker's house and the chapel, both of which are at the street end of the side wings. U-plan with seven bay central range and four bay side wings, three central bays of the central range advanced. Mostly single storey plus attics but with single storey chapel and two storeys plus attics to three central bays.
MM022	84, 88 and 90 high street	1096390	Post-medieval	Grade II Listed Building	Four houses, now three. Early C18 and late C18 with C19 and C20 alterations. Red brick with plain tile roofs, that to No 84 with red tiles, brick coped gables, large central brick ridge stack and moulded brick eaves cornice and those to Nos 88 and 90 with blue tiles, brick gable stack to east and brick ridge stack, plus sawtooth eaves bands.
MM023	11, Blanch Croft	1096405	Post-medieval	Grade II Listed Building	House. Late C18 with minor later alterations. Ashlar front and rubble stone to side and rear walls, with stone dressings and plinth. Slate roof with brick ridge stack and coved eaves cornice. Three storeys and two bays. Glazed panelled door to north and two C19 3-light timber mullioned casements to south. Above, two C20 3-light casements and above again two similar shallower windows with C19 3-light timber mullioned casement windows. All openings have ashlar wedge lintels with keystones.
MM024	43 and 45 Castle Street	1096406	Post-medieval	Grade II Listed Building	Pair of cottages, now shops. Mid C18 with C20 alterations. Coursed squared stone with stone dressings and plain tile roof with large central ridge stack, plus chamfered eaves band. Each cottage single bay, both two storeys.
MM025	Barn at castle farm	1096407	Post-medieval	Grade II Listed Building	Barn. C16 and C18 with later additions and alterations. Square panel timber framing with corner braces to upper panels, on stone plinth and with brick nogging, plus later red brick, and pantile roof. Single storey and three bays.
MM026	Derby house	1096441	Post-medieval	Grade II Listed Building	House. Late C18. Orange brick with plain tile roof and brick gable stacks. Dentil eaves cornice. Three storeys with two storey outshut to rear. Symmetrical three bay north elevation. Central moulded doorcase with bracketed hood. Raised and fielded panelled door with segment headed rectangular overlight. Flanked by glazing bar sashes under wedge brick lintels. Three similar sashes above, and three similar but smaller sashes above again.
MM027	Lime kiln house	1096442	Post-medieval	Grade II Listed Building	House. Early C19. Rubblestone and red brick with plain tile roof and brick gable stacks. Long rear wing with ridge stacks. Dentil eaves cornice. Two storeys. Chamfered plinth. Symmetrical three bay south elevation has a flight of stone steps up to a central doorway under wedge lintel. Panelled door with rectangular overlight.

MM028	Pillar fountain at the junction of Melbourne Lane and Stanton hill	1140126	Modern	Grade II Listed Building	Pillar fountain. Manufactured by Glenfield and Kennedy Ltd of Kilmarnock. Erected 1914 at the instruction of Sir Vauncey Harpur-Crewe of Calke Abbey. Fluted cast iron cylindrical column, with moulded domed top, incorporating tap lever handle, Lion mask surround to tap outlet, and integral bucket platform to base. The design, apparently of the late C19 date is referred to as Kennedy's patent, self-closing, anti-freezing Pillar fountain. The fountain forms part of fresh water supply system for the village of Ticknall, (itself part of the Harpur-Crewe estate), of which 16 other examples (q.v.) survive. The fountains were served by gravity from a reservoir filled with water drawn from a well by windpump.
MM029	7, blanch croft	1140133	Post-medieval	Grade II Listed Building	House and textile workshop, empty at time of inspection. Circa 1800, with minor C19 alterations. Red brick with a slated roof and gable stacks. One and a half bays deep, with first floor frame shop above ground floor service room in half bay to street frontage.
MM030	Brick kiln at OS 359242	1203423	Post-medieval	Grade II Listed Building	Brick kiln of intermittent updraught or Scotch kiln type. Late C19. Red brick. Rectangular in plan, approximately 20 feet by 30 feet. Round arched entrance at south end. The long sides have a row of eight round-arched fireholes. The north end has an entrance, the arch collapsed. No roof.
MM031	Royal oak house	1203428	Post-medieval	Grade II Listed Building	House. Early C18 and early C19. Rubblestone and red brick. Plain tile roof with brick gable and ridge stacks. Dentil eaves cornice to brick part. Two storeys.
MM032	The priory	1203433	Post-medieval	Grade II Listed Building	House. Early C19. Red brick with hipped plain tile roof and two lateral brick stacks. Dentil eaves cornice. Three storeys. Symmetrical three bay south elevation has a central late C19 flat-roofed porch with pilasters and low parapet. Doorway with wedge brick lintel, panelled door and rectangular overlight.
MM033	43-57, blanch croft	1203968	Post-medieval	Grade II Listed Building	Terrace of eight cottages. 1795, built for the Sick Club, with later alterations. Red brick with shallow pitched slate roofs, plus brick gable and ridge stacks and dentilled eaves band. Each cottage has three storeys and a single bay. They step downwards in pairs from Nos 55 and 57 at the south end.
MM034	55-61, castle street	1203994	Post-medieval	Grade II Listed Building	Two matching pairs of houses. Early C19 with minor later alterations. Red brick with stone dressings and plinth, and slate roofs with brick gable stacks plus dentilled brick eaves bands. Three storeys, each pair three bays. Nos 55 and 57 to south have a central moulded Venetian-style arrangement of doorcases with semi-circular headed passage doorcase flanked by flat headed doorcases.
MM035	Castle farmhouse and ruins of Melbourne castle and outbuildings	1204011	Medieval	Grade II Listed Building	Farmhouse and attached castle walls with outbuildings. c1311, with C15 and C16 additions, and early C18 with C19 and C20 alterations and additions. Farmhouse is of red brick, on stone plinth, with flush stone quoins and plain tile roof with brick coped gables and central brick ridge stack. Castle walls are of ashlar and rubble stone. Farmhouse is two storeys plus attics and has three bays, plus single storey wing to east.

MM036	Number 62 and attached smithy	1204658	Post-medieval	Grade II Listed Building	House and attached smithy. Late C18 with later alterations. Red brick with first floor band and C20 plain tile roof with one large, rendered ridge stack and one smaller brick ridge stack, plus dentilled eaves band to house. Smithy is coursed rubble stone with C20 plain tile roof plus glazed roof lights and brick gable stack to west. House has two storeys and three bays; three bay, single storey smithy attached to east.
MM037	Number 12 and attached brewery buildings	1204671	Post-medieval	Grade II Listed Building	House and attached brewery buildings. Early C19 with minor later alterations. Red brick with rendered plinth and painted stone dressings to the house, brewery buildings are completely rendered. Plain tile roofs with central brick ridge stack and brick gable stack to north, plus dentilled eaves bands. House, three storeys and three bays, brewery buildings, three storeys and four bays with canted plan.
MM038	35, derby road	1204680	Post-medieval	Grade II Listed Building	House. c1810 with late C19 alterations. Red brick with painted stone dressings and plain tile roof with brick gable stacks, plus sawtooth eaves band. Three storeys and three bays. Central doorcase with raised and fielded panelled door.
MM039	47, derby road	1204687	Post-medieval	Grade II Listed Building	Pair of cottages, now one. Early C19. Red brick with painted stone dressings and slate roof with brick gable stacks, plus dentilled eaves band. Two storeys and two bays. Two central segment headed doorcases, that to south with a raised panelled door and that to north with a flush door. To either side there are glazing bar sashes below wedge lintels with raised keystones.
MM040	Leisure centre and library	1204725	Post-medieval	Grade II Listed Building	School, now library and leisure centre, 1897, with various later alterations. Red brick with brick and stone dressings and steeply pitched red clay tile roofs with wide eaves, one brick ridge stack, several elaborately moulded terracotta ridge vents and a tapering square cupola with domed copper roof and louvred sides to rear roof, also with moulded stone copings to the gables and domed copper roof to the tower with flagpole to top. Square plan and single storey with attic to centre bay of north elevation.
MM041	23 High Street	1204740	Post-medieval	Grade II Listed Building	House. Late C18. Red brick with brick dressings and plain tile roof with brick ridge stack and brick gable stack to north, plus dentilled eaves band. Two storeys and two bays. Off-centre segment headed doorcase with glazed panelled door and C20 porch roof above, flanked by three-light segment headed small paned casements. Above two flat headed three-light small paned horizontal sliding sashes.
MM042	21 Market Place	1204823	Post-medieval	Grade II Listed Building	House. Early C19, refronting of C18 house with C20 alterations. Red brick with painted stone and concrete dressings, and plain tile roof with brick gable stack to east plus a stepped eaves band. Three storeys and two bays. Ground floor has been rebuilt in the C20 and has a panelled door and plain overlight below concrete rusticated wedge lintel with raised keystone to west and a glazing bar sash below similar concrete lintel to east.

