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Site-Specific Representations on behalf of Prologis UK Ltd:

Submission Draft Bedford Local Plan 2040

July 2022

LICHFIELDS

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Contents

1.0 Introduction

1.1 This Site-Specific representation has been prepared by Lichfields on behalf of Prologis UK Ltd [Prologis] in the context of Prologis's development interests on land to the west of the A1, Wyboston [the Site]. The site is currently unallocated 'white land' and is being promoted by Prologis for a sustainable mixed-use employment-led development with a particular focus on additional in-combination development of life science manufacturing and modern logistics development. It accompanies representations to the Submission Draft Bedford Local Plan 2040 (April 2022) [SDBLP], which was published for consultation by Bedford Borough Council [BBC] for 6 weeks until 29th July 2022.

1.2 The Site extends 40.32 hectares [ha] gross (18.46 ha net) and could deliver 26,500 sqm [GIA] Life Sciences Manufacturing (B2/Eg(iii)); 58,300 sqm [GIA] of B2/B8/E(g) industrial floorspace; 5,000 sqm [GIA] Electric Vehicle Trunk Road Service Area [EVTRSA]; 700 sqm community uses; and a range of environmental, landscape and vehicular access improvements. It is considered that the site represents the optimum location to meet the need for additional in-combination development of life science manufacturing and modern logistics development in this part of the South East Midlands.

1.3 The Site is located in the parish of Wyboston, near to the northeast border of Bedford's administrative area. The site is bounded by the A1 and the A428 slip road to St Neots to the east, while a row of residential properties on Rookery Road are located to the western edge of the site. HE Payne, a haulier's firm is located to the southwest of the site along The Lane, with agricultural land and National Grid substation to the north.

1.4 The local area is set to benefit from significant transport improvements, with a new road linking the Black Cat roundabout (2km south of the south of the Site) with the Cambridge Road at Caxton Gibbet (14km northeast of the site). The site is also in close proximity to the new East-West Rail line that will connect Bedford with St Neots and Cambridge. This is currently in the early stages of planning but will be a catalyst in connecting Bedford with Cambridge and will undoubtedly open up significant job and investment opportunities across the whole area.

1.5 Prologis' proposals for this site have been informed by a thorough understanding of the baseline conditions in Wyboston as well as local, regional and national economic growth strategies. Prologis' development strategy has been devised by an experienced team that has the track record expertise and knowledge to deliver a unique, high quality development providing life-sciences, advanced manufacturing, logistics, training and education. Prologis would deliver a project that the people of Bedford can be proud of.

1.6 In order to support Bedford Borough Council's [BBC's] aspirations for high quality, productive economic growth with a specific focus on technology and life sciences, the emerging Bedford Local Plan [BLP] should include suitable policy provision which allows for the allocation of the Land West of A1, Wyboston for a mix of employment uses. Over the SDBLP period (2020-2040), the site should form one of the key foundations of BBC's economic growth ambitions and act as a key component of the Plan area's provision for the life sciences, tech and advanced manufacturing that are presently unfulfilled by nearby Cambridge.

1.7 This Site was the subject of two previous submissions put forward for the Bedford Local Plan Issues and Options consultation which ended in September 2021, as well as the Council's Call for Sites in 2020. Bedford Borough Council's ID for this site is 951.

1.8 As we demonstrate, there is compelling evidence to include the site as part of the Council's future employment land portfolio, given that BBC's evidence on employment land requirements is not robust and significantly under-estimates the true level of need. The wider area is being transformed due to considerable levels of transport infrastructure investment, as well as the Council's intention to deliver a new settlement further east. This will require BBC to deliver a balanced portfolio of deliverable employment sites of all scales and particularly smaller sites that can be delivered more easily (and quickly in response to market demand).

1.9 A site which has the backing of Prologis, a global real estate developer with a market-leading track record in the sub-region, should be given full and proper consideration in the BLP 2040. We respectfully request that the site is allocated for employment-led mixed use in the Plan, or at the very least, identified as a reserve candidate site, of which the merits could be debated at the forthcoming Local Plan Examination.

