



University Station

Heritage and Archaeological Assessment

25 October 2019

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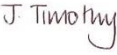



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Executive summary

Mott MacDonald have been instructed by West Midland Combined Authority (WMCA) to prepare a Heritage and Archaeological Assessment to accompany a planning application for the proposed redevelopment of the University Station, Birmingham. Following consultation with Historic England and Birmingham City Council Conservation Officer the Heritage and Archaeological Assessment will;

- build upon existing information about Metchley Fort and does not re-assess the early development of the fort and previous excavations;
- look at the development of the landscape from the 19th Century as the focus of the report, including the development of the railway, canal, university and hospital; and
- include recommendations for further heritage/archaeological works.

A Setting Assessment of the Scheduled Metchley Fort was previously undertaken by Atkins in 2017. This report provides a comprehensive historical background detailing the development of the Roman fort and assessment of the asset's setting, including the contribution of this to its significance. The report also assessed the impact upon the setting which will result from the proposed redevelopment of University Station.

Two assets have been identified within the scheme area. The first of these comprising the Scheduled Roman Forts at Metchley (MM001) which covers areas of the former fort north of the railway where the potential for surviving archaeology is considered greatest. The second asset, the non-designated Metchley Roman Fort (MM015) recorded on the Birmingham City HER, is larger in area and covers the area of the scheduled asset and the majority of the former footprint of the Roman fort.

Other periods are not well represented in the known archaeological record in the study area, and previous archaeological events recorded on the Birmingham HER have primarily focused on the area of the fort. However Bronze Age burnt mounds (MM012), which are considered significant archaeological assets, have been excavated within the area of the Fort.

It is considered that the proposed development will result in less than substantial harm to both assets located in the scheme area. Evidential value will be affected during construction with some archaeological remains removed or truncated. However the design will avoid remains where possible and allow for preservation in situ. Where remains are removed, they will be subject to archaeological recording. The method of recording will be agreed in advance with Historic England and the LPA. The work will also be subject to a scheduled monument consent application. In accordance with NPPF paragraph 194, harm to the significance of designated assets should have clear and convincing justification. In accordance with paragraph 196 any planning decision should weigh this harm against the public benefit of scheme.

It is considered however that the proposed scheme will represent an improvement to the existing character of the scheme area, enhancing the ability to understand the significance of both Roman assets. If the recommendations outlined in this report are fulfilled the potential also exists to further existing knowledge of the fort. The scheme therefore offers demonstrable heritage benefits.

It is considered that the proposed scheme will result in a change to setting of a number of built heritage assets in the scheme, particularly the grade II listed Chamberlain Tower (MM010) and the non-designated Queen Elizabeth Hospital (MM051). However, this change in the setting will

not result in harm to significance of these assets. The proposed scheme, in enhancing the visual connection between the Hospital and University sides of the railway/canal corridor, has the potential to offer heritage benefits.

A scheduled monument consent application will be submitted for the works within the footprint of the monument.

1 Introduction

1.1 Background

Mott MacDonald have been instructed by West Midland Combined Authority (WMCA) to prepare a Heritage and Archaeological Assessment to accompany a planning application for the proposed redevelopment of the University Station, Birmingham.

A Setting Assessment of the Scheduled Metchley Fort was previously undertaken by Atkins in 2017. This report provides a comprehensive historical background detailing the development of the Roman fort and assessment of the asset's setting, including the contribution of this to its significance. The report also assessed the impact upon the setting which will result from the proposed redevelopment of University Station.

Several archaeological excavations led by Alex Jones have taken place across the area of the fort, which have allowed a considerable understanding of the Fort, its development and uses.

1.2 Scheme Description

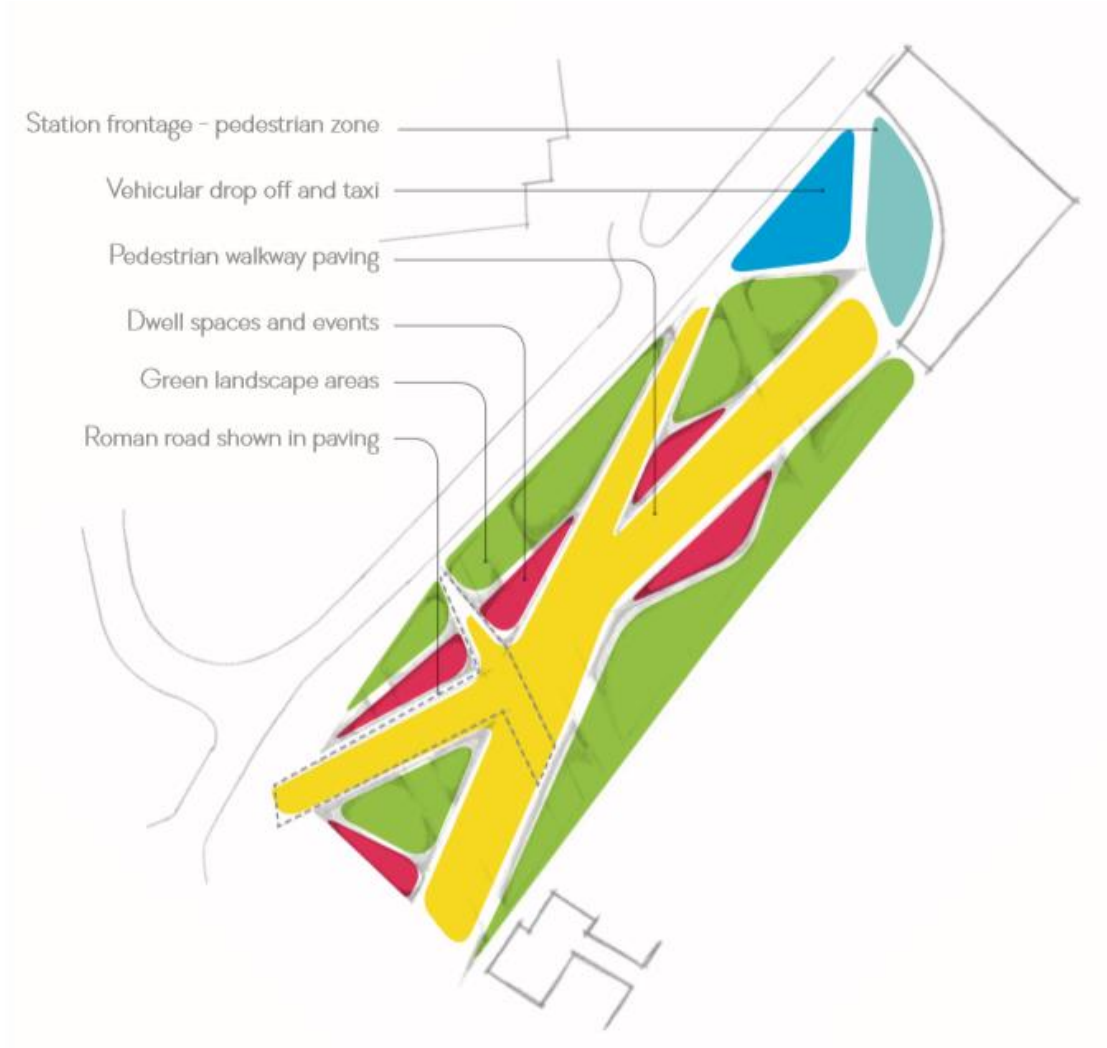
The proposed scheme comprises a new station building at University Station, a footbridge across platforms, a footbridge over the canal, and a comprehensive landscaping scheme.

Buildings are located at the north-east of the existing platforms, of three storeys and constructed of concrete with precast brick panels, brick piers and full height glazing with flat roof. A covered footbridge connects the two station buildings in the north-east at second floor.

There are two entrances into the station, from the north and south. The northern entrance is at first floor level and leads onto a forecourt south of Vincent Drive. The southern entrance leads onto a footbridge over the canal and into the Edgbaston Campus of the University of Birmingham.

The landscape scheme comprises a station frontage pedestrian zone, with passenger drop off, at the north entrance to the station. A series of pedestrian walkways and green spaces have been designed in the locations of existing the car park and tennis courts, in linear arrangements corresponding the to the form of Metchley Fort over which the proposed scheme area lies.

Figure 1: The proposed landscaping scheme with linear arrangement reflecting the Roman fort



Source: WMCA, Mott MacDonald, 2019

Figure 2: The proposed landscaping scheme with linear arrangement reflecting the Roman fort



Source: WMCA, Mott MacDonald, 2019

1.3 Scope

The historic environment is defined as: 'all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora' (National Planning Policy Framework (NPPF), 2019; Annex 2 Glossary).

Heritage assets are: 'a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions. Heritage assets include designated heritage assets and assets identified by the local planning authority (including local listing)' (NPPF, 2019; Annex 2 Glossary).

Designated heritage assets are world heritage sites, scheduled monuments, listed buildings, conservation areas, registered parks and gardens, registered battlefields, and protected wreck sites. Non-designated heritage assets can be identified by the local authority (local listings, entries on the historic environment record (HER), via research or surveys).

This report sets out the legislation, planning policy and detailed assessment methodology in the first two sections. It then includes a baseline assessment of the historic environment as it is currently understood, including a discussion of the study area, walkover survey, cartographic evidence, archaeological and historical background, archaeological remains including potential and historic buildings. This also includes an assessment of setting and significance, as well as an impact assessment and recommendation for further archaeological work.

Following consultation with Historic England and Birmingham City Council Conservation Officer the Heritage and Archaeological Assessment will;

- build upon existing information about Metchley Fort and does not re-assess the early development of the fort and previous excavations;
- look at the development of the landscape from the 19th Century as the focus of the report, including the development of the railway, canal, university and hospital and the setting of this post-medieval/modern development; and
- include recommendations for further heritage/archaeological works.

2 Methodology

This Heritage and Archaeological Assessment follows the guidance set out by the Chartered Institute for Archaeologists' (CIfA) Standards and Guidance for Historic Environment Desk-Based Assessments (2014) and Historic England Good Practice Advice Note 2: Managing Significance in Decision-Taking in the Historic Environment (2015) and Note 3: The Setting of Heritage Assets (2017).

2.1 Study Area

Both designated and non-designated assets within a study area of a 500m buffer around the proposed scheme area have been considered within this assessment.

2.2 Desk-based research

In accordance with best practice guidance, and as determined by policy requirements, this assessment identifies the baseline heritage interest of the assets within this area. The historical narrative informing the baseline has been derived from a review of various resources, including:

- a search of the Historic England National Heritage List for England (NHLE) dataset for scheduled monuments, listed buildings, and registered parks and gardens within the study area;
- a search of the Birmingham City Council Historic Environment Record;
- an examination of local, regional and national planning policies in relation to the historic environment;
- an inspection of the cartographic evidence for the land use history of the site; and
- an assessment of relevant published and unpublished historical sources.

2.3 Surveys

2.4 Walkover Survey

A site visit was undertaken on 5th August to:

- evaluate the significance of heritage assets,
- identify the setting of the assets; and
- identify any further visible heritage assets.