MM043	Market cross	1204824	Post-medieval	Grade II Listed Building	Market cross. 1889 by James Wright with alterations, dated 1953, restored 1977. Ashlar and timber with hipped plain tile roof. Large central stone pier has moulded base with wooden bench attached, all round. Above there are blind C12 style semi-circular headed niches to all except the south side, with scalloped capitals, nookshafts and moulded arches, plus continuous impost band and hoodmoulds. West side has the inscription 'Erected 1889' within the niche and the north side has an inset brass plaque recording the fact that the monument was erected by public subscription to celebrate Victoria's Jubilee. Beneath this is a short history of Melbourne.
MM044	10, Market Place	1204877	Post-medieval	Grade II Listed Building	Two cottages, now one. C18 with early and late C19 alterations. Pebbledashed brick and stone rubble with slate roof, plus brick gable stacks and a large central brick ridge stack, also with stepped eaves bands. Two storeys and four bays. C19 shop front to east with moulded cornice has a segment headed doorcase with glazed door adjacent to west.
MM045	59, Penn Lane	1204910	Post-medieval	Grade II Listed Building	Cottage. Early C18 with mid C19 alterations. Pebbledashed stone rubble and red brick with plain tile roof, brick gable stacks and dentilled brick eaves band. Two storeys and two bays. Two segment headed horizontal sliding glazing bar sashes to ground floor with two similar flat headed windows above. Segment headed plank door to east gable wall.
MM046	Pennfield house and attached outbuildings	1204916	Post-medieval	Grade II Listed Building	House and attached lace factory, now outbuildings. Late C18 and early C19. Red brick on stone plinth, with gauged brick dressings to south front and painted stone dressings to north front. Hipped slate roof with brick side wall stacks and dentilled eaves band. Three storeys and three bays plus three storey five bay outbuilding attached to east. Garden front has central doorcase with double, margin light, glazed doors and an elegant traceried fanlight below iron Gothick porch with four-centred arches to three sides, a castellated top and pierced panels to the main posts.
MM 047	Thatched cottage	1204966	Post-medieval	Grade II Listed Building	Three cottages, now one. Late C16 with numerous later alterations. Square panel timber framing on stone plinth with painted brick nogging and corner braces to upper panels, partly rebuilt in red brick. Thatched roof with gable brick stack to east and one brick ridge stack. Single storey plus attics and six bays.
MM048	16 and 18, Potter Street	1204992	Post-medieval	Grade II Listed Building	Pair of houses with shops to ground floors. Mid C18 with late C19 alterations. Red brick in Flemish Bond with gauged brick and stone dressings, plus stone plinth to No 18. Steeply pitched plain tile roof with brick gable end stack to west and a large off-centre ridge stack, also with brick coped gables on plain stone kneelers and moulded stone eaves cornice. Both houses, three storeys. No 16, single bay and No 18, two bays.
MM049	50-54, Potter Street	1204993	Post-medieval	Grade II Listed Building	Terrace of three cottages, now partly offices. Mid C18 with minor later alterations. Rendered brick on stone plinth with plain first and second floor bands. Steeply pitched plain tile roof with large central brick ridge stack and gable brick stack to west, also with stone coped gables on plain kneelers and stepped and dentilled eaves band. Two storeys, plus attics to Nos 50 and 52, and garret to Nos 54, each cottage is single bay.

MM050	58-60, Potter Street	1205002	Post-medieval	Grade II Listed Building	Pair of houses, both with shops to ground floor. Early C19 with late C19 alterations. Red brick with painted stone dressings and slate roofs with brick gable stacks, plus dentilled eaves band. Each house has three storeys and a single bay.
MM051	Stone rubble outbuildings to west of shaw house	1205024	Post-medieval	Grade II Listed Building	Stables and loft, now a small factory. Mid C19. Rubble stone with flush quoins and stone dressings. Steeply pitched plain tile roof with brick dentilled eaves band. Two storeys and three bays.
MM052	Market lamp	1251434	Post-medieval / Modern	Grade II Listed Building	Lamp post. 1838, restored and altered c1970. Stone and cast iron. Stepped stone plinth with square pedestal over, topped by wide moulded stone slab on which is placed an iron column supporting a lamp. The pedestal has panelled sides with quarter circles cut out of each corner, western panel inscribed 'Market Re-opened July 30 1838'. Iron column above has leaf decoration to base, fluted stem and foliage capital. Above there is a C20 lamp in single hooped surround with scrolls to base.
MM053	Vale house	1280985	Post-medieval	Grade II Listed Building	House. Early C19 with mid C19 porch. Red brick with painted stone dressings and steeply pitched plain tile roof with brick gable stacks, plus dentilled eaves band. Two storeys and three bays. Central mid C19 brick porch with clasping pilasters to corners and stone entablature over with blocking course, plus panelled door below a divided overlight to front.
MM 054	4 and 6, High Street	1281074	Post-medieval	Grade II Listed Building	Pair of houses. Mid C18 with late C19 alterations. Red brick with painted stone dressings. Red plain tile roof with large banded central brick ridge stack and brick coped gables on plain kneelers, plus dentilled eaves band. Each house has two storeys and a single bay.
MM 055	65, Church Street	1281103	Post-medieval	Grade II Listed Building	House. Early C18, with early C19 and late C19 alterations. Red brick with stone dressings and continuous dentilled brick bands between floors. Steeply pitched red clay tile roof with central brick ridge stack and C19 brick gable stack to east, also brick coped gables. Two storeys plus attics and three bays.
MM056	49, Church Street	1281106	Post-medieval	Grade II Listed Building	House. Early C18 and early C19 with later additions and alterations. Rendered brick and plain tile roof with brick gable stacks, that to west external plus a stepped eaves band. Three storeys and three bays, with a low ground floor.
MM057	Pair of chest tombs at SK 3394 2513	1281401	Post-medieval	Grade II Listed Building	Pair of chest tombs. 1788 and early C19. Stone. Tomb to north has panelled sides and ends with shaped balusters to corners. Above it has a slate slab with moulded edges, inscribed 'In memory of Mr William Fox who died April 26th, 1788. In the 64th year of his age'. Southern tomb has plain sides and ends with raised corners, decorated to each side with semi-circular headed panels. Large, chamfered slab to top with moulded edges. Inscriptions now illegible.