About Prologis

1.10 Prologis is the leading global real estate provider in industrial and logistics buildings. By bringing a dramatic new vision to logistics development, Prologis has built the first and largest global network of distribution facilities, enabling companies to streamline critical supply chain operations. In addition, Prologis is currently delivering the second phase of a 10-year, 290,000 sq.m, expansion of a significant life sciences project at the Cambridge Biomedical Campus (see case study below).

1.11 Since entering Europe in 1997, Prologis has expanded its presence into 13 countries. This rapid growth is directly linked to customer demand throughout the region, creating a distribution network that serves some of Europe's largest and most dynamic manufactures, retailers, and third-party logistics providers.

1.12 Within the UK, Prologis has around £5.2 billion of assets under management, located on 22 Prologis Parks. Prologis' logistics buildings in the UK see the equivalent of 2.6 per cent of UK GDP flowing through them each year. However, as a developer, Prologis makes much more than industrial logistics buildings. Prologis makes spaces and places where their customers, employees and local communities can flourish. Prologis is committed to achieving 100% carbon-neutral construction globally by 2025 and was recently awarded the inaugural Terra Carta Seal at the COP26 summit by HRH The Prince of Wales, in recognition of its commitment to, and momentum towards, the creation of genuinely sustainable markets. Prologis is the only property company to receive this award. Indeed, Prologis is one of only 45 companies globally to receive this award and the only global developer and property owner to receive it.

1.13 Prologis puts people at the very centre of its approach, helping to create a sense of place and belonging. The importance of providing the very best spaces and places in which to work is not underestimated by Prologis and it places great emphasis on sustainability, health and wellbeing in the design, delivery and operation of its developments.

1.14 Prologis has a strong track record of delivering high profile industrial and logistics developments in Bedfordshire and the Southeast Midlands more generally. Prologis is a long-term investor in Bedfordshire and owns and operates a number of highly successful parks in the area.

1.15 Prologis' landscape-led philosophy and vision is to enhance the employment diversity offer on land to the West of the A1 at Wyboston by combining our unparalleled knowledge and delivery expertise in these two exciting employment sectors. A unique, high-quality development that provides a sustainable and industry-leading scheme where communities and occupiers can flourish will be delivered, bringing together the company's unique expertise on life-sciences, advanced manufacturing, logistics, training and education to deliver a unique project.

Case Study: Cambridge Biomedical Campus[1]

Prologis is currently delivering the second phase of a 10-year 290,000 sq.m expansion of a significant life sciences project at the Cambridge Biomedical Campus [CBC]. The CBC is located at the heart of the UK's and Europe's leading life sciences cluster and combines world-class biomedical research, patient care and education on a single site. Now undergoing a major expansion that is being delivered by Prologis and includes the co-location of companies alongside the existing 17,500-strong community of healthcare professionals and research scientists, the Campus is on track to becoming one of the leading biomedical centres in the world.

CBC has the physical space to accommodate expansion and the international connections to be the global hub for content and research. The site has planning permission to house an additional 75,000 sq.m of new clinical and science related business. This means the Campus is now ready to help Cambridge to lead UK plc in creating the next generation of UK life sciences companies. CBC is the largest employment site in Cambridge and encompasses renowned hospitals including Addenbrook's. CBC has a particular focus on ensuring patients benefit from the campus' world-leading research, benefitting from networking with Cambridge University's world-leading academics.

AstraZeneca and its global biologics R&D arm MedImmune are building a new Strategic R&D Centre and global Corporate Headquarters on the Campus. The facility brings together AstraZeneca's small molecule and biologics research and development activity, furthering opportunities to develop the next generation of innovative medicines through collaboration. It will become the company's largest centre for oncology research, as well as housing scientists focused on cardiovascular and metabolic diseases, respiratory, inflammation and autoimmune diseases and conditions of the central nervous system.

The campus is an excellent example of how excellent connectivity fuels sustainable growth. It is served by 60 local bus services an hour during weekdays and is on the Cambridgeshire Guided Busway, which provides frequent, reliable public transport along the A14 corridor linking Huntingdon and St Ives to central Cambridge, Addenbrooke's Hospital, the Cambridge Biomedical Campus and Trumpington to the south. The southern entrance to CBC, directly adjoining the Phase 2 is accessed via Addenbrooke's Road, is just 2 miles from junction 11 of the M11.