2.5 Assessment of Potential Impact

This assessment is based on the guidance contained in Historic Environment Good Practice Advice in Planning Note 2 (GPA2) – Managing significance in decision taking in the historic environment (Historic England, 2015). Paragraph six of the guidance outlines the steps which should be taken to establish potential impact of the scheme on the significance of heritage assets and where appropriate justify any harmful impacts and identify mitigation and enhancements. These steps are;

- Understand the significance of the affected assets;
- Understand the impact of the proposal on that significance;
- Avoid, minimise and mitigate impact in a way that meets the objectives of the NPPF;

- Look for opportunities to better reveal or enhance significance;
- Justify any harmful impacts in terms of the sustainable development objective of conserving significance and the need for change;
- Offset negative impacts on aspects of significance by enhancing others through recording, disseminating and archiving archaeological and historical interest of the important elements of the heritage assets affected.

In accordance with paragraph 189 of the NPPF and the Historic England guidance the level of detail supplied is proportionate to the level of significance of the asset and the overall effect the scheme will have.

2.6 Assumptions and Limitations

The following assumptions and limitations have been assumed for the survey and assessment:

- the assessment is reliant on available data. Designated and non-designated data is up to date as of September 2019;
- databases are limited in their ability to predict new sites and the information from the HER has been used as a starting point for further research rather than as a definitive list. Where there is an absence of data, professional judgement has been used to reach informed decisions regarding the historic environment;
- site walkovers have been carried out from publicly accessible areas. The walkover surveys were restricted to external visual inspection from accessible areas, which limited the ability to assess the effects of visual intrusion and interruption of views from within property boundaries or interiors of historic buildings; and
- 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 invasive investigation. There is the possibility that further or more complex unknown buried archaeology exists on sites which has not been assessed.

2.7 Consultation

Consultation was undertaken with Historic England and the Birmingham City Archaeologist on 14th August 2019, in which the requirements of a Heritage and Archaeological Assessment were discussed. The following key points were agreed:

- The assessment should build upon existing information about Metchley Fort and is not required to re-assess the early development of the fort and previous excavations;
- The development of the landscape from the 19th Century should be the focus of the report, including the development of the railway, canal, university and hospital;
- An indicative section demonstrating the depth of known archaeology shall be produced by Alex Jones to feed into a ground model produced by Mott Macdonald. This is to be used to aid detailed design and reduce the impact on known archaeology where possible;
- The report should include recommendations for further heritage/archaeological works.

These meetings were in addition to a series of design related meetings held with Historic England.

3 Legislation, Planning Policy & Guidance

3.1 Legislation

3.1.1 The Ancient Monuments and Archaeological Areas Act 1979

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 (NPPF 2019).

3.1.2 Planning (Listed Building and Conservation Areas) Act 1990

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

3.2 Policy

3.2.1 National Planning Policy Framework (2019)

The revised National Planning Policy Framework (NPPF 2019) considers the importance of historic environment in planning and development and sets out the government's policies regarding development which effects the historic environment. Paragraphs 189 to 202 outline these policies. The following paragraphs are relevant to this Heritage and Archaeological Assessment:

Paragraph 189: 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 information submitted should be proportionate to the assets importance and no more that is sufficient to understand the potential impact on the asset's significance.

Paragraph 192: The following should be taken into account when determining applications;

- The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- The positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- The desirability of new development making a positive contribution to local character and distinctiveness.

Paragraph 193: 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. The more important the asset, the greater the weight should be.

Paragraph 194: 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.

Paragraph 196: 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.

Paragraph 197: The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application.

3.2.2 Local Planning Policy

The Birmingham Development Plan (BDP) 2031 was adopted by Birmingham City Council in January 2017. The BDP sets the vision and strategy for the development of Birmingham between 2011 and 2031. It includes policy TP12 relating to the historic environment which states:

- Great weight will be given to the conservation of the City's heritage assets. Proposals for new development affecting a designated or non-designated heritage asset or its setting, including alterations and additions, will be determined in accordance with national policy.
- Applications for development affecting the significance of a designated or non-designated heritage asset, including proposals for removal, alterations, extensions or change of use, or on sites that potentially include heritage assets of archaeological interest, will be required to provide sufficient information to demonstrate how the proposals would contribute to the asset's conservation whilst protecting or where appropriate enhancing its significance and setting. This information will include desk-based assessments, archaeological field evaluation and historic building recording as appropriate.
- Where it grants consent for proposals involving the loss of all or part of the significance of a designated or non-designated heritage asset, the City Council will require archaeological excavation and/or historic building recording as appropriate, followed by analysis and publication of the results.
- Initiatives and opportunities to mitigate the effects of climate change by seeking the reuse of historic buildings, and where appropriate, their modification to reduce carbon emissions and secure sustainable development - without harming the significance of the heritage asset or its setting - will be supported.
- Opportunities for information gain through investigations as part of proposed development will be maximised and such information will be widely disseminated.
- Innovative design which retains the significance of the heritage asset(s) and is integrated with the historic environment will be encouraged.

Where a Conservation Area Character Appraisal or Management Plan has been prepared, it will be a material consideration in determining applications for development, and will be used to support and guide enhancement and due regard should be given to the policies it contains.

The City Council will support development that conserves the significance of non-designated heritage assets including archaeological remains and locally listed buildings.

3.3 Guidance

3.3.1 Historic England Guidance

Historic England have published a series of Good Practice Advice (GPA) of which those of most relevance to this appraisal are GPA2 Managing Significance in Decision-taking (Historic England, 2015) and GPA3 The Setting of Heritage Assets (Historic England, 2017).

GPA2 emphasises the importance of having a knowledge and understanding of the significance of heritage assets likely to be affected by the development and that the 'first step for all applicants is to understand the significance of any affected heritage asset and, if relevant, the contribution of its setting to its significance' (para 4). Early knowledge of this information is also useful to a local planning authority in pre-application engagement with an applicant and ultimately in decision making (para 7).

GPA3 provides advice on the setting of heritage assets. Part 1 of the document confirms the extent of setting, as defined in the NPPF, to be the surroundings in which a heritage asset is experienced and that elements of a setting can make positive or negative contributions to the significance of an asset and affect the ways in which it is experienced. Historic England state that setting does not have a boundary and that setting is often expressed by reference to views, comprising the visual impression of an asset obtained from a variety of viewpoints. Setting is not an asset or a designation, rather its importance is in what it contributes to the significance of an asset and its appreciation is not dependent upon public access (para 9).

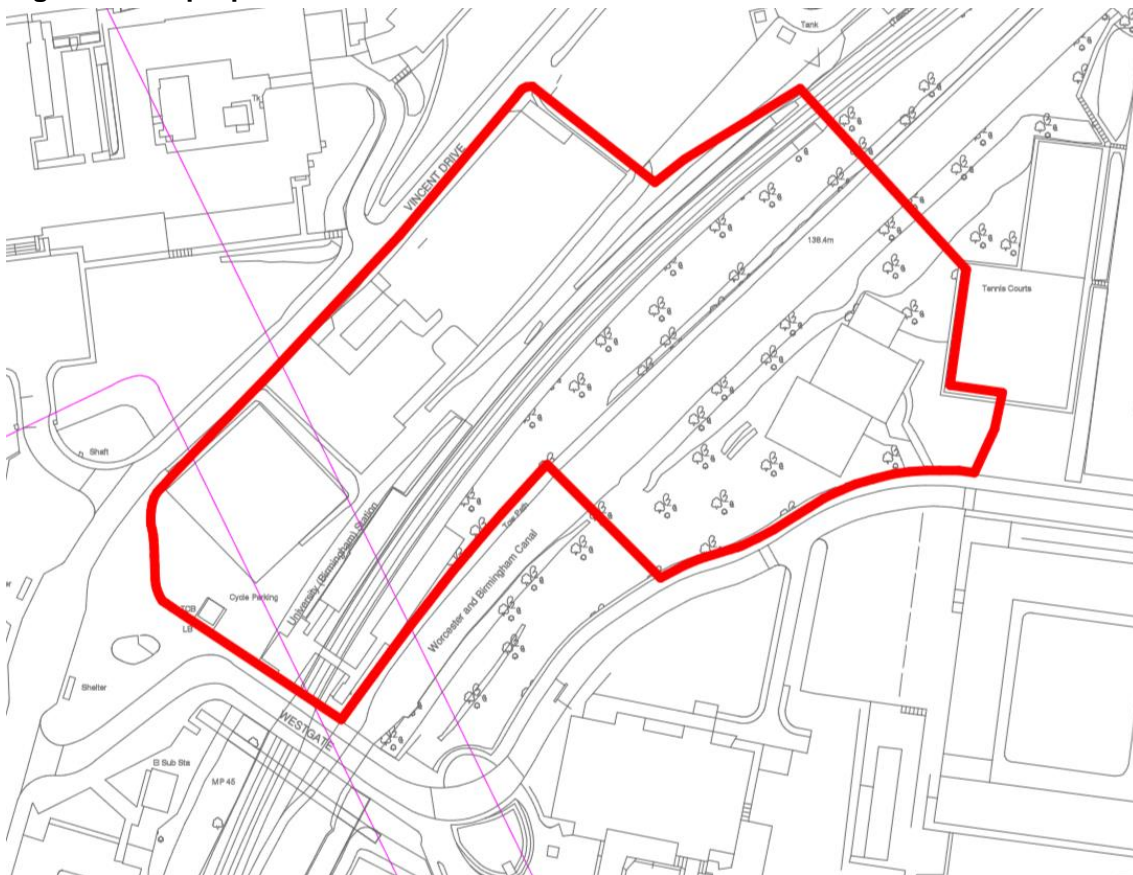
4 Baseline

4.1 Site Description

The proposed scheme area (the Site) is located c.30m south-east of the Queen Elizabeth Hospital and immediately north-east of the Westgate bridge over the Birmingham West Suburban Railway and the Worcester and Birmingham Canal. In the south of the scheme area are the buildings of the University Station which flank the railway with a footbridge between them. The full length of the station platforms is included in the scheme area (Figure 3).

The scheme area is divided in two from the south-west to north-east by the canal and railway, both of which are in a cutting to the north-west.

Figure 3: The proposed scheme area



Source: Mott MacDonald, 2019

The north-west of the site at present comprises car parks, with tennis courts located in the west. The scheme area also includes land south-east of the railway, comprising waste land north-west of the canal and a small area of land south-west of the canal where a new bridge will land. This land is partly wooded, and part of a former Aviary which belonged to the university (Figure 6).

Figure 4: The scheme area, viewed from the north-west of the railway, with platform canopy visible beyond the fence and the corner of the tennis courts visible in the extreme left of the photograph.



Source: Mott MacDonald, 2019

Figure 5: The scheme area, viewed from the south-west towards the tennis courts.



Source: Mott MacDonald, 2019

Figure 6: The scheme area viewed from the south towards the former aviary south of the canal.



Source: Mott MacDonald, 2019

4.2 Topography and Geology

British Geological Survey (BGS) England and Wales (Sheet No. 168, 1:50,000, 1995) and the BGS online geology (1:50,000) indicate the site to be underlain by Glaciofluvial Deposits (Sand and Gravel) and Glaciolacustrine Deposits (clay and silt) overlying the solid geology of the Bromsgrove Sandstone Formation. Superficial deposits of till (pebbly clay) are shown to be present immediately to the north and west of the site. Land rises gently from east to west, from 138m to 145m AOD.