MM058	The white swan inn	1281449	Post-medieval	Grade II Listed Building	Public house. C17, partly rebuilt in early C19 and with C20 alterations. Painted roughcast, probably over rubble stone, on deep chamfered stone plinth. Plain tile roof with central brick ridge stack and brick side wall and gable stacks to west, plus stepped eaves band. Two storeys plus garrets and three bays with lobby entrance plan.
MM059	40, High Street	1329364	Post-medieval	Grade II Listed Building	House. Early-to-mid C19. Brick in Flemish bond with sandstone dressings. Slate roof, hipped at the left, with a chimney on the right-hand gable and at the left of the ridge. Facade symmetrical, of 3 storeys and 3 bays with a sandstone gutter cornice and with glazing bar sashes which have projecting painted stone sills and painted stone lintels with false voussoirs and keystones.
MM060	Close house	1334618	Post-medieval	Grade II Listed Building	House. Early C18, enlarged and refronted in late C18 with minor late C19 alterations. Red brick, on chamfered stone plinth, with painted stone dressings, painted brick quoins and plain, early C18, stone first floor band. Plain tile roof with brick gable stacks and brick ridge stack to rear pitch of roof, plus brick coped gables on plain kneelers and moulded stone cornice. Three storeys and three bays, with single storey, single bay to north. Plain central doorcase with raised and fielded panelled door and gothick traceried overlight
MM061	19 Church Street	1334620	Post-medieval	Grade II Listed Building	House. Mid C18 with C19 and C20 alterations. Red brick with rendered plinth and steeply pitched plain tile roof with brick gable stack to east, brick coped gables on plain kneelers and stepped and dentilled eaves band. Two storeys and three bays.
MM062	Number 33 And Attached Building to South	1334621	Post-medieval	Grade II Listed Building	Pair of houses, now shop, offices and restaurant. 1810 with later alterations. Red brick with painted stone dressings and plain tile roofs with brick gable stack to north and brick ridge stack to centre, plus dentilled eaves bands. Both three storeys, No 33 with two bays and attached building, single bay with angled side elevation.
MM063	11, 15 (the thatched cottage) and 19, High Street	1334623	Post-medieval	Grade II Listed Building	Three cottages. C15, early C18 and C19 with various C19 and C20 alterations. Cruck timber frame, encased in red brick, and red brick with some stone rubble. Thatched roof with two tall brick stacks, to the northern pitch of the roof and slate roofs with central brick ridge stack and two brick ridge stacks to south. Four bay cruck range of single storey plus attics, to west with two storey three bay part to east at right angles and further three bay two storey C19 part attached to south.
MM064	21, Blanch Croft	1334630	Post-medieval	Grade II Listed Building	House. Early C19. Red brick with some stone dressings and plain tile roof with brick gable stack to north, plus dentilled eaves band. Two storeys and two bays. Off-centre doorcase with moulded architrave, flush panelled door and bracketed porch roof, also with a deep lintel which has three blind cusped roundels. Attached to base of door on south side is an ogee headed stone bootscraper.
MM065	63, Castle Street	1334631	Post-medieval	Grade II Listed Building	House. Early C19. Rendered brick on stone plinth with painted stone dressings and plain tile roof with brick gable stack to south, plus dentilled eaves band. Single bay and three storeys. Plain doorcase to north with six panelled door and traceried overlight below rusticated wedge lintel with fluted keystone.

MM066	Melbourne Baptist church	1334632	Post-medieval	Grade II Listed Building	Baptist church. 1750, enlarged 1832, with minor later alterations. Rendered brick, simulated to look like ashlar, with painted stone dressings and rusticated rendered quoins. Slate roof with stone coped gables on plain kneelers. Three bays by three bays with lower bay to west. There are several wall memorials, including three C18 ones to the east wall.
MM067	22-24, Market Place	1334645	Post-medieval	Grade II Listed Building	Terrace of three cottages. Early C19 with later alterations. Red brick with painted stone dressings and plain tile roofs with one brick ridge stack and a brick gable stack to west, plus sawtooth eaves band. All cottages have two storeys, Nos 22 and 23 are single bay but No 24 to west has an extra bay to first floor because of a passage through the buildings below.
MM068	Dower house cottage and attached outbuildings	1334647	Post-medieval	Grade II Listed Building	Cottage with attached outbuildings. C17 with later alterations and mid C19 additions. Rubble stone with flush quoins and red brick addition and outbuildings. Steeply pitched red clay tile roof with brick ridge stack to house, and blue tile roof with dentilled eaves band to outbuildings. Single storey plus attics and three bays, two to north of stone rubble and southern one of red brick.
MM069	The Roebuck	1334650	Post-medieval	Grade II Listed Building	Public house. Early C19. Painted red brick with painted stone dressings and rendered plinth. Plain tile roof with brick gable stacks and dentilled eaves band. Three storeys and three bays plus single storey bay to east. Steps up to a central segment headed doorcase with panelled door, in a raised brick surround, with a simple hood and bootscrapers to each side.
MM070	56 Potter Street	1334651	Post-medieval	Grade II Listed Building	House. C16, restored in C20. Square panel timber frame on stone plinth with corner braces to top and painted brick nogging. Thatched roof with brick ridge stack towards eastern end. Single storey plus attics and two bays. Plank door to east and two-light horizontal sliding glazing bar sash to centre with fixed small pane window to west. Above there are two eyebrow dormers with two-light glazing bar casements. Similar elevation to rear and interior with chamfered beams and winder staircase.
MM071	Tithe barn	1204539	Post-medieval	Grade II* Listed Building	Threshing barn, now a store. C14 or C15 with a C17 and a late C18 addition plus mid C19 alterations and additions. Massive ashlar blocks with later rubble and red brick patching, also with mid C19 red brick walling above the stone. Plain tile roof with a mixture of red and blue tiles, plus brick coped gables and dentilled eaves band. Single storey plus basement and attic. Seven bays, plus lower single bay addition to east and six bay addition to south.
MM072	Ticknall	n/a	Post-medieval	Conservation Area	The Ticknall Conservation Area was jointly designated by South Derbyshire District Council and Derbyshire Councty Council on 17th November 1972 and extended by the District Council on 24th November 1983.
MM073	Melbourne	n/a	Post-medieval	Conservation Area	The Melbourne Conservation Area was designated by Derbyshire County Council on 12th February 1969. It was extended by the District Council on 27th May 1976 to include more of Blanch Croft, again by the District Council on 10th October 1991 to take in four additional areas on the edges of the original designated area and once more by the District Council on 9th June 2011

MM074	Woodhouses	n/a	Post-medieval	Conservation Area	The Woodhouses Conservation Area was designated by South Derbyshire District Council on 16th January 1992.
MM075	Melbourne hall	1000682	Post-medieval	Grade I Registered Park or Garden	Gardens laid out by the Rt Hon Thomas Coke during the period 1704 to c 1710, with advice from Henry Wise, and parkland probably laid out during the C17 and the early C19.
MM076	Calke abbey	1000676	Post-medieval	Grade II* Registered Park or Garden	Pleasure grounds of late C18/early C19 date with early C18 origins, a park largely of the late C18 and early C19 with early C17 origins, and mid C18 kitchen gardens.
MM077	Melbourne Castle Fortified Manor and Earlier Medieval Manorial Remains	1008610	Medieval	Monument	The monument includes the known extent of the site of the medieval fortified manor known as Melbourne Castle. This early 14th century manor was preceded by earlier manor houses dating back to the first half of the 11th century. The fortified manor is believed to have incorporated part of a royal manor house noted in 13th century documents and is known to have possessed a variety of ancillary features at various periods in its history. The buried remains of earlier and later medieval buildings and associated manorial features will survive throughout the area of the scheduling, partly overlain by Castle Farm in the northern half and, in the southern half, sealed beneath the new housing development and residents' carpark which is now being completed on the site of Castle Mills and Castle Cottage. Both mill and cottage were demolished in the late 1980s. The Castle Street frontage of the mill formerly stood on the site of a row of cottages which were demolished after a fire in 1933. Knowledge of the fortified manor derives from field observation, a large body of documentary evidence held principally by the Duchy of Lancaster and a number of partial excavations.
MM078	Neolithic pits, and medieval and post-medieval occupation, Castle Street, Melbourne	MDR4397	Pit – Neolithic Ditch – Medieval Site – Medieval/ Post-medieval	Monument	Excavations between the abbatoir and county fire station, Castle Street, Melbourne (SK 389253), in advance of factory development, were carried out by the D.O.E. in 1973 to ascertain whether there had been any medieval or earlier occupation. The earliest features found were two shallow Neolithic pits, one containing sherds of a late Neolithic vessel with cord-impressed decoration and three fragments of quartzite, apparently from an axehead. A V-shaped ditch of uncertain date, running north-west to south-east, may have been a drainage ditch for a medieval fishpond. A wall foundation trench running parallel to, and below the present pavement of Castle Street may be medieval. Post- medieval intrusions were also revealed and a variety of unstratified medieval and post-medieval pottery recovered.
MM079	Ticknall lime kilns and quarries, Ticknall	MDR4445	Post-medieval	Monument	Complex of limekilns of early 19th century date near the Ticknall tramway (SMR 27109). Two horseshoes of 8 kilns each were constructed into the tramway embankment. There are still four sets of intermittent limekilns along the Ashby Canal and its tramways. The largest and best-preserved set are in the quarries at Ticknall where there are fourteen, some in very good condition. To the east of Ticknall village are the lime workings associated with the Ticknall Tramway. Within the quarry area, both sides of the road, are to be found extensive limestone workings. The quarry contains lime kiln remains, and at one point two groups of kilns were built into the tramway embankment.