[1] https://cambridge-biomedical.com/

Furthermore, Network Rail has submitted a Transport and Works Act Order application to seek deemed planning permission to build a new station, Cambridge South, and associated infrastructure which will serve the southern fringe of Cambridge and the biomedical campus. A new station would connect the Cambridge Biomedical Campus with potential destinations such as central London, London Stansted Airport, Ely, Birmingham and Europe via London St Pancras. Planned to open in early 2025, it would provide access to a growing area of high-quality employment and also help relieve congestion in the local area by supporting the development of environmentally sustainable transport in Cambridge.

As recently as July 2022, Prologis began construction on the first wholly speculative development of new multi-let laboratory and office space at Cambridge Biomedical Campus, which is specifically targeting a range of growing biotech and life science businesses. Since announcing plans to develop the 103,000 sq ft, 5 -storey building in October last year, Prologis UK has received numerous expressions of interest in the new development from biotech and life science businesses, providing flexibility to meet start-up, spin-out and scale-up options for healthcare research facilities. The new building will provide laboratory and office space in a variety of sizes and specifications, ranging from open plan to laboratory and office space equipped. The opportunity to be part of an established, vibrant, life science ecosystem is likely to be the main draw. Such is the level of interest in the new building that Prologis has already begun the design for multiple follow-on buildings for both speculative and pre-let development[2].

The Campus will therefore continue to grow, creating jobs and bringing investment to Cambridge.

[2] https://www.cambridgenetwork.co.uk/news/prologis-starts-construction-speculative-life-science-development-cambridge-biomedical-campus

2.0 What is the Opportunity?

National Policy

2.1 The **National Planning Policy Framework** [the NPPF] outlines the Government's commitment to ensuring that the planning system does everything it can to support sustainable economic growth, particularly in highly productive areas:

"Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in ***driving innovation, and in areas with high levels of productivity, which should be able to capitalise on their performance and potential****."* [paragraph 81]

2.2 The NPPF also requires planning policies and decisions to address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge and data-driven, creative or **high technology industries**; and for **storage and distribution operations at a variety of scales and in suitably accessible locations** [paragraph 83]. Significant weight should be placed on the need to support economic growth through the planning system.

2.3 Although the land West of A1, Wyboston will primarily incorporate life sciences manufacturing, it also has the potential to accommodate some logistics infrastructure. In this regard, the Government's recent ***Future of Freight: a long term plan*** (June 2022) is highly relevant, as this recognises that freight and logistics has a key role to play in the delivery of a number of public policy outcomes. The plan firmly puts freight logistics at the forefront of the Government's policy agenda, establishing its ambition and commitment to a long-term, cross-government and cross-modal approach to delivering its vision of a freight and logistics sector that is cost-efficient, reliable, resilient, environmentally sustainable and valued by society. The sector can make a significant contribution to levelling up and strengthening the union as a geographically distributed employer supporting economic activity across the UK. As such, the Plan identifies as a key goal the need for a planning system which fully recognises the needs of the freight and logistics sector now and in the future and empowers the relevant planning authority to plan for those needs:

"*To achieve this, the planning system needs to ensure that sufficient land is being made available in the right places for freight operations and that it is able to respond to the changing needs of the freight and logistics sector such as how to plan for the adoption of future vehicle technologies*." [paragraph 5.1]

2.4 To capture this, the Plan states that the Government will ensure that planning policy keeps pace with technological advancements such as for electric vehicles, low carbon fuels across transport modes and autonomous vehicles.

The Oxford-Cambridge Arc

2.5 The area between Oxford and Cambridge, incorporating the counties of Oxfordshire, Buckinghamshire, Bedfordshire, Northamptonshire and Cambridgeshire forms a strategic Arc that the Government recognises as the Oxford-Cambridge Arc. Bedford Borough, and Prologis' site at Wyboston, sits at the very heart of this Arc.

2.6 The Government has identified the Arc as a national economic priority area and in February 2021 published its plan for developing a Spatial Framework that will guide the future growth of the area over the period to 2050. The plan sets out that with the right interventions and investment, economic forecasts suggest that economic output could grow by between £80.4 billion and £163 billion per annum by 2050, with between 476,500 and 1.1 million additional jobs.