Ground Investigation works were undertaken by Geotechnical Engineering Limited in May 2018. A total of nine boreholes were excavated in the north-east of the scheme area located at SP 044 837 (Ref. RC03, RC04, RC05, RC06, WS04, WS05, WS05A, WS05B and WS06) (Figure 8). The study area at the time of investigation included an area c.50m north-east of the existing Birmingham University railway station, comprising an operational car park adjacent to the station buildings and areas of vegetation behind the existing platforms

A review of these indicates that made ground, including modern building materials, was revealed from ground level down to a depth of 3.2m below ground level in this area, below which was found sandy gravelly clays corresponding to Glaciofluvial Deposits (Sand and Gravel) and Glaciolacustrine Deposits (clay and silt) recorded in the area by the BGS.

Organic remains were found in boreholes WS04, WS05A and WS05B between the depths of 0.75m and 2.35m in sandy gravelly clays. Due to the low presence and poorly preserved character of organic material the potential for paleoenvironmental remains is considered to be low. Solid geology was not reached in any boreholes, which reached a maximum depth of 15.54m.

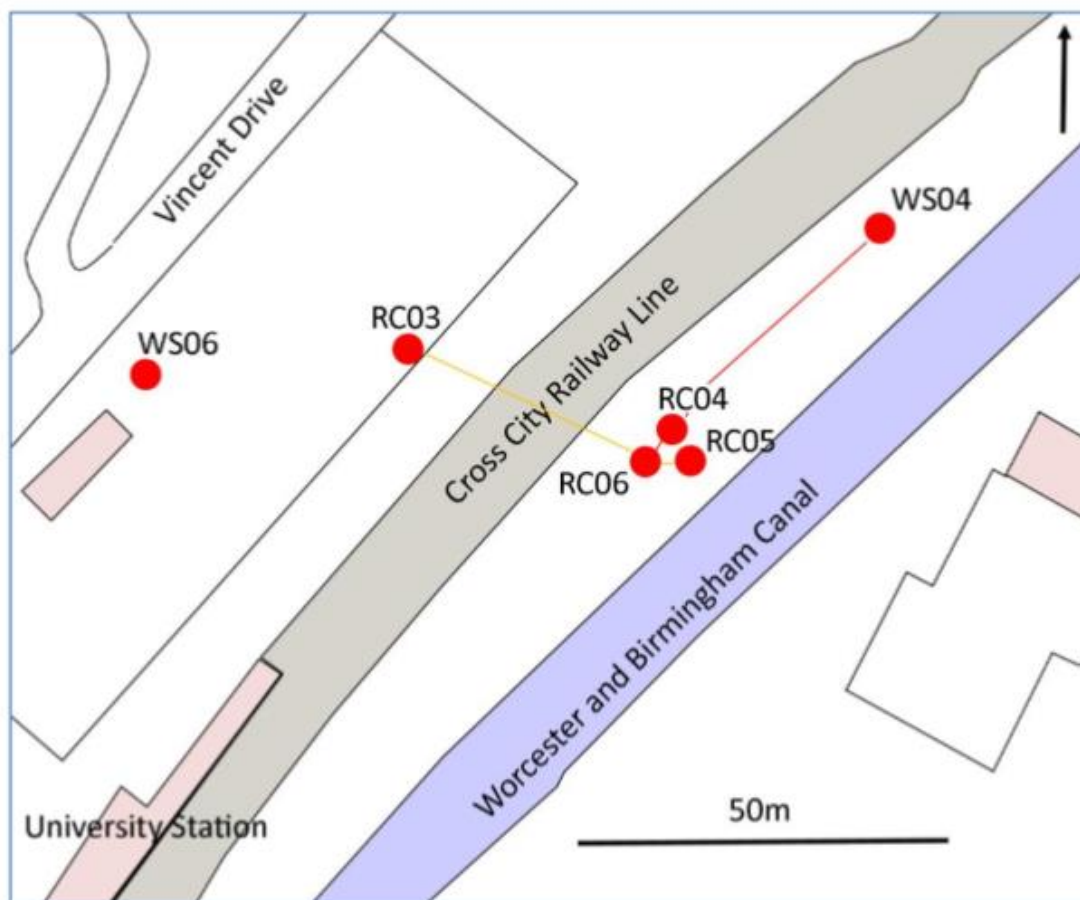
Ground Investigation works were also undertaken at the site by ARCA at the request of AJ Archaeology in June 2018 (ARCA, 2018). A total of six boreholes were excavated in the scheme area (Figure 7).

Glaciogenic sediments were identified across the six boreholes, consisting of sandy gravels. These were located at depths below 2.35m to 3.4m below ground level.

In WS06 black humic carbonaceous silt/clay were identified at 1.8m to 2.14m below ground level, containing fine grains of red ceramic building material (CBM) and a single fragment of modern glass.

Made ground truncates all the underlying deposits of the six boreholes, and primarily comprises glaciogenic deposits suggesting made ground in these areas was laid down during and after the construction of the canal, railway and perhaps the Elan Aqueduct also.

Figure 7: Location of GI boreholes excavated in June 2018.



Source: ARCA, 2018

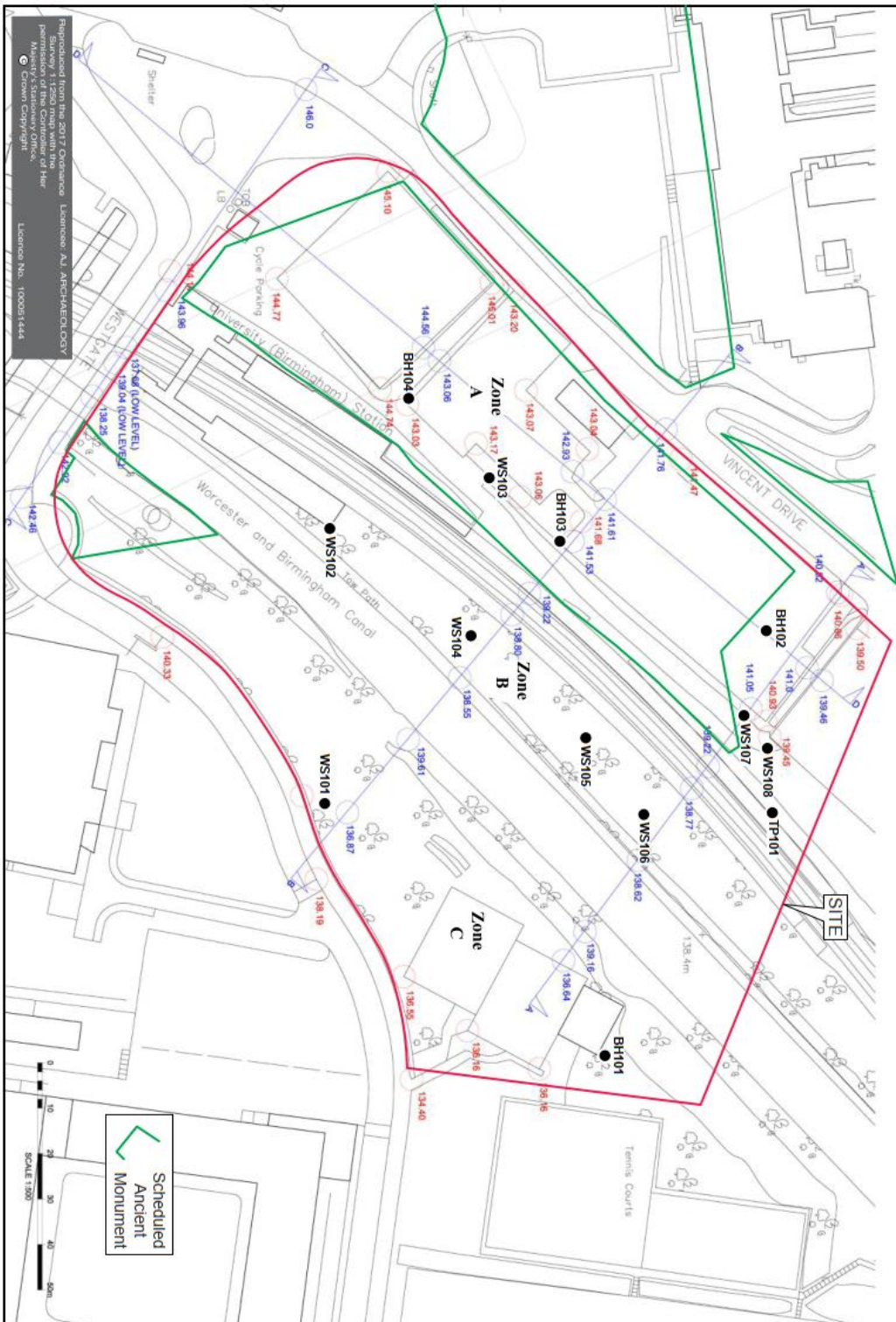
Ground investigation was also undertaken at the site by Bridgeway Consulting in 2019 (AJ Archaeology, 2019) and included 13 locations (Figure 8). In Zone A in all but one investigation (BH103) made ground was found above a black-brown mottled, organic deposit. This material was up to 0.5m in depth (except in BH103), and immediately overlay the natural subsoil. It

contained 19th century pottery, fragments of coal and clinker. It could be associated with the construction of the adjoining railway in the 1860s. This overlaid natural subsoil.

In Zone B four investigations were undertaken, largely recording made ground below the modern surface without a definitive natural subsoil found.

In Zone C two investigations recorded natural subsoil below the modern surface.

Figure 8: Location of Geotechnical Investigations undertaken by Bridgeway Consulting in 2019



Source: AJ Archaeology, 2019

4.3 Archaeological and Historical Background

This section sets out assets identified within a 500m study area on the Birmingham City HER and other available desk-based sources and sets these within the context of the historical development of the area. A full list of all heritage assets identified is presented in a gazetteer in Appendix A and illustrated in relation to the site in Appendix B. Each heritage asset has been assigned a unique MM reference number prefixed by an abbreviation of “MM” (Mott Macdonald) which is shown within the text (e.g. MM001) for ease of reading.

The historic narrative of the baseline is provided chronologically as follows:

Prehistoric Period Dates	Historic Period Dates
– Palaeolithic 500,000 - 10,001 BC	– Roman AD 43 - 409
– Mesolithic 10,000 – 4,001 BC	– Early Medieval AD 410 - 1065
– Neolithic 4,000 – 2,201 BC	– Medieval AD 1066 - 1539
– Bronze Age 2,200 – 701 BC	– Post-medieval AD 1540 - 1900
– Iron Age 700 BC – AD 42	– Modern AD 1901 - Present

4.3.1 Prehistory

A single asset located in the study area is dated to the Prehistoric period. This comprises Metchley Burnt Mounds (MM012) located c.150m west of the scheme area. The asset represents the remains of multiple mounds of burnt stones dated to the Bronze Age identified during excavation, and indicate limited activity in the area. However this type of archaeological asset is considered significant due to its age and rarity. Further evidence of prehistoric activity is limited, however is not well recorded in the area.

4.3.2 Roman

A total of two heritage assets are located in the study area, both of which are inside of the scheme area. These include the Scheduled Roman Forts at Metchley (MM001), located in the north-west of the scheme area, and the non-designated Metchley Fort (MM015). The non-designated area of the fort includes the scheduled area, but extends over what is thought to be the full extent of the forts.