MM080	Brick works, Ticknall	MDR7257	Post-medieval	Monument	Remains of brickyards in use by the end of the 18th century. Brick Yard' is named on the Ordnance Survey map of 1887 in an area of quarrying and associated Lime Works. The Brick Yard is not depicted on the 1901 edition - the area is shown as 'Old Quarries'. The brick yard was already extant in 1843. At one point the yard contained a Scotch Kiln, a powered crusher and a drying shed.
MM081	Brickkiln Pit fishpond, Brickkiln Pit, Melbourne	MDR7249	Post-medieval	Monument	The amorphous shape of this pond suggests that before becoming a fishpond it was the clay pit associated with a brick kiln whose presence is presumed from the place name
MM082	Lambert's Quarry, east of Ashby Road, Melbourne	MDR7226	Post-medieval	Monument	Quarry worked from the late 18th century.
MM083	19 Potter Street, Melbourne	MDR10716	Post-medieval	Building	Late 16th century timber-framed house, with additions and alterations; used as a shop at some time, before its return to a dwelling.
MM084	20 Potter Street, Melbourne	MDR10779	Post-medieval	Building	Mid-19th century shop, and house in which stocking frame knitting was carried out; now a house and workshop.
MM085	Doctors' Clinic (former), Penn Lane, Melbourne (site of)	MDR10792	Post-medieval	Monument	Built as an Estate Office in 1884, later a doctor's clinic; demolished in 1994
MM086	No. 49, blanch croft, Melbourne	MDR10803	Post-medieval	Building	One of a row of eight terraced cottages built in 1795 for members of a Sick Club.
MM087	Post-medieval pottery works (site of), the Limeyards, Ticknall	MDR11614	Post-medieval	Monument	There was a pottery in what is now the Limeyards. There is almost no trace left of this, it having nearly all been quarried out, but pieces of pot can still be seen in the dump. The pottery was working at the end of the 17th century and into the early 18th century and was run by at least two generations of the Cox family before the quarries exended this far.
MM088	Post-medieval pottery (site of), Melbourne Lane, Ticknall	MDR11615	Post-medieval	Building	A pottery was started up in the last quarter of the 18th century at what is now The Continent. The first mention of a pot site here was in 1778 when William Cox paid one shilling for a 'bit of ground at the East End of Ticknall, in the Priory Manor for a Pot Yard'. The rentals are incomplete, so it is not clear just how long this site was working; it was an unlikely time to start a new pot site in Ticknall, although it produced a large quantity of waste material. A deed of 1802 shows Cox's house, which is the present-day Continent. Part of the garden of the property is solid with pot shards and the owner found a large area of burnt earth where the kiln might have been.

MM089	Melbourne pool, Melbourne Park	MDR11713	Medieval/ Post-medieval	Monument	Although its extent in the medieval period is not known, Melbourne Pool was certainly large by the early 17th century, as shown on a map of that time. Tradition says that stone for Melbourne Castle was quarried here before the area was flooded. A map of 1787 shows the Pool extending further to the west than it does now. It provided water to Melbourne Mill. The level of the water was raised by two feet at the beginning of the 18th century, in order to work the fountains in the Hall gardens, although this flooded part of the vicarage garden. By the early 19th century, the pool was silted up completely at the west end. In the 1840s it was partly filled, and the rest was cleaned out, making two ornamental islands and landscaping the surrounding area. In its current form it covers some 20 acres.
MM090	Mount factory, commerce street, Melbourne	MDR7321	Post-medieval	Monument	Former boot and shoe factory established in 1894 and rebuilt after a fire in 1939. There is a plaque on the street frontage of the factory which reads 'The Mount Boot Factory 1894'.
MM091	Brickyard (site of), Melbourne Common, Melbourne	MDR7254	Post-medieval	Monument	A brickyard is named on the 1st ed. 1" OS map of 1836 at approximately SK 371 245, with a building or row of buildings possibly associated with it at the north-eastern end of Bog Lane. On the 1887 map the brickyard is not named and had probably gone out of use by that time although the buildings are still shown and hachures on the map, as well as two small ponds, suggest that evidence for clay extraction was evident.
MM092	Windmill (site of), Ticknall Road, Melbourne	MDR7255	Post-medieval	Monument	Approximate site of a windmill present by 1782 and gone by 1882
MM093	Castle Cottage (site of), Castle Street, Melbourne	MDR10700	Post-medieval	Monument	Mid-18th century stone cottage, rebuilt in the 19th century, and extended in the 20th century, now demolished.
MM094	Castle mills, castle street, Melbourne	MDR7316	Post-medieval	Monument	Lace mill constructed in 1857 and later used for hosiery. Demolished in 1989.
MM095	Ridge and furrow - part of Ticknall's South Field, Lodge Plantation, Calke	MDR7266	Medieval	Monument	Medieval field system consisting of three areas of probable earthwork ridge and furrow, one centred at SK 3567 2356 with a maximum length of 180m, and one centred at SK 3547 2361 with amaximum length of 92m and one centred at SK 3607 2346 with a maximum length of 100m. Mapped using good quality aerial photographs.
MM096	Calke park, Calke abbey	MDR7237	Post-medieval	Monument	A late 18th/early 19th century park with early 17th century origins, pleasure grounds with early 18th century origins and mid18th century kitchen gardens
MM097	Fold yard in Ridings Nook, Ticknall	MDR12433	Post-medieval	Monument	A ruined former livestock enclosure used for sheltering sheep and cattle stands just outside the southern edge of the limeyards at Ticknall.

MM098	Whimsey House (remains of), Margaret's Close, Ticknall	MDR7258	Post-medieval	Monument	Ruined remains of a whimsey house and pond, present by 1802, associated with the adjacent lime yard, later used as a cottage but destroyed by the army in the 1940s
MM099	Site of Ashby to Ticknall Tramway, Ticknall and Simsby	MDR7243	Post-medieval / Modern	Site	Former site of Ashby to Ticknall Tramway, Ticknall and Simsby, opened in 1803 and closed in 1913. The Ashby-Ticknall tramway was built by the Ashby Canal Company. In December 1798 Benjamin Outram was instructed to make a full survey for the construction of the tramway and in January 1799 he was asked to stake out the line. Some remains survive from the tramway.
MM100	Graveyard, castle street, Melbourne	MDR7284	Medieval / Post-medieval	Monument	Graveyard with probable medieval origins, possibly containing the site of the medieval church of St Michael, demolished in the 16th century.
MM101	Methodist church, church street, Melbourne	MDR13025	Post-medieval	Building	A Wesleyan Methodist Chapel that was built in 1870. It superseded an earlier chapel to the east. It is still in use as a place of worship. The old chapel is used as a Sunday school. It is still in use as a place of worship.
MM102	Former Methodist chapel, church street, Melbourne	MDR13026	Post-medieval	Building	The first Wesleyan Methodist Chapel at Melbourne was built in 1826. It sufficed until 1870, when a much more ornate structure was erected, at an expense of £2,000, to seat 400 persons.
MM103	Former chapel, Derby Road, Melbourne	MDR13027	Post-medieval	Building	A former chapel that appears to have been built in 1863-4 and used by Swedenborgians. It probably replaced an earlier chapel of 1825.
MM104	The Melbourne arms, Ashby Road, Melbourne	MDR13689	Post-medieval	Building	A purpose-built late 18th century inn, formerly listed, which was significantly altered and extended in the late 20th century.
MM105	Remains of windmill, Melbourne	MDR7224	Post-medieval / Modern	Monument	Remains of windmill mound. A windmill symbol is depicted on the OS map of 1887. By 1924 it was disused and is marked as an Observation Tower in 1970. A concrete observation platform has been added, but the main body of the brick-built windmill survives.
MM106	Shawcorner quarry	MDR7225	Post-medieval	Monument	Quarry worked in the late 18th century. Planted (trees?) in c.1840.
MM 107	Charnell hills, quarry	MDR7238	Post-medieval	Monument	Quarry worked in 1850.
MM108	Arrowhead, Highfields, Melbourne	MDR7281	Bronze Age	Findspot	A barbed and tanged flint arrowhead was found by the occupier of Highfield Farm, Melbourne, in January 1940.
MM109	Kendrick Mills (site of), Chapel Street, Melbourne	MDR7318	Post-medieval	Monument	The site of a silk mill that was extant by the late 19th century.