2.7 The site on land west of the A1, Wyboston provides a clear opportunity to positively respond to the Oxford-Cambridge Arc initiative. The Government has identified the Arc as a national economic priority area, with ambitions to maximise the potential of the area to become an economic asset of international standing. Whilst the future of the Oxford-Cambridge Arc Spatial Framework is uncertain and it is now likely to be a locally-led project, Bedford should plan positively in order to capitalise on the potential for transformational growth in the region. Given the national economic importance of the Arc, the potential development of Wyboston for the in-combination development of life science manufacturing and modern logistics development would perfectly align with its aspirations and provide a symbiotic link with the R&D-focused life sciences developments at sites such as Cambridge Biomedical Campus further to the east.

2.8 Successive studies have found that there is a clear transformational opportunity for the Arc. The '*Planning for sustainable growth in the Oxford-Cambridge Arc'* policy paper sets out that with the right interventions and investment, economic forecasts suggest that by 2050 economic output could grow by between £80.4 billion and £163 billion per annum, with between 476,500 and 1.1 million additional jobs[3].

2.9 Prologis considers that Bedford Borough should harness this opportunity and plan for aspirational levels of growth, ensuring that the emerging SDBLP allocates the requisite quantum of high-quality employment land for development within the plan period.

2.10 The land west of A1, Wyboston site is a unique opportunity to assist Bedford and the wider Arc to achieve its economic growth ambitions and provide new high-quality life sciences manufacturing and logistics floorspace over the period to 2050.

Bedfordshire Economic Growth Ambitions Topic Paper (April 2022)

2.11 BBC's Economic Growth Ambitions Topic Paper (April 2022) sets out the economic ambitions of Bedford Borough, based on a SWOT analysis of the local economy. The Council's ambition for Bedford's economy is to create a high-value, highly skilled, economy, expanding its current strengths, and developing into a location where innovative businesses

[3] HM Government (February 201) 'Planning for sustainable growth in the Oxford-Cambridge Arc', available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962455/Spatial_framework_policy_paper.pdf

can thrive. The SWOT analysis recognises that the Oxford to Cambridge Arc creates chance to develop a higher value economy, and that the East West Rail route via Bedford positions the town as a pivot for commercialisation of Oxbridge tech:

"Land allocations need to be made in locations where they will deliver a wider range of jobs, including a much greater proportion of those that are higher value and related to non-B8 sectors, (for example, manufacturing, life sciences and green economy)." [page 4]

2.12 The Topic Paper notes that SEMLEP's ambition is to be the 'connected core' of the Oxford to Cambridge Arc2 and Bedford is at the heart of this – the core of the core - allowing local and new business to take advantage of this positioning.

"Bedford Borough's proximity to Cambridge, as the main and largest urban settlement along the Arc infrastructure investment route with the forthcoming East West Rail and A421 / A428 Black Cat to Caxton Gibbet improvements, make it a natural location to respond to pent up growth in the life sciences, tech and advanced manufacturing that are unfulfilled in Cambridge." [pages 13-14]

2.13 The Topic Paper notes that the life science sector is rapidly growing and has a large potential to expand. Institutional investors are assessing this sector and the affiliated property uses as long-term rewarding investment options. There is a dearth of lab and sector-specific (clean room etc.) manufacturing space across the region and Bedford is positioned well to fill this gap and meet demand.

2.14 This narrative clearly provides an excellent fit with the Life Sciences manufacturing element of the proposed development site.

Bedford Council's Employment Land Needs Case

2.15 Bedford Borough Council's Employment Land Study [BELS] was published in May 2022 and comprises the evidence base for the emerging Bedford SDLP 2040. It sets out the Council's requirement for the emerging Bedford Local Plan to identify between 118 and 142 ha of employment land. Policies HOU 12, HOU 19 and EMP 1 - EMP8 identify sufficient land to meet the upper end of this forecast (plus a further 24 ha of employment land that is already committed – hence the need, estimated by BBC, is for between 142 ha and 166 ha).