An in depth assessment of the Forts at Metchley was undertaken in 2017 in the Birmingham University Station Setting Assessment - Metchley Fort (Atkins, 2017. 10-15). The following extract gives a full description of the historic and archaeological background of the asset:

“The earliest Roman military occupation of the site (Phase 1A) at Metchley may have taken the form of a construction camp. Metchley is one of a network of such temporary military encampments and forts constructed during the Roman advance northwards c. AD48. The positioning of Metchley Fort would appear to be a strategic choice based on favourable topography, offering views to the south, east and north, and proximity to both good water supplies and also the confluence of important roads leading south to Droitwich and Alcester, and north to Wall; the Alcester to Wall stretch being part of Ryknield Street. The character of the original fort is unlikely to have been primarily defensive, and would have been more likely a point of strategic control and military supply, although its architecture would have reflected the standard defensive model. Roman army commanders planned their movement and campaigns of tribal conquest by controlling the terrain, critical navigational pinch-points such as fords in rivers, and the indigenous but non-military peoples; placing strategic encampments on high ground for visibility, for example, was not necessarily a primary aim. Access to water and

controlling points of navigation were of greater significance in planning the location of encampments such as Metchley Fort.

The earliest fort (Phase 1B) is of mid Neronian date, and was defended by double ditches and an earthen rampart, while large scale excavations during the late 1960s identified that the fort interior contained timber-framed buildings, including barrack-blocks, a granary, a store building and a workshop. Contemporary to the development of the earliest fort, a narrow annexe to the western side (Phase 1C), defined by a palisade trench, may have contained an area of pottery production. A civilian settlement has been located to the west of the Phase 1 fort; it is not known whether this was mirrored by similar civilian settlement activity, and/or indeed additional external defences, to the east of the fort. There would have been opportunities to trade along the line of Rykniel Street to the east, and consequently civilian settlement may have extended on that side of the fort as well. Such military vici are common features associated with forts throughout Roman Britain, in particular aligned alongside roads approaching one or both portae principales, which in the case of Metchley would add to the potential for settlement to the east of the eastern defences.

Further annexes were added to the northern, eastern and southern sides of the Phase 1B fort during the later Neronian period (54-68AD) (Phase 2A)¹⁵. It is known that the northern and southern annexes extended the entire length of their respective sides of the Phase 1 fort, and though it has not been proven it is likely that this was the same for the eastern annex too. Within the same period, deliberate clearance of the Phase 1 fort buildings was followed by a single phase construction of temporary structures and fenced compounds associated with a military stores depot (Phase 2B). The evidence from excavations dating to this period suggests a complex sequence of activity, including ovens and hearths seemingly used for metalworking, potentially facilitating the manufacture and/or repair of tools and weapons, and the laying out of ditched pens for livestock. The layout of such temporary buildings within a fort interior is very unusual, and the remains of this period of activity at Metchley are considered of particular importance. During the Phase 2 period of occupation, the position of Metchley was important to requisition military supplies from adjoining tribes; it is these supplies which were likely stored in the annexes constructed during Phase 2A. Such features, as with the layout of temporary buildings within the fort interior, are relatively rare in a Roman military context in the West Midlands¹⁸. The Phase 2 period of activity appears to have concluded with the backfilling of the Phase 1 fort defences.

After a period of abandonment, the site was re-occupied in the early Flavian (69-96AD) period, with a smaller fort being laid out within the interior of the Phase 1 fort (Phase 3A). This second fort may have functioned as a supply depot for grain storage; evidence from excavations suggests the predominant building type from this phase was the granary, with a number possibly located within the fort. Once more, external civilian settlement contemporary with this phase of fort has been identified to the west of the western defences.

The Phase 3A fort was abandoned later in the 1st century, but small-scale civilian occupation at Metchley continued through the 2nd century. Alterations to the site during this period of occupation and use included the insertion of a livestock 'funnel' into the western Phase 3A-4A fort entrance, to facilitate the movement of livestock into the fort interior (Phase 4C). Lengths of the Phase 1 fort defences also appear to have been re-cut during the Phase 4 occupation and use of the fort, for example adjoining the south-eastern corner of the defences. The civilian abandonment of the fort probably finally took place around AD 200/22. The surviving defences of the earlier fort were utilised in the later Roman or post-Roman periods as enclosure for livestock (Phase 5), possibly continuing in such use until the piecemeal enclosure of the land in the later 18th century."

4.4 Early medieval

No known assets dated to the Early medieval period are located in the study area.

4.4.1 Medieval

No known assets dated to the Medieval period are located in the study area. During the Medieval period Metchley Park covered the scheme area, (and was a deer park of the de Birmingham family who held the manor of Birmingham for 400 years until the 16th century. The house of Metchley Park is recorded approximately 200m north-west of the scheme area in 1888 Ordnance survey Plan (Figure 9) and survived until the second half of the 20th century.

4.4.2 Post-medieval

A single designated asset dated to the Post-medieval period is located in the study area. The Grade II listed 6 Mass House (MM006), a timber framed house dated to the 17th century with a later brick façade.

In 1717 Edgbaston Hall, located c.1.5km north-east of the scheme area, came under the ownership of Sir Richard Gough. The estate was enlarged by his son Henry Gough, who succeeded him in 1727, to include the scheme area amongst over 2000 acres of land west of Birmingham. Sir Henry was married to Barbara Calthorpe in 1742, and his son the second Sir Henry would succeed him and take the name of Gough-Calthorpe. The estate was subsequently known as the Calthorpe Estate (Thompson, 2012).

The second Sir Henry's marriage settlement in 1783 gave tenants on the estate the power to grant building leases with the first granted in 1796 on land at Five Ways, between what is now Hagley and Harborne Roads, followed by several others.

An act for the construction of the Worcester and Birmingham Canal was passed in 1791. Intended to shorten journey times between Birmingham and the River Severn, construction began in 1792 and by 1795 the section between its Birmingham Terminus at Gas Street Basin and Selly Oak was completed. The route of the canal travelled west from the centre of Birmingham, through Edgbaston and the scheme area, taking a gentle southerly curve in the area of the Roman Fort through which it cut. Passing through the Calthorpe Estate, Sir Henry had included in the canal act clauses which stipulated that no warehouses, workshops or wharves were to be constructed on the canal within the estate. These clauses were to preserve the rural and scenic character of the estate (Thompson, 2012).

From 1810 George Calthorpe, who had succeeded the estate, began the development of Edgbaston as a high-class residential estate. It benefitted from proximity to Birmingham but distance from industries concentrated to the north of the city. Speculative building as elsewhere in Birmingham was not allowed and restrictive leases prevented industrial or commercial development, excepting nurseries and horticultural gardens.

The full length of the canal was completed in 1815, with traffic never meeting the expectations of the canal company. By the middle of the century, its poor performance led the canal company to develop a plan for a railway to be built alongside the canal between the Birmingham and Gloucester Railway and Birmingham. The scheme was not progressed and was instead revived in 1870 by local businessman, with an Act passed in 1871 allowing for its construction and to be operated by the Midland Railway renting the land from the canal company. The railway was completed by 1876, opened as the Birmingham West Suburban Branch Railway, and was built in cutting north of the canal through the scheme area.

Figure 9: Ordnance Survey – Staffordshire Six inch – Published 1888



Source: Ordnance Survey

The scheme area is recorded on the 1888 Ordnance Survey Plan of Staffordshire. The Worcester and Birmingham Canal and the Birmingham and West Suburban Branch Railway are shown intersecting the site. Immediately to the south-west of the site is a bridge over the canal and the railway at the location of the extant bridge adjacent to University Station on Westgate. Two cottages are located south of the bridge, named Camp Cottages after their location in the Roman fort (*Supposed ROMAN CAMP* in the 1888 plan). Metchley Park is located in the north-west of the study area, though the area is largely recorded as open fields. The south-western extent of suburban development in the Calthorpe estate is apparent in the north of Figure 9 on what is Farquhar Road.

Between 1896 and 1906 the Elan Aqueduct was constructed by the Birmingham Corporation Water Department to transport clean drinking water from the Elan Valley at Rhayader, Wales, to the City of Birmingham. Ordnance Survey mapping of 1901 records the Elan Reservoir, its route flanking the Birmingham West Suburban Railway to the north. In areas where a gradient of 1:2,300 could be maintained a method of cut and cover was employed. This entailed the excavation of a deep trench, lined with brick and tile to create a covered underground stream. The path of the aqueduct passed through the centre of Metchley Fort from the south-west to the east (Powys Digital History Project, n.d.).

4.4.3 Modern

A total of nine known assets dated to the Modern period are located in the study area, recorded on both the Birmingham City Council HER and also identified during a site visit by Mott MacDonald staff. These are largely buildings associated with the University of Birmingham's

Edgbaston Campus, the majority of which are designated. These have been discussed in detail in the Designated Assets section of this report.

By the late 19th century Edgbaston had been surrounded to the north and south by the city's suburbs and through-traffic from these suburbs reduced the tranquil character and appeal which had attracted wealthy inhabitants. From 1900 the Calthorpe estate gifted land for the construction of the University of Birmingham, beginning with the Great Hall Quadrant (MM002) and the Chamberlain Tower (MM010) (c.275m south-east of the scheme area) which were completed in 1909. The ambition of the Calthorpe estate had been to make land further west accessible for residential development (Birmingham City Council, n.d. 5-6). The 1917 Ordnance Survey Plan of Warwickshire records the newly constructed University, south of the tree lined University Road (Figure 10). The scheme area and much of the study area are recorded as undeveloped and still open farmland. Edgbaston's population had, unlike other suburbs of the city, declined and there was little market to develop this land for residential property. Suburban residential development in Edgbaston would reach Pritchatt's Road by the 1930s but would extend no further into the study area.

Figure 10: Ordnance Survey - Warwickshire 25 inch – Published 1917



Source: Ordnance Survey

During the second phase of the development at the University from the 1920s the Chancellor, Grant Robertson, had wished to extend buildings to mirror the Great Hall quadrant creating a full circular range of buildings. This plan was quashed by the Calthorpe family, who had gifted 45 acres for the extension, believing the topography favoured a tree lined processional route beginning at Pritchatt's Road in the north leading to the Harding Library gates and on to the

Chamberlain Tower and the Great Hall. The grand entrance on Pritchatt's Road with its lodges and gates at the north of the processional driveway were built in 1930. Apparent in the 1945 Ordnance Survey mapping (Figure 11) they survive today located c.300m east of the scheme area and are Grade II listed (MM005). Verner Rees' Library building was constructed to the north of the Chamberlain Tower in 1957-60 severing this processional route (Foster, 2005. 251).

By the 1927 Ordnance Survey map University Road had been extended along the trackway which bridged the canal and railway inside the Roman Fort.

Land was granted by the Calthorpe estate, and the Cadbury brothers, during the 1930s for the construction of a new teaching hospital in close proximity to the Medical School at the University of Birmingham. Construction began in 1933 and the Queen Elizabeth Hospital (MM051) was completed in 1938.

The 1945 Ordnance Survey Plan depicts the south of the hospital constructed over the north-west corner of the Roman fort. The newly constructed junction of Vincent Drive and University Road is depicted south of the hospital and in the centre of the Roman fort. Mapping also records that the scheme area, and plots of land north-west of Vincent Drive, have been levelled with visible raised embankments at their lowest areas.