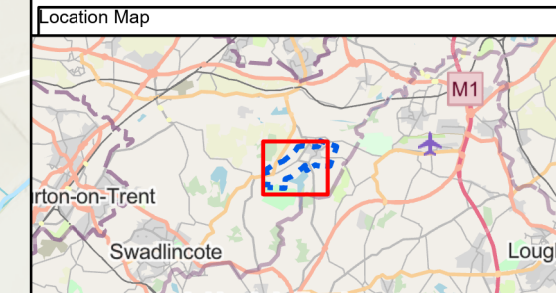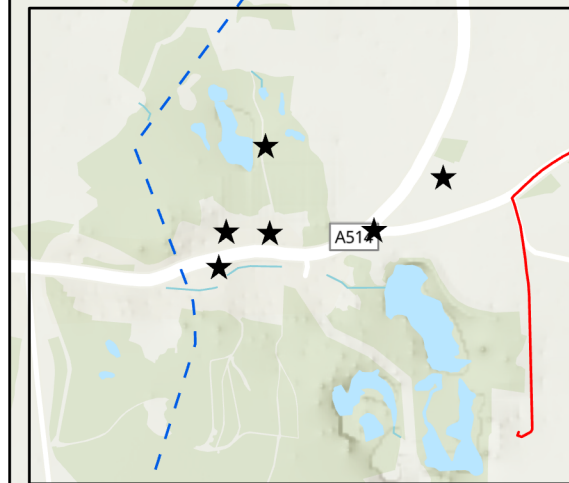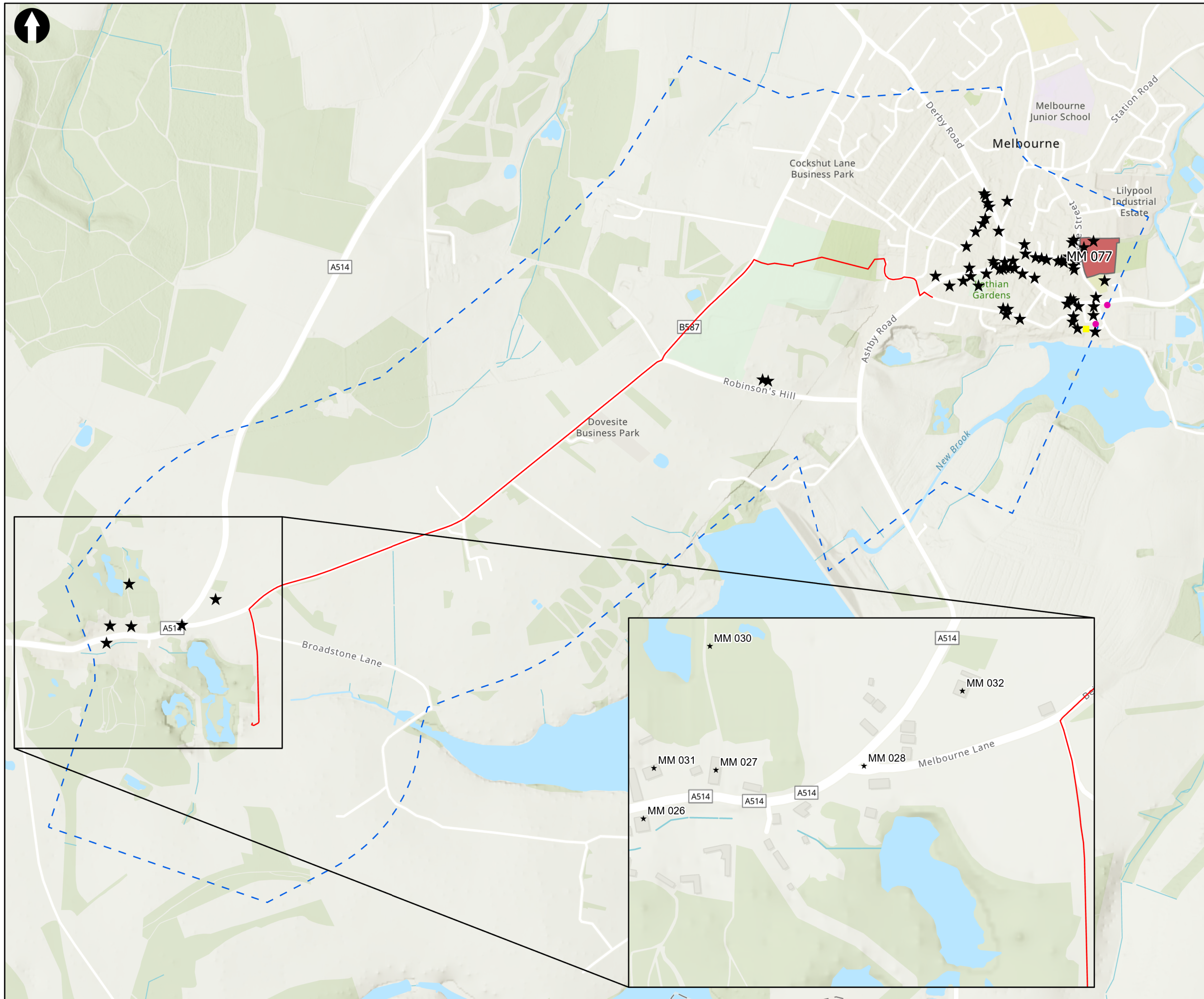|					
MM110	Victoria mill, derby road, Melbourne	MDR7319	Post-medieval	Monument	A boot and shoe factory that was extant by the late 19th century. Some of the original mill complex may still be standing.
MM111	Prehistoric quartzite implements, Melbourne	MDR9004	Prehistoric	Findspot	Various prehistoric quartzite implements found in Melbourne.
MM112	Horse-driven pug mill	MDR4446	Post-medieval	Monument	A horse driven pug mill used for grinding and tempering clay, survives in Ticknall East Brickyard. The date of the structure is uncertain, but probably predates 1881. It is possible that the mill was moved to its present site from the derelict west brickyard
MM113	West End Factory (site of), South Street, Melbourne	MDR7320	Post-medieval	Monument	The site of a boot factory that was built in 1882 and had doubled in size by 1895 but was destroyed by fire in 1947.
MM114	Malthouse, royal oak garage, Ticknall	MDR7259	Post-medieval	Monument	Malthouse. The building is in use as workshops for the Royal Oak Garage.
MM115	Parish boundary stones, White Leys, Ticknall	MDR7273	Post-medieval	Monument	Seven boundary stones north of White Leys and a further two immediately east of White Leys mark the former parish boundary between Ticknall and Melbourne
MM116	Building Survey of 11-19 High Street, Melbourne, in 1988 (DBR 22)	EDR1978		Event/ Survey	Measured survey of11-19 High Street, with description and interpretation of the evidence to produce a summary of the building's development.
MM117	Building Survey of Tithe Barn, Melbourne, in 1988 (DBR 25)	EDR1979		Event/ Survey	Measured survey of Melbourne Tithe Barn, with description and interpretation of the evidence to produce a summary of the building's development.
MM118	Building Survey of 56 Potter Street, Melbourne, in 1989 (DBR 42)	EDR1998		Event/ Survey	Measured survey of 56 Potter Street, with description and interpretation of the evidence to produce a summary of the building's development.
MM19	Building Survey of White Swan Inn, Melbourne, in 1989 (DBR 45)	EDR2001		Event/ Survey	Measured survey of White Swan Inn, with description and interpretation of the evidence to produce a summary of the building's development.