2.16 The BELS goes on to set out a number of qualitative requirements that should inform the Council's decision making for employment land, including:

"*As a result of Bedford's excellent and improving connectivity, it is realistic to plan for employment growth that is of a type and quality that can help serve the market currently met by Cambridge's world renowned science parks. Bedford will be an attractive complementary location because of the availability of lower cost land yet with easy access to established knowledge hubs.*" [paragraph 9.7].

"*As set out above, the quantitative requirement for additional B class employment land is between 118 and 142 ha after taking account of the existing supply of undeveloped land. The primary qualitative requirement is for sites to meet the need for new high quality employment parks. These should provide campus-style space for high technology research and development uses, innovation hubs and science park development. They*

should be located with good access to the A421 and existing or planned rail stations." [paragraph 9.12]

2.17 In response to this evidence, the emerging SDBLP Policy DS5(S) sets out where the growth should be located, taking into account existing commitments. It indicates that there is a total of 136 ha allocated for employment land for the period 2020-2040 in addition to the 24 ha of existing employment land commitments which includes 20.4 ha at Pear Tree Farm. Therefore, the Council's forward supply of employment land is in the order of 160 ha, which broadly aligns with the upper end of the range identified in its evidence base. This includes land south of Bedford, at the proposed Kempston Hardwick New Settlement (Policy HOU14). The Policy in the emerging Plan states that in addition to delivering at least 4,000 homes, this site could also deliver an innovation hub and business/science campus primarily focussed on innovation, research, development and education providing around 70 ha of employment land.

2.18 On behalf of Prologis, Lichfields has critiqued this employment land evidence and provided a detailed response in the accompanying Employment Land Technical Paper (July 2022). This report finds that there are some serious flaws in the detail of the BELS' approach to employment land forecasting which means that the range of 142-166 ha is unsound. This includes some errors in its calculations of past losses and take up. As a result, BBC's employment land calculation significantly underplays the actual requirement.

2.19 Furthermore, the Council's employment land evidence base does not address the needs of strategic logistics. The Local Plan is premature in this regard, as it has been put forward ahead of a SEMLEP Strategic Employment Land Requirements Study that will seek to identify the needs of 'big box' logistics across the entire South East Midlands in accordance with NPPF policy requirements.

Lichfields' own assessment indicates that there is **a need for at least 189 ha – 226 ha of employment land** and potentially significantly more over the period 2020 to 2040. This is around **47-60 ha higher than the range that has informed the emerging Local Plan**. It also indicates a very substantial requirement for industrial and warehousing land across all of the scenarios. This means that Bedford Borough has an insufficient supply of employment land to meet its requirements in full and will need to identify new sites.

2.20 The East-West Rail / A421 transport corridor has significant potential for rail-based growth and stronger links with the areas to the east of the Oxford-Cambridge Arc. Faster journey times, reduced transport costs, and greater transport capacity will create much stronger economic ties with Cambridge, creating significant opportunities to pull in the higher value jobs and investment opportunities that Bedford sets out in its *Economic Growth Ambitions Topic Paper*. These areas are set to experience a significant increase in house building over the years ahead. The increase in households in these areas in close proximity to the Wyboston site would provide further opportunities for economic growth due to the larger pool of workers in the area. Prologis's site at Land West of A1, Wyboston would help the Council capitalise on this opportunity and deliver a more robust strategy that would go much further in delivering against the SDBLP's strategic objectives.