Figure 11: Ordnance Survey - Warwickshire 25 inch – Published 1945



Source: Ordnance Survey

The 1958 Ordnance Survey plan depicts substantial development at the university, reflecting the beginnings of post-war development. University buildings west of the Great Hall quadrant were consolidated with more substantial faculty buildings such as the extant Mechanical Engineering

block. The fields north-west of the university, and immediately east of the scheme area remained undeveloped.

Between 1977-8 University Station was constructed immediately east of University Road, to the designs of John Broome. This involved further cutting to the north of the railway for the construction of Platform 1 and the station building, further into the area of the Roman Fort (Doherty, 2003).

A new Queen Elizabeth Hospital, Birmingham, was opened in 2010 replacing the previous hospital and Selly Oak Hospital. The buildings of the 1930s hospital however remain extant. The new hospital is located immediately south-west of its predecessor and c.250m west of the scheme area on the northern side of Vincent Drive.

4.5 Designated Assets

A single designated heritage asset is located in the scheme area, comprising the scheduled Roman Forts at Metchley (MM001).

A further six designated heritage assets are located in a 500m study area, including a single grade II* listed building and five grade II listed buildings.

4.5.1 Scheduled Monuments

4.5.1.1 Roman Forts at Metchley (MM001)

The Roman Forts at Metchley, referred to as Metchley Fort, represents the surviving extent of the buried and earthwork remains of a Roman fort built over successive phases from AD40 to AD75, although later Roman activity is recorded until AD120 (Figure 12). Standing remains include the partially reconstructed north-western corner of the fort's northern annexe defences. The remainder of the fort survives as below ground remains, which have been subject to numerous excavations. Excavations have confirmed the survival of substantial remains including structures, artefacts and environmental deposits.

A full description, as well as analysis of the historical development, and setting of the fort is included in the Birmingham University Station, Setting Assessment Metchley Fort (Atkins, 2017). An extract is included in the Historical Background of this report.

The setting of the asset comprises the University Edgbaston Campus and the Hospital and Medical School, located as it is in the corridor of land between the two intersected by the canal and railway. This setting does not contribute to the ability to understand the significance of the asset.

4.5.2 Listed Buildings

4.5.2.1 Great Hall and Quadrant Range (Grade II*) (MM002) & Chamberlain Tower (Grade II) (MM010)

The Grade II* listed Great Hall and Quadrant range of the University of Birmingham were constructed in 1900-1909 to designs of Sir Aston Webb and Ingress Bell, constructed of red brick with buff coloured terracotta dressings in the Byzantine style. Only part of the asset was completed to their original designs. The buildings are in a D plan with the Great Hall opposite the Grade II listed Chamberlain Tower acting as the focal centre of the range.

The Great Hall is fronted by an entrance hall with a large semi-circular arched mullioned window, above an ornate frieze over the loggia doorways. This is flanked by square corner turrets with ribbed domes. An octagonal drum is above the hall with a large ribbed drum and lantern.

The Great Hall's interior is barrel vaulted with two storey side vaulted galleries with rich grotesque carvings and stained glass by T. R. Spence.

Wings flank the hall with similar architectural embellishment, though of a reduced scale.

The Grade II listed Chamberlain Tower was built contemporary to the Great Hall by Sir Aston Webb and Ingress Bell as part of the same commission. The tower is in the form of a campanile with a tapering square plan, built of machined red brick surmounted with a corbelled entablature and lantern.

The setting of the Great Hall range and the Chamberlain tower comprises the University's Edgbaston Campus, with buildings to the north contributing most to this setting. Open spaces and buildings north of the assets in particular contribute to the understanding of the originally intended design of the quadrant and tower. The principle elevation of the quadrant focus' north, towards the tower and open spaces of Chancellor's Court and University Square. Views north towards Pritchatt's Road is a design intervention made by the Calthorpe Family during the 1920s, however it has defined the relationship between the asset and the rest of the university campus for nearly a century and contributes to the significance of the assets. The ability to understand this relationship between the quadrant and the view north is diminished by the Law and Harding's Buildings, constructed north of Chancellor's Court in the mid-20th century. Demolitions at what is now Green Heart (MM005) (University of Birmingham, n.d.) have begun to reopen views towards the area of the North Gate (to some extent, enhancing the ability to understand this relationship.

While the quadrant buildings are relatively introspective the Chamberlain Tower has a far greater viewshed and is designed to be experienced from a far greater distance. Naturally views south from North Gate is a key designed view and contributes to the architectural interest of the asset. Also of significance is views from the entrance to the Medical School north of Vincent Drive, where views south-east towards the Chamberlain tower and to the north towards the clock tower of the former Queen Elizabeth Hospital visually connect the Medical School and the University.

The residential streets to the north in the Edgbaston Conservation Area also contribute positively to the setting of the early University Buildings. This contemporary suburban development enhances the ability to understand the historical context in which the University was developed on the Calthorpe Family's Edgbaston Estate.

4.5.2.2 Garth House (Grade II*) (MM003)

The Grade II* listed Garth House comprises an irregular composition of buildings, with an L shape plan house with a tower at the angle and stable yard in the shorter wing of the L. The house is built in a Tudor Style, influenced by the Arts and Crafts movement, and was designed by W.H. Bidlake for Ralph Heaton in 1901.

Significance is derived from architectural interest, from an appreciation of the aesthetically pleasing Tudor revival design. Historic interest is derived from the survival of original fabric and the ability of the house to illustrate the context of the development of the area from the early 20th century. The house's setting comprises firstly the gardens in which it is located, and the secondly the low density suburban residential landscape of the Edgbaston Estate. Both of which contribute to the ability to understand the buildings development and its historic interest.

4.5.2.3 St Clear (Grade II) (MM004)

The Grade II listed St Clear is a Grade II listed two storey house, built in 1913 for W. H. Bidlake in the Arts and Crafts style. The house is constructed of red and blue brick with brick and limestone dressings, with three gables bays and central hung tile gable. Of note are red brick relieving arches and large stacks.

Architectural interest is derived from the aesthetic value of the house's Arts and Crafts design, intended to appear organic and fortuitously formed. Historic interest is also derived from the buildings ability to illustrate the development of the Edgbaston estate as an upper class residential suburb of Birmingham. The buildings setting comprises the residential streets to the north which are populated with large villas dated primarily from the late 19th century. This setting contributes to the ability to understand the significance of the asset.

4.5.2.4 The Lodges, gates, gate piers and walls to Birmingham University campus, Pritchatt's Road (Grade II) (MM005)

The Grade II listed asset comprises a pair of ceremonial drive gates, with flanking pedestrian gates and lodges and wing walls built 1930. The group was designed by H T Buckland and W Haywood in a Classical style. Gates are constructed of iron, made by the Birmingham Guilds, and piers are of ashlar in the forms of pedestals. The lodges are constructed of red brick, of a single storey, with pan tile roofs. Elaborate ashlar door cases reflect the design of the gate piers.

Their significance is primarily derived from their architectural interest and the aesthetic value of the grand northern entrance to the University. This interest has been diminished by the loss of the route towards the Great Hall Quadrant and Chamberlain Tower, through the construction of buildings between these assets the Gate, and the use of land immediately south of the gate as a car park. This has been enhanced by recent demolitions, however the relationship between the buildings is difficult to understand from the North Gate, and views towards the Chamberlain Tower appear fortuitous rather than an intentionally designed feature.

4.5.2.5 6, Mass House (Grade II) (MM006)

Mass House comprises a 17th century house, of timber framed construction with an alter brick exterior and a tiled hipped roof. The projecting central bay has a pedimented timber doorcase, and a hipped roof with dormer. Fenestration comprises inserted sashes.

The significance of the house is derived from the survival of original historic fabric which illustrate the multiple phases of development of the house. The aesthetic appreciation of the polite composition of the Georgian façade also contributes to this significance.

The setting of the house comprises the historic Pritchatt's Road on which the house is located, and the suburban development of the Edgbaston Estate. While suburban development is later in date than Mass House, it informs the historic development of the Edgbaston Estate as the house does.

4.5.2.6 Minerals and Physical Metallurgy Building, University of Birmingham (Grade II) (MM008) & Ashley and Strathcona Buildings, Birmingham University (Grade II) (MM007)

The Grade II listed Minerals and Physical Metallurgy Building was constructed in 1963-66 by Philip Dowson of Arup Associates. The buildings comprise offset square blocks, constructed of reinforced concrete, with ground storey piers in an orthogonal two way 'tartan' grid plan. Storeys are fully glazed above ground storey. The brick ground storey is recessed to create covered walkways around the edge of the buildings.

The Ashley and Strathcona Buildings comprise a series of linked university faculty buildings constructed by Sherban Cantacuzino, Howell, Killick, Partridge and Amis in 1961-64 in the Brutalist style. The blocks include a tower block, a smaller spiral plan block and a low two storey block, all of reinforced concrete.

The Brutalist style of the buildings are of architectural interest, through an appreciation of their aesthetic value and in conveying the intellectual and social philosophies of the modernist movement. Historic interest is also derived from the modernist designs of the buildings, placing them within the post-war development of the University and the national trend of Brutalist academic buildings from the late 1950s into the 1980s. Their setting comprises the Edgbaston Campus, which contributes to the ability to understand their historic development, particularly their role in the post-war development of University Institutions nationally.

4.5.2.7 The Barber Institute at Birmingham University (Grade II listed) (MM009)

The Barber Institute was constructed in 1939, by architect Robert Atkinson, in a mixed Classical and modern style. Of two storeys, ground floor is of ashlar façade with a blind brick upper storey. The building has a strong horizontal emphasis balanced by an oversized battered portal.

The significance of the building is derived from its architectural interest, derived from a visual appreciation of the striking modern design. In illustrating the architectural and intellectual ambitions of the University during the inter-war period the building is also of historic interest. The setting of the Edgbaston Campus contributes to the ability to understand this significance.

4.5.3 Conservation Areas

4.5.3.1 Edgbaston Conservation Area (MM011)

The Edgbaston Conservation Area is largely located outside of the study area, to the north and west of the University of Birmingham Edgbaston Campus. A small area is located in the north of the 500m study area, c. 270m north of the scheme area, comprising suburban residential street laid out from the second half of the 19th century. This description will cover only the conservation area located in the study area.

Streets are widely spaced with large plots populated by villas primarily designed in domestic revival styles. Boundary treatments typically comprise red brick walls, with hedges and mature trees. A single listed building is located in the conservation area within the study area, comprising the Grade II listed St Clears Described above (1210750).

The significance of the asset is derived from its architectural interest. Its planned layout, with low density suburban villas and verdant character is a result of the strict covenants placed on

developers of the Edgbaston estate by the Calthorpe family. This architectural interest and aesthetic value similarly contribute to an understanding of the historic development of the area.

The setting of the conservation area, as well as the suburbs of Birmingham which flank the Edgbaston Estate, comprises the Edgbaston Campus. The choice of site of the University contributes to an understanding of the development of the Edgbaston estate by the Calthorpe family at the turn of the 20th century, and in particular their attempts to make their land more marketable for suburban residential development.