MM120	Building Survey of Castle Cottage, Melbourne, in 1989 (DBR 43)	EDR2005	Event/ Survey	Measured survey of Castle Cottage, with description and interpretation of the evidence to produce a summary of the building's development.
MM121	Building Survey of Thatched Cottages, Melbourne, in 1989 and 1990 (DBR 54)	EDR2012	Event/ Survey	Measured survey of Thatched Cottages, with description and interpretation of the evidence to produce a summary of the building's development.
MM122	Building Survey of Close House, Melbourne, in 1990 (DBR 67)	EDR2027	Event/ Survey	Measured survey of Close House, with description and interpretation of the evidence to produce a summary of the building's development.
MM123	Building Survey of 19 Potter Street, Melbourne, in 1990 (DBR 70)	EDR2029	Event/ Survey	Measured survey of 19 Potter Street, with description and interpretation of the evidence to produce a summary of the building's development.
MM124	Building Survey of 19 Church Street, Melbourne, in 1992 (DBR 127)	EDR2104	Event/ Survey	Measured survey of 19 Church Street, with description and interpretation of the evidence to produce a summary of the building's development.
MM125	Building Survey of 20 Potter Street, Melbourne, in 1993 (DBR 141)	EDR2117	Event/ Survey	Measured survey of 20 Potter Street, with description and interpretation of the evidence to produce a summary of the building's development.
MM126	Building Survey of Doctors' Clinic, Penn Lane, Melbourne, in 1994 (DBR 154)	EDR2134	Event/ Survey	Measured survey of Doctors' Clinic, with description and interpretation of the evidence to produce a summary of the building's development.
MM127	Building Survey of 51 Church Street, Melbourne, in 1994 (DBR 156)	EDR2136	Event/ Survey	Measured survey of 51 Church Street, with description and interpretation of the evidence to produce a summary of the building's development
MM128	Building Survey of 49 Blanch Croft, Melbourne, in 1994 (DBR 165)	EDR2146	Event/ Survey	Measured survey of 49 Blanch Croft, with description and interpretation of the evidence to produce a summary of the building's development.

MM129	Building Survey of 49 Church Street, Melbourne, in 1994 (DBR 174)	EDR2159	Event/ Survey	Measured survey of 49 Church Street, with description and interpretation of the evidence to produce a summary of the building's development
MM130	Building Survey of The Stone House, Melbourne, in 1998 (DBR 228)	EDR2211	Event/ Survey	Measured survey of The Stone House, with description and interpretation of the evidence to produce a summary of the building's development.
MM131	Building Survey of Castle Farm, Melbourne, in 1989 (DBR 32)	EDR1990	Event/ Survey	Measured survey of Castle Farm and barn, with description and interpretation of the evidence to produce a summary of the building's development.
MM132	Building Survey of Limekiln House, 173 Main Street, Ticknall, in 1994 (DBR 161)	EDR2140	Event/ Survey	Measured survey of Limekiln House, with description and interpretation of the evidence to produce a summary of the building's development
MM133	Archaeological watching brief, 56 Potter Street, Melbourne, by RAB Archaeology, in 2009	EDR2750	Event/ Intervention	An archaeological watching brief was carried out on groundworks for a rear extension at 56 Potter Street. The stratigraphy appeared to reflect garden soils only, and no archaeological remains were identified.
MM134	Watching brief, land at Castle Lane, Melbourne, by APS, in 2006	EDR2257	Event/ Intervention	A watching brief was carried out on April 19, 2006, during groundworks at Scallywags Nursery, Castle Lane, Melbourne. The watching brief monitored the excavation of footing trenches for an extension to the current nursery building. The development site lies directly north of the site of Melbourne Castle. The watching brief revealed a sequence of undated and recent deposits. Undated layers included a series of levelling deposts raising the original ground level. No archaeological deposits were identified.
MM135	Archaeological watching brief, Roebuck Inn, Melbourne, by ARS Ltd, in 2011	EDR3326	Event/ Intervention	Watching brief taken during ground works for the extension of the Inn and the creation of a boundary wall. The severely truncated remains of a wall were found in the south-west corner of the footings trench for the new building. No other archaeological remains of significance were revealed.
MM136	Assessment and evaluation, Potter Street, by John Samuels Archaeological Consultants, in 1994	EDR3475	Event/ Intervention	Assessment commissioned to support a planning application affecting land off Potter Street. Nothing of archaeological significance was found, by a watching brief during excavation of any foundations was recommended.

MM137	Building Survey, 51 Church Street, Melbourne, by RCHME, in 1990	EDR2465	Event/ Survey	Building survey conducted at 51 Church Street
MM138	Watching brief, at Castle Mills, Melbourne, by Anne Dodd, in 1989	EDR3406	Event/ Intervention	Prior to site development, a watching brief was carried out. Sections of castle masonry were recorded in southern trenches and the core of a massive wall was also identified in another trench. A layer of glazed roof tile was also identified. Much of what may have been considered as medieval deposits or features were largely destroyed during the construction of the mill in 1857.
MM139	Watching Brief at Dower House, Penn Lane, Melbourne, 2014	EDR4458	Intrusive Event	A watching brief was carried out over groundworks associated with the construction of two extensions to Dower House in 2014. No archaeologically significant features were considered to be present, with the exception of the footings of the outbuildings associated with the house, seen just to the northwest side of the building. On the east side, unstratified finds of building materials show that the house could have originally been roofed with ceramic tiles, which were later replaced with dark grey Welsh slate. The ceramic pavers are identical to those used to floor the room in the northeast side of the building.
MM140	Survey of Calke Abbey limeyards and brickyards by AOC Archaeology Group in 2009	EDR2809	Event/ Survey	A survey of the historic 18th-19th century limeyard and brickyard complex at Calke Abbey was commissioned by the National Trust. The survey involved the creation of a gazetteer of the features in the limeyards and brickyards following a thorough walkover survey of the area, noting the extent of the remains and their condition. The features were also plotted using a hand-held GPS which was used to produce updated maps of the site, and which were subsequently plotted onto a GIS. Each feature was also photographed, and a measured sketch was produced, where appropriate.
MM141	Geophysical survey report: st Brides farm, Stanton by bridge	EDR5072	Non-intrusive Event	This was a geophysical survey entailing resistivity an magnetometry. A number of linear features, of possible archaeological origin, were observed to the west of the area.
MM142	Archaeological survey, Calke Abbey, by The National Trust, between 1987 and 1988	EDR3714	Event/ Survey	Archaeological survey of features in the boundary of the estate and survey of the industrial features of the area.

B. Drawings

B.1   A7S13297-MMD-XX-ZZ-DR-EN-0001 – Ticknall Pipeline – Designated Heritage Assets – Pipeline Route – Drawing 1

B.2   A7S13297-MMD-XX-ZZ-DR-EN-0002 – Ticknall Pipeline – Designated Heritage Assets – Melbourne – Drawing 2

B.3   A7S13297-MMD-XX-ZZ-DR-EN-0003 – Ticknall Pipeline – Non-designated Heritage Assets – Monuments – Drawing 3

B.4   A7S13297-MMD-XX-ZZ-DR-EN-0004 – Ticknall Pipeline – Non-designated Heritage Assets – Events – Drawing 4

Location Map

Key to Symbols

Scheduled Monument
— Pipeline Route
- - - Study Area

Grade

● Grade I Listed Buldings
■ Grade II* Listed Buildings
★ Grade II Listed Buildings

Melbourne

Melbourne Junior School

Cockshut Lane Business Park

Lilypool Industrial Estate

MM 077

A514

B587

Robinson's Hill

Dovesite Business Park

Ashby Road

New Brook

Broadstone Lane

A514

MM 030

MM 032

MM 031   MM 027

MM 028

A514   A514   A514

MM 026

Melbourne Lane

| 01 | 18/01/2023 | PS | For Information | ED | ZB |
| Rev | Date | Drawn | Description | Ch'k'd | App'd |

M M
MOTT
MACDONALD

Mott MacDonald House
8-10 Sydenham Road
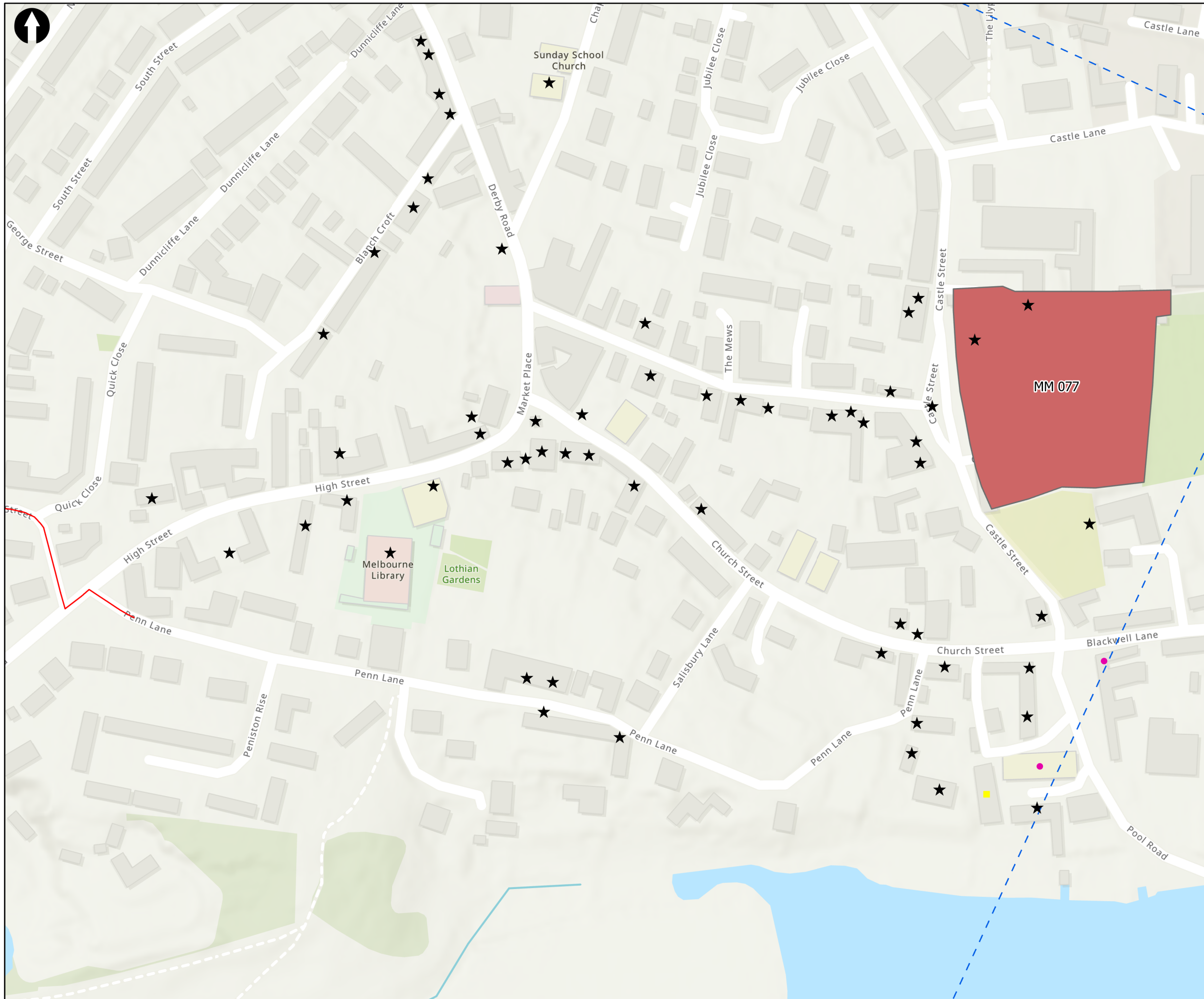Croydon, CR0 2EE
United Kingdom
T +44 (0)20 8774 2000
W mottmac.com

Client

SEVERN
TRENT
WATER

Title

Ticknall Pipeline
Designated Heritage Assets
Pipeline Route
Figure 1

Designed	P da Silva	Check	E Dennis
Drawn	P da Silva	Coordination	Z Burn
GIS Check	E Dennis	Approved	Z Burn

| Scale at A3 | Status | Rev | Security |
| 1:11,295 | INF | 01 | STD |

Drawing Number
A7S13297-MMD-XX-ZZ-DR-EN-0001

0   250   500   750   1,000   Metres

Location Map

King's Newton
Melbourne
Wilson
A514

Key to Symbols

	Scheduled Monument
	Pipeline Route
	Study Area

Grade

- ● Grade I Listed Buldings
- ■ Grade II* Listed Buildings
- ★ Grade II Listed Buildings

MM 077

South Street
George Street
Quick Close
Dunnicliffe Lane
Dunnicliffe Lane
Blanch Croft
Derby Road
Market Place
High Street
Melbourne Library
Lothian Gardens
Penn Lane
Peniston Rise
Penn Lane
Salisbury Lane
Church Street
The Mews
Castle Street
Castle Street
Castle Lane
Castle Lane
Jubilee Close
Sunday School Church
The Lily
Blackwell Lane
Pool Road
Penn Lane

01	18/01/2023	PS	For Information	ED	ZB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Client

SEVERN TRENT WATER

Title

Ticknall Pipeline
Designated Heritage Assets
Melbourne
Figure 2

Designed	P da Silva	Check	E Dennis
Drawn	P da Silva	Coordination	Z Burn
GIS Check	E Dennis	Approved	Z Burn

Scale at A3	Status	Rev	Security
1:2,036	INF	01	STD

Drawing Number
A7S13297-MMD-XX-ZZ-DR-EN-0002

Metres
0   45   90   135   180

Figure 3 — Ticknall Pipeline Non-designated Heritage Assets Monuments
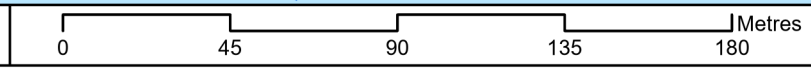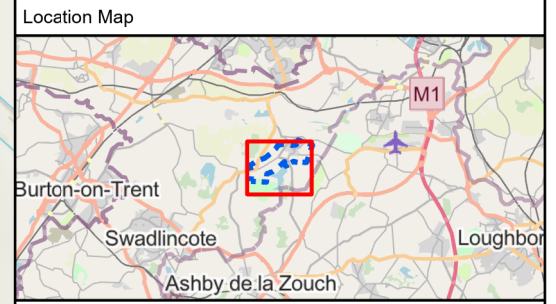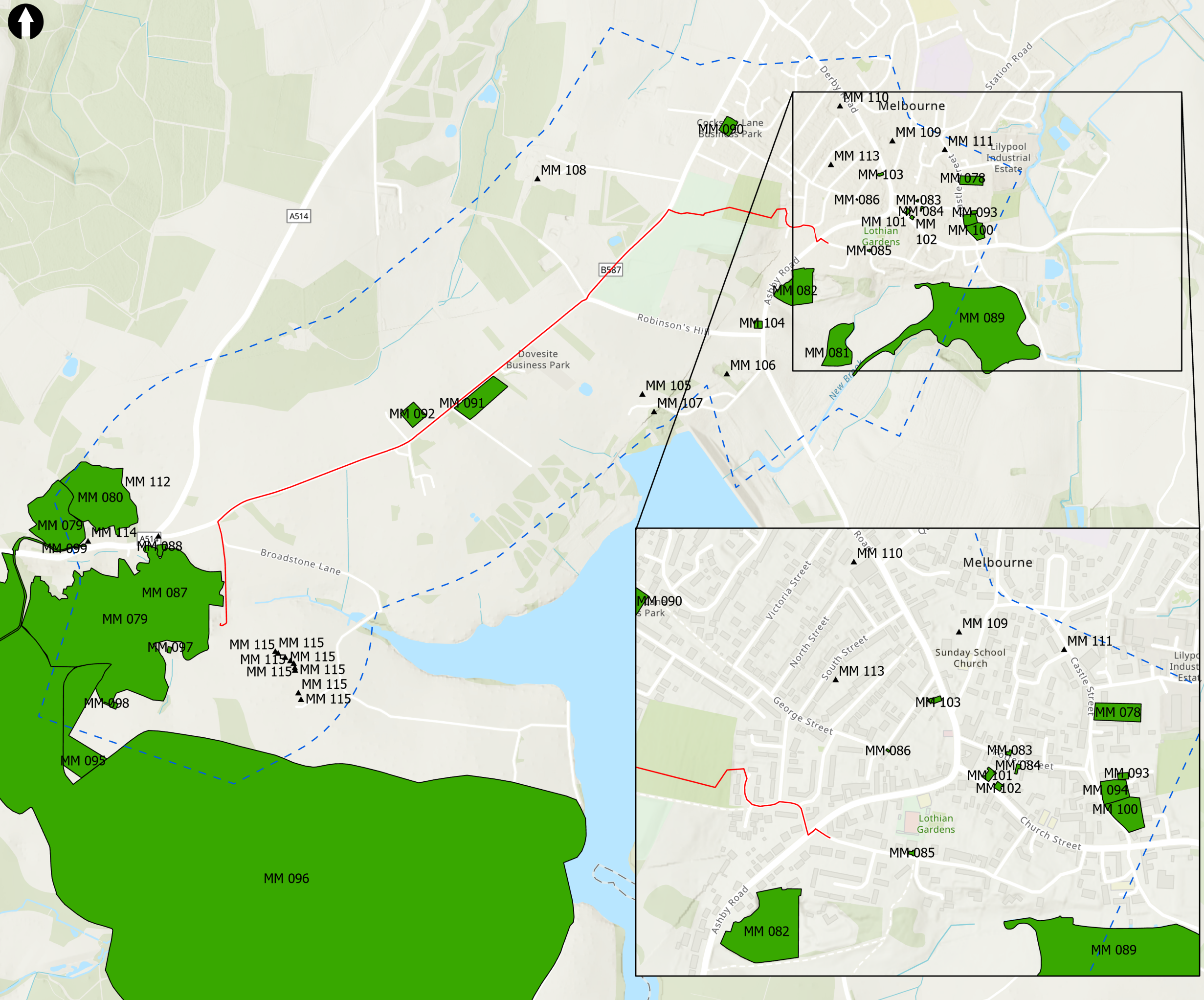
Key to Symbols
- ▲ Monuments Points
- — Pipeline Route
- ┄ Study Area
- ▮ Monuments Region