Due to the strict controls placed upon the estate by the Calthorpe family, both the Birmingham West Suburban Railway and the Worcester and Birmingham Canal are relatively discreet within the landscape. The narrow corridor which they occupy is passive in its contribution to the character and appearance of the conservation area and its setting. They do however contribute to the ability to understand the development of Birmingham's suburbs, sharing the Calthorpe family's strict controls on their development as residential development in the conservation area had as well as illustrating the development of the suburban transport network which had allowed growth further west from the city.

4.6 Non-designated Assets

4.6.1.1 Queen Elizabeth Hospital, Birmingham (MM051)

Queen Elizabeth Hospital was constructed 1933-1935 to the designs of Thomas Arthur Lodge, and incorporates a hospital and medical school. The buildings are of reinforced concrete frame with brown brick elevations in the modern style. Of note is the central clock tower, with staggered top and square faces on south and north elevations.

The significance of the hospital is derived from its historic interest, illustrating the post-war development of hospitals in Birmingham. Architectural interest also contributes to the significance of the asset, derived from an appreciation of Lodge's modernist design. The setting of the hospital includes the Edgbaston Campus of the University, with a clear visual unity between the two buildings groups apparent in the relationship between their towers. The proximity to the university is directly responsible for the choice of location of the hospital and this setting enhances the ability to understand the historic context of its development and contributes to its significance.

Figure 13: Queen Elizabeth Hospital viewed from the south, immediately north-west of the scheme area.



Source: Mott MacDonald, 2019

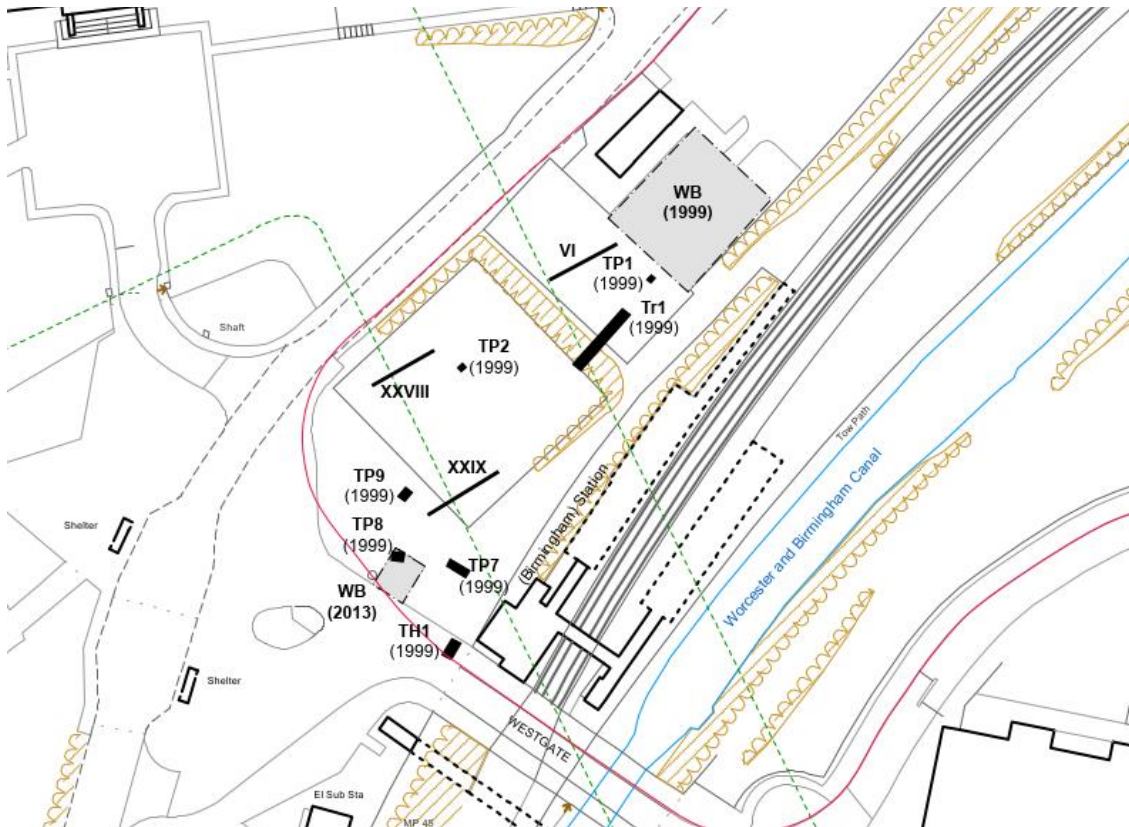
4.7 Previous Works

A total of three archaeological events in the scheme area are recorded in the Birmingham City HER (Appendix A & B), comprising:

- Metchley test-pitting 2000, Area 3 (MM018). This record relates to test pitting in the area of the Roman Fort in 2000. This is an unpublished document;
- Metchley Area 7 excavation (MM033) undertaken from 1999-2001 and in 2002 in the eastern and southern annexes of the fort. The results of this are published in *Jones A. 2005. Roman Birmingham 2. Excavations at Metchley Roman forts 1999-2001 and 2002. The eastern and southern annexes and other investigations*; and
- Metchley evaluation 1999 - tennis courts and Medical School lawn (MM049). The excavations in 1999 identified the defences of the earliest phase of fort in the tennis courts, and the third phase defences in the Medieval School lawns. The results of this are published in *Jones A. 1999. University of Birmingham Metchley Roman forts. Further archaeological evaluations 1999*.

Test pits and a trench were excavated in the area of the car park in 1999 (TP1, TP2 & Trench 1, Figure 14). TP1 recorded sandy gravels above natural subsoil at 1.15m, TP2 recorded clays to 0.6m but was not excavated further. In Trench 1 *the natural subsoil was recorded at a depth of 1.60m below the modern surface. This trench identified an eastern ditch and rampart of the Phase 1 fort at their uppermost horizons* (AJ Archaeology, 2019).

Figure 14: Test pits and a trenches excavated in 1999 & 2013



Source: AJ Archaeology, 2019

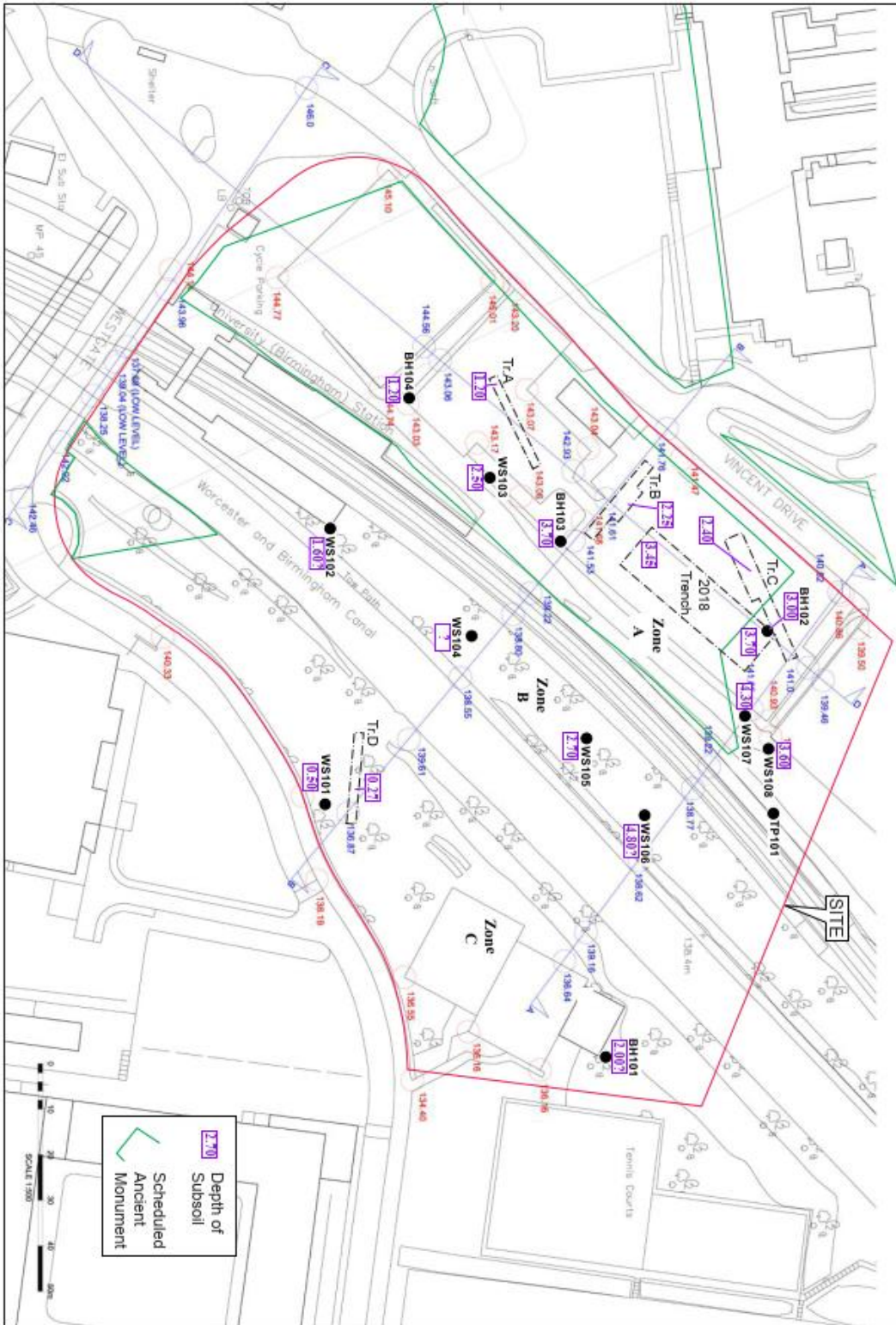
Further excavations were undertaken in the form of small areas of targeted trenching between 2017 and 2018 to inform the proposed scheme. These and previous works have been synthesised by AJ Archaeology (2019) and their conclusions are as follows:

Outside the area of the existing station premises, the areas proposed for development have not previously been disturbed by construction with the exception of the former Animal House Sub-Station in Zone A (Figure 14). It is unlikely that the aviary in Zone C will have deep intrusive foundations. Indeed, in many places the archaeological deposits will have been sealed and protected from recent disturbance by deep modern dumped deposits.

The new station has been located to the east of the eastern Phase 1 fort defences, in order to minimise the impact on below-ground deposits and the setting of the Scheduled Monument. Trenching in parts of Zone A, and in Zone C has identified Roman or possibly Roman features outside the fort perimeter. The line of a historic stream course which may contain waterlogged deposits, including environmental remains has been plotted to the east of the fort, running on a north-south alignment (Jones 2019). It is unlikely that the archaeological deposits in these areas merit preservation in situ.

Importantly, from previous archaeological investigations and GI works undertaken in the boundary of the scheme area, it is apparent that the depths of sub-soil where there exists the potential for archaeology below made ground increases towards the north-east end of the site. This depth varies from 1.2m in the west to below 4.8m in the north-east (Figure 15).

Figure 15: Known depths of sub-soil below made ground, based on previous investigations.



Source: AJ Archaeology, 2019

5 Archaeological Potential

Archaeological remains include known assets of high significance that are defined as designated assets recorded in the National Heritage List for England and respective Local Authority records, and non-designated assets recorded on the Birmingham HER and local lists. There remains the potential for unknown archaeological assets of high value.