Notes

| Rev	Date	Drawn	Description	Ch'k'd	App'd
01	18/01/2023	PS	For Information	ED	ZB

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Client: SEVERN TRENT WATER

Title:
Ticknall Pipeline
Non-designated Heritage Assets
Monuments
Figure 3

Designed	P da Silva	Check	E Dennis
Drawn	P da Silva	Coordination	Z Burn
GIS Check	E Dennis	Approved	Z Burn

Scale at A3	Status	Rev	Security
1:12,711	INF	01	STD

Drawing Number
A7S13297-MMD-XX-ZZ-DR-EN-0003

Location Map
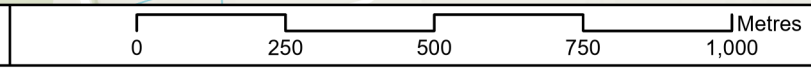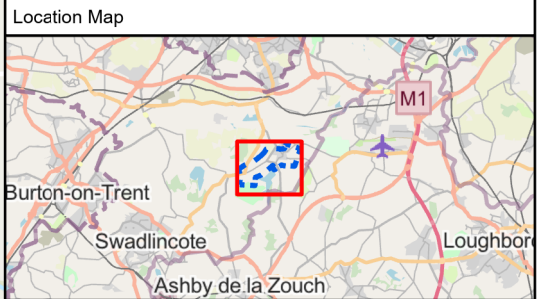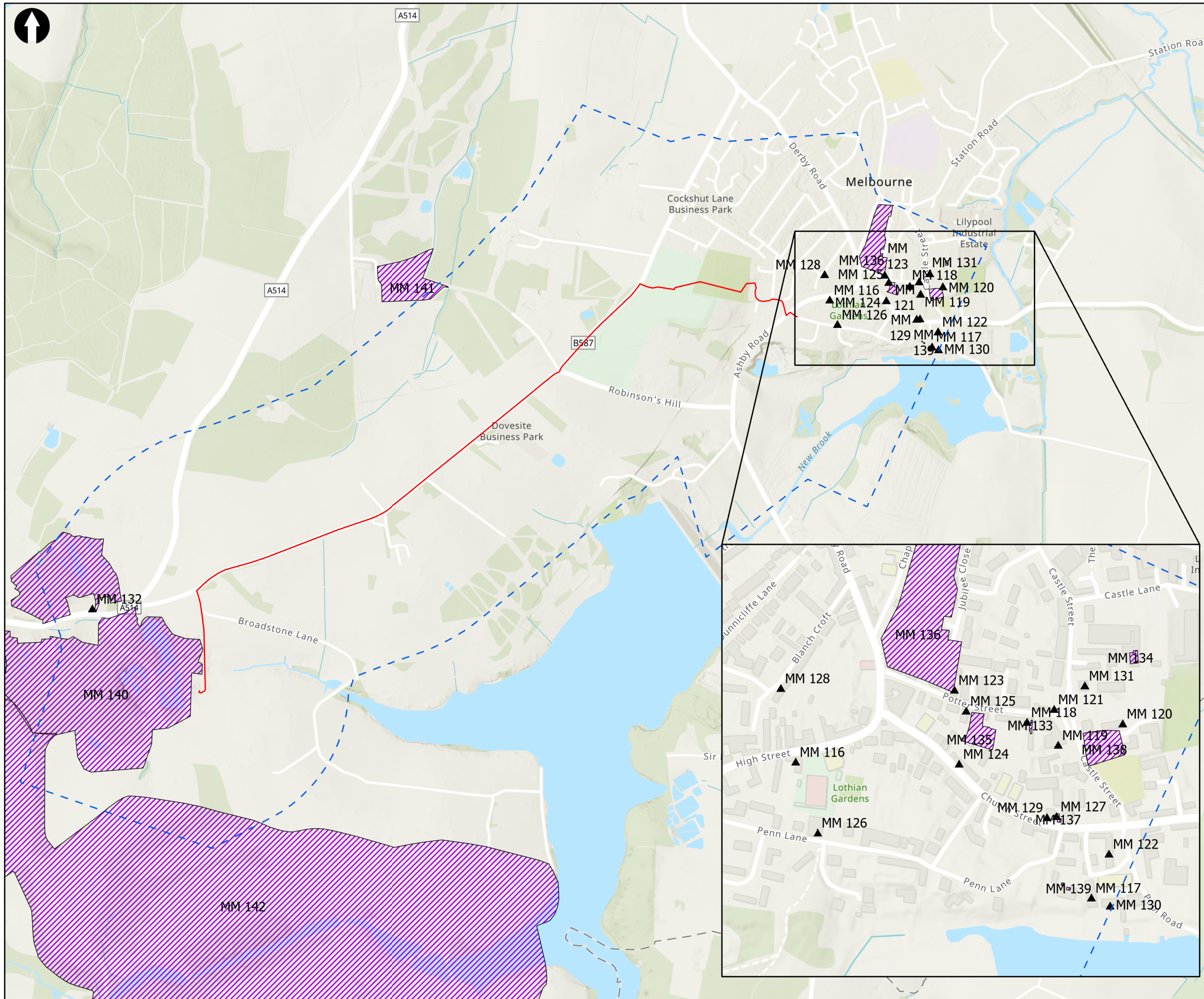
Key to Symbols

— Pipeline Route

- - - Study Area

▨ Arcaheological Events Region

▲ Archaeological Events Points selection

Map labels (main map):

A514

A514

B587

Cockshut Lane Business Park

Melbourne

Lilypool Industrial Estate

Derby Road

Station Road

Station Road

Robinson's Hill

Dovesite Business Park

Ashby Road

New Brook

Broadstone Lane

MM 141

MM 132

MM 140

MM 142

Ashby de la Zouch

Burton-on-Trent

Swadlincote

Loughboro

M1

Inset/point labels:

MM 128, MM 136, MM 123, MM, MM 131, MM 125, MM 118, MM 120, MM 116, MM 119, MM 124, MM 121, MM 126, MM 122, MM 129, MM 117, MM 130, MM 134, MM 133, MM 135, MM 138, MM 127, MM 137, MM 139

Dunnicliffe Lane, Blanch Croft, High Street, Lothian Gardens, Penn Lane, Church Street, Potter Street, Jubilee Close, Castle Street, Castle Lane, Chapel, Road, Sir

01	18/01/2023	PS	For Information	ED	ZB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Client

SEVERN TRENT WATER

Title

Ticknall Pipeline
Non-designated Heritage Assets
Events
Figure 4

Designed	P da Silva	Check	E Dennis
Drawn	P da Silva	Coordination	Z Burn
GIS Check	E Dennis	Approved	Z Burn

Scale at A3	Status	Rev	Security
1:12,860	INF	01	STD

Metres

0   250   500   750   1,000

Drawing Number

A7S13297-MMD-XX-ZZ-DR-EN-0004

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