5.1 Prehistoric

A single asset has been identified from the Birmingham HER within the study area. This comprises Metchley Burnt Mounds (MM012) located c.150m west of the scheme area. Ground investigation within the scheme area has identified glacial deposits with organic remains found in a limited number of samples. These have the potential to contain geoarchaeological deposits.

Given the limited nature of known prehistoric remains, and the past impacts on the site resulting from the construction of the canal, railway and aqueduct, as well as modern urban development since, the potential for remains dated to the Prehistoric period is assessed as **Low**. Any remains from this period are likely to be of **high value**.

5.2 Roman

The scheme area is located on the site of the Scheduled Roman Forts at Metchley (MM001) and the wider area of the non-designated Metchley Roman Fort (MM015). The extent of the remains are generally well understood and extensive previous investigations have been undertaken at the forts. The full extent of surviving archaeological remains associated with the forts within the scheme area is variable given previous impacts following the construction of the canal, railway, aqueduct and other modern development in the scheme area. Previous archaeological excavations in the scheme area, outlined on the Previous Works section of this report, will have also impacted upon the potential for surviving archaeological remains. The depths of deposits in which archaeological remains may survive also varies across the site, between 1.2m in the west and up to 4.8m in the north-east

Despite previous impacts in the scheme area the potential for remains dated to the Roman period is assessed as **High**. Any remains from this period are likely to be of **high value**

5.3 Early medieval

Early medieval evidence is relatively unknown in the study area. There are no assets recorded on the Birmingham HER dated to the period.

The potential for remains dated to the early medieval period is assessed as **Low**. Any remains from this period are likely to be of **high value**

5.4 Medieval

The scheme area is known to have been located in Metchley Park during the Medieval period and was a deer park belonging to the de Birmingham Family. It is not considered that remains associated with the scheme areas use as a deer park will be represented in the archaeological record.

There are no assets recorded on the Birmingham HER dated to the period.

The potential for remains dated to the medieval period is assessed as **Low**. Any remains from this period are likely to be of **low value**

5.5 Post-medieval

Given the previous impacts on the site from the construction of the canal and railway, it is considered that there is potential for associated archaeological remains to survive in the scheme area.

The potential for remains dated to the post-medieval period is **Medium**. Any remains from this period are likely to be of **low value**

5.6 Modern

The scheme area has been successively developed over multiple phases during the modern period, and modern remains have been identified in ground investigation in the scheme area.

The potential for remains dated to the modern period is **High**. Any remains from this period are likely to be of **low value**

6 Assessment of Impact

The design of the scheme has accounted for the significant change in depths of strata below made ground which have the potential to contain surviving archaeological remains. The station buildings have been located in the east, beyond the eastern defences of the fort and in an area where potential archaeological deposits are at their greatest depth. The landscaping scheme as the least intrusive element of the scheme will be located in areas where archaeological deposits are at their shallowest, at below 1.2m in depth. A model of indicative depths of archaeology will be produced using data provided by Alex Jones to inform the detailed design. This will aim to minimise the physical impacts upon the fort and the potential harm resulting upon the significance of the assets from foundations and other excavations.

The design of the landscaping scheme reflects the linear arrangement of known remains of the fort, alike similar reconstructed raised banks reflecting the form of the landscape prior to development from the mid-19th century efforts adjacent to the hospital. This has the potential to enhance the ability to understand the asset's significance and enabling engagement with the fort's heritage. These raised banks also allow safety barriers to be concealed. This avoids external barriers which would detract from the overall sympathetic design.

Any impacts upon the remains of the Roman fort which are determined to be unavoidable will be mitigated by targeted archaeological investigation and preservation of the archaeological resource by record.

The proposed scheme will be subject to Scheduled Monument Consent(s), which will determine both the requirement for targeted intrusive archaeological works,.

The construction of a new bridge, connecting the University and Hospital sides of the canal and railway, is considered to enhance the ability to understand the relationship between the two sites. Equally the development of a forecourt and landscaping scheme to the west of the station is considered to focus views from the hospital site towards the university, further enhancing this visual relationship. The scheme therefore has the potential to offer heritage benefits for built heritage assets.

6.1 Impact on built heritage

The proposed development is located between the University of Birmingham's Edgbaston Campus and the non-designated Queen Elizabeth Hospital. It is considered that the proposed development will result in a change within the setting of The Grade II listed Chamberlain Tower in particular and the Hospital. This will however not result in a change in the ability to understand the significance of the assets, or their relationship with each other, with the visual connection between the two remaining strongly tangible and potentially enhanced by the scheme.

Due to the existing impacts from taller building constructed both within and in close proximity to the University Campus, as well as the three storey height of the station, it is not considered that the new buildings will be a dominant addition to the skyline. The low density of the proposed development, with open space in the form of a forecourt and landscaping scheme to the west of the station buildings, is considered not to result in change to the existing grain of development in the area.

6.2 Impact on archaeology

Due to the destructive nature of ground works associated with construction there is a potential risk of disturbing archaeological remains that may survive within the boundary of the site. At present it is unclear the exact level of disturbance to below ground archaeological remains, particularly those associated with the Roman forts, following the construction of the canal, railway, aqueduct and other modern development in the scheme area, however they are known to be extensive.

As well as disturbance to the below ground remains of the fort, development in the study area from the mid-19th century has resulted in loss of the historic setting of the fort which contributes to its significance. While further changes to this setting will take place, these will not result in a change to the ability to understand its significance.

As detailed in the Previous Works section of this report, extensive archaeological works have been undertaken in the Roman fort within the proposed scheme area. The destructive nature of these works has also resulted in some loss of archaeological remains.

The proposed scheme will aim to minimise depth of intrusion into the assets and avoid physical effect which may result in harm to or loss of the assets' significance.

Despite the high potential for remains dated to the Roman period, and given the small proportion of the footprint of the fort to be affected by the scheme (Figures 4 and 12), it is considered that the proposed development will result in less than substantial harm to the significance of both designated Roman Forts at Metchley (MM001) and the non-designated Metchley Roman Fort (MM015). Any harm resulting from the proposed scheme will be sought to be mitigated by targeted archaeological investigation and preservation by record.

The landscaping scheme and forecourt will be less intrusive than works undertaken for the construction of the station buildings. Their location has been chosen where archaeology has been located at the shallowest depths, and with the highest potential. These elements of the works will be designed to avoid the depths of known archaeology to the greatest extent possible, which will be outlined prior to seeking Scheduled Monument consent for the proposed scheme. It is also considered that the design of landscaping offers the potential to enhance the ability to understand the significance of the fort as outlined above.

7 Recommendations

Mitigation by design should be employed, including excavation and foundation design, informed by archaeological work undertaken to date. This should enable known archaeology to be avoided and remains be preserved in situ.

During construction, in the areas where the potential to impact archaeology is low, mainly around the proposed station building, where site strip is undertaken this should be done under archaeological supervision. This will allow finds or remains to be recorded.

Where there is the potential for archaeology to be disturbed, around the current tennis court area, for landscaping works, targeted excavation should be undertaken to establish what remains are present. Where there is the opportunity to preserve in situ through amendments to design, or if this is not possible preservation by record may be more appropriate.

A geophysics as survey is not recommended as the modern upper surfaces do not allow for sufficient penetration of the magnetic signals to produce a clear result.

A scheduled monument consent application will be submitted. This will include the detailed design of the station, detailing the archaeological mitigation which will be undertaken before and during construction. It will also set out how the remains and significance of the monument have informed the detailed design of the station and its ancillary landscaping.

8 Conclusions

This report has outlined the cultural heritage baseline within the study area, to understand the key archaeological and built heritage constraints in relation to the proposed redevelopment of University Station.

Two assets have been identified within the scheme area. The first of these comprising the Scheduled Roman Forts at Metchley (MM001) which covers areas of the former fort north of the railway where the potential for surviving archaeology is considered greatest. The second asset, the non-designated Metchley Roman Fort (MM015) recorded on the Birmingham City HER, is larger in area and covers the area of the scheduled asset and the majority of the former footprint of the Roman fort.

It is considered that the proposed development will result in less than substantial harm to both assets located in the scheme area. Evidential value will be affected during construction with some archaeological remains removed or truncated. However the design will be as such to avoid remains where possible and allow for preservation in situ. Where remains are removed they will be subject to archaeological recording. The method of recording will be agreed in advance with Historic England and the LPA. The work will also be subject to a scheduled monument consent application. In accordance with NPPF paragraph 194, harm to the significance of designated assets should have clear and convincing justification. In accordance with paragraph 196 any planning decision should weigh this harm against the public benefit of scheme.

It is considered however that the proposed scheme will represent an improvement to the existing character of the scheme area, enhancing the ability to understand the significance of both Roman assets. If the recommendations outlined in this report are fulfilled the potential also exists to further existing knowledge of the fort. The scheme therefore offers demonstrable heritage benefits.

A scheduled monument consent application will be submitted for the works within the footprint of the monument. To inform the scheduled monument consent application a ground model of indicative depths of known archaeology from the existing station in the south west to the site of the new station in the north east of the scheme area will be produced and shared with Historic England at the earliest opportunity.

Other periods are not well represented in the known archaeological record in the study area, and previous archaeological events recorded on the Birmingham HER have primarily focused on the area of the fort.

It is considered that the proposed scheme will result in a change to setting of a number of built heritage assets in the scheme, particularly the grade II listed Chamberlain Tower (MM010) and the non-designated Queen Elizabeth Hospital (MM051). However this change in the setting will not result in harm to significance of these assets. The proposed scheme, in enhancing the visual connection between the Hospital and University sides of the railway/canal corridor, has the potential to offer heritage benefits.

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A. Appendix 1 Gazetteer

Table 1: Known Heritage Assets

Asset ID	Reference no.	Designation	Asset Type	Description	Period
MM001	DBM1	Scheduled Monument	Fort	Roman Forts at Metchley	Roman
MM002	1076133	Grade II* Listed Building	University Building	Great Hall & Quadrant Range of Birmingham University	Modern
MM003	1075616	Grade II* Listed Building	House	47 (Garth House)	Modern
MM004	1210750	Grade II Listed Building	House	79 (St. Clear)	Modern
MM005	1402289	Grade II Listed Building	Gates	The Lodges, gates, piers and walls, University of Birmingham Campus	Modern
MM006	1291210	Grade II Listed Building	House	6 (Masshouse)	Post-Medieval
MM007	1234299	Grade II Listed Building	University Building	Ashley and Strathcona buildings at Birmingham University	Modern
MM008	1276183	Grade II Listed Building	University Building	Minerals and Physical Metallurgy Building at Birmingham University	Modern
MM009	1216784	Grade II Listed Building	University Building	Barber Institute	Modern
MM010	1210306	Grade II Listed Building	University Building	Chamberlain Tower	Modern
MM011	DBM110	Conservation Area	Area	Edgbaston Conservation Area	Post-Medieval-Modern
MM012	1682	Non-designated Monument		Metchley Burnt Mounds	Prehistory

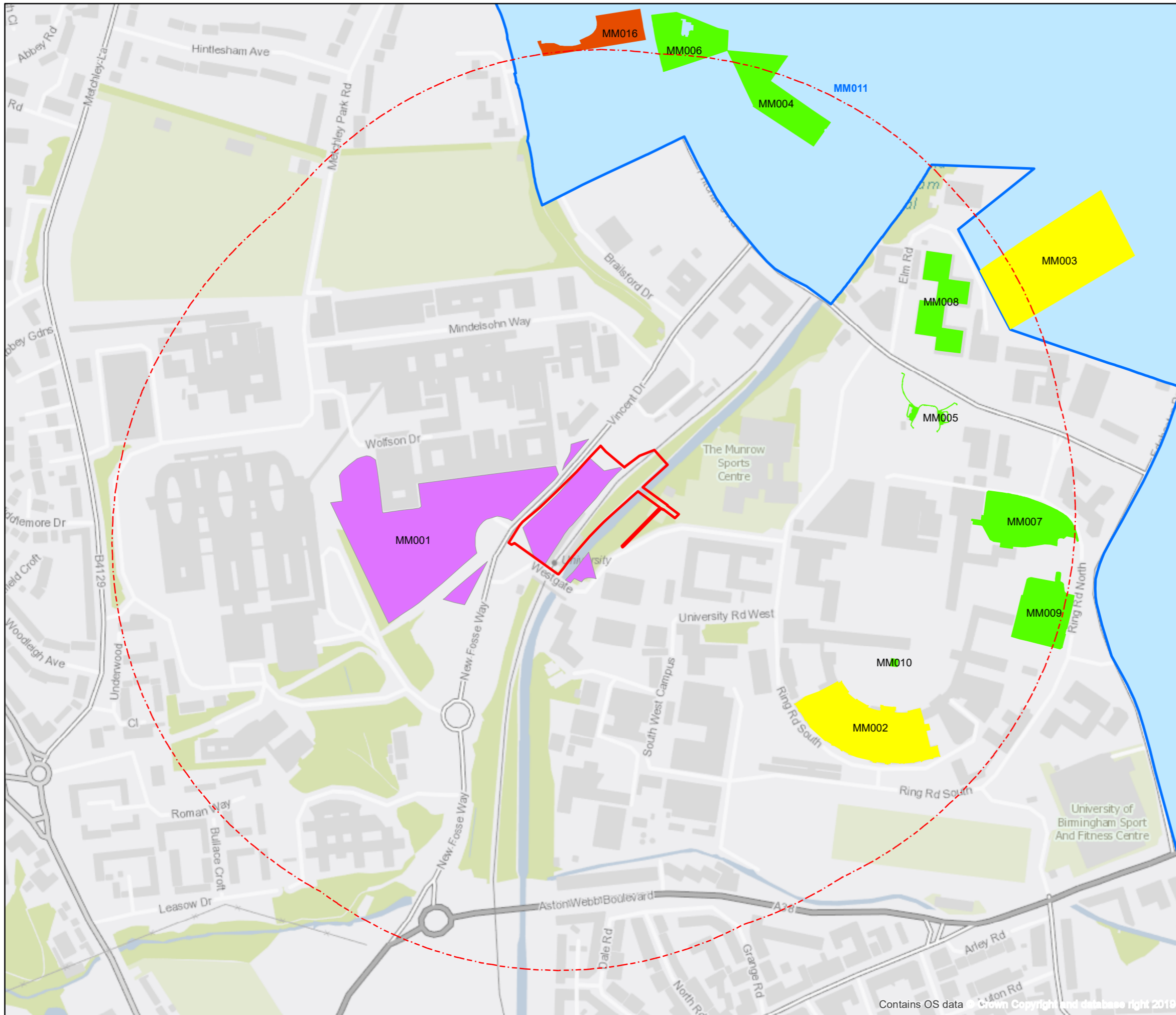
Asset ID	Reference no.	Designation	Asset Type	Description	Period
MM013	05611	Non-designated Monument		Vincent Drive Excavations	
MM014	20726	Non-designated Monument		Selly Okay alluvium, earthworks, canals and battery works	
MM015		Non-designated Monument	Roman Fort	Metchley Roman Fort	Roman
MM016		Locally Listed Building	House	306 Pritchatt's Road	
MM017	EBM662		Event	Metchley Area 8 excavation	
MM018	EBM576		Event	Metchley test-pitting 2000, Area 3	
MM019	EBM579		Event	Metchley Vicus excavation Area 9 1999-2001	
MM020	EBM129		Event	Metchley Webster excavations 1954	
MM021	EBM416		Event	Health Services Research Centre, Metchley, Birmingham	
MM022	EBM571		Event	Metchley Area 18 excavation (Vincent House)	
MM023	EBM574		Event	Metchley salvage recording 2004 Area 12A	
MM024	EBM129		Event	Metchley Webster excavations 1954	
MM025	EBM577		Event	Metchley Preatentura-"laundry site" Area 12, 2003	
MM026	EBM621		Event	Selly Oak evaluation	
MM027	EBM668		Event	Metchley north annexe excavation	
MM028	EBM572		Event	Metchley excavations 2004. Areas 13 and 14	
MM029	EBM567		Event	Metchley burnt mounds further investigation	
MM030	EBM575		Event	Metchley salvage recording 2005-	

Asset ID	Reference no.	Designation	Asset Type	Description	Period
				haul road to west of fort. Areas 19A and 19B	
MM031	EBM666		Event	Metchley excavation 1968-69	
MM032	EBM417		Event	Boiler House Drive Excavation	
MM033	EBM406		Event	Metchley Area 7 excavation	
MM034	EBM575		Event	Metchley salvage recording 2005- haul road to west of fort. Areas 19A and 19B	
MM035	EBM628		Event	Metchley evaluation 1999- tennis courts and Medical School lawn	
MM036	EBM10		Event	Vincent Drive Excavation	
MM037	EBM664		Event	Metchley Area 2 excavation 1967	
MM038	EBM405		Event	Selly Oak New Road watching brief	
MM039	EBM667		Event	Metchley Garden Site excavation 1969	
MM040	EBM581		Event	Metchley Westgate excavation 2010	
MM041	EBM113		Event	Metchley burnt mounds evaluation	
MM042	EBM643		Event	Metchley cycle shelter watching brief	
MM043	EBM578		Event	Metchley excavations 2004 Areas 15-16	
MM044	EBM665		Event	Metchley Area B2	
MM045	EBM590		Event	SE corner of Medical School watching brief 2009	
MM046	EBM570		Event	Formulation Engineering Watching Brief	

Asset ID	Reference no.	Designation	Asset Type	Description	Period
MM047	EBM663		Event	Metchley Area 6 excavation	
MM048	EBM420		Event	Metchley Area 20 excavation	
MM049	EBM628		Event	Metchley evaluation 1999- tennis courts and Medical School lawn	
MM050	EBM657		Event	University Road West watching brief 2002	
MM051		Non-designated building	Hospital	Queen Elizabeth Hospital, Birmingham	Modern

Source: Birmingham City HER & Mott MacDonald, 2019

B. Known Heritage Assets



Legend

- Red Line Boundary
- 500m Buffer
- Listed Buildings**
- Grade II
- Grade II*
- Locally Listed Buildings
- Scheduled Monument
- Conservation Area

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Known Heritage Assets

**University Station, Birmingham
 Map 1 of 2**

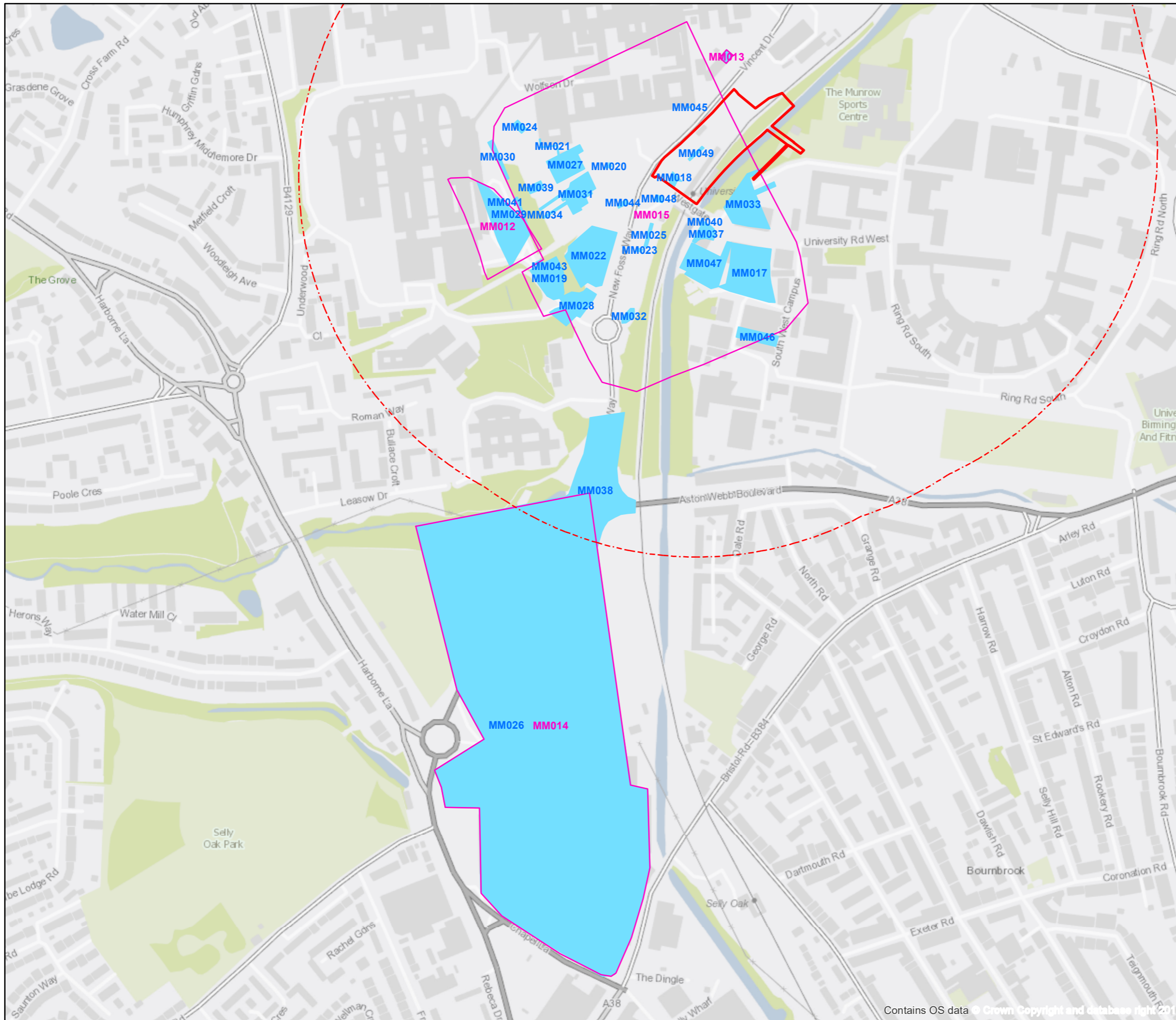
Rev	Date	Drawn	Description	GIS chk	Ch'k'd	App'd
01	23/09/2019	CA	For Information	CA	JC	JT

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Scale at A3
 1:4,775

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 MMD-402103VH01-GIS-001



— Red Line Boundary
 500m Buffer
 Monuments
 Events

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Known Heritage Assets Monument and Event Data

University Station, Birmingham Map 2 of 2

Rev	Date	Drawn	Description	GIS chk	Ch'k'd	App'd
01	23/09/2019	CA	For Information	CA	JC	JT