2.21

Summary

- National planning policy implores local authorities to do everything they can to support economic growth. The needs of high technology industries and storage and distribution operations at a variety of scales and in suitably accessible locations must be provided for;
- Although uncertainties remain regarding the Oxford-Cambridge Arc initiative, the concept - of a national economic priority area with unique growth opportunities - holds true and is supported by significant infrastructure investments such as East West Rail. Wyboston sits at the very core of the arc and can provide a link to the R&D-focused life sciences developments in nearby Cambridge;
- BBC's Economic Growth Ambitions Topic Paper recognises that the Oxford to Cambridge Arc creates a chance to develop a higher value economy and that Bedford is the natural location to respond to pent up growth in the life sciences, tech and advanced manufacturing that are unfulfilled in Cambridge. There is a dearth of lab and sector-specific manufacturing space across the region and Bedford is positioned well to fill this gap and meet demand;
- BBC's employment land evidence indicates a need for between 142 ha and 166 ha over the 20-year plan period to 2040, and the Council's emerging Local Plan allocates around 160 ha (including 24 ha of existing commitments to meet this need) with a focus away from strategic distribution towards high technology and life sciences;
- However, Lichfields' analysis suggests that the Council's evidence significantly under plays the true level of need by between 47 ha-60 ha. This means that the Council has a very significant shortfall and needs to identify new employment land sites in addition to the allocations in the emerging BLP;
- The SEMLEP Strategic Employment Land Requirements Study currently underway responds to the national policy requirement to fully understand the needs for strategic logistics in Plan-making and is likely to identify substantial B8 logistics needs across the wider sub-region. In this respect, Bedford will need to provide additional sites to contribute towards its 'fair share' given the excellent strategic linkages to the road and rail network. Without additional provision, this would increase the employment land shortfall still further;
- This all indicates that there is a clear justification to promote life sciences manufacturing in Bedford, and that very substantial additional sites including Land to the West of the A1, Wyboston, will be required to meet the current unmet need.

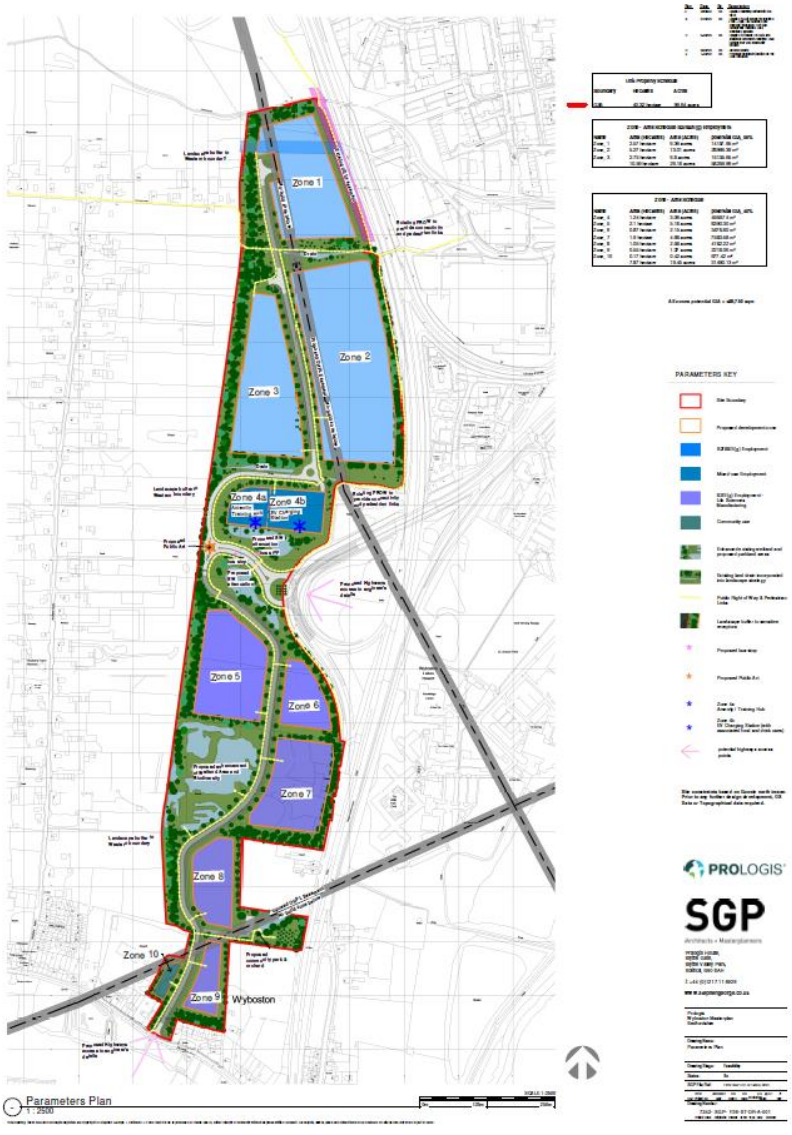
3.0 Vision and Proposed Development

Overview

3.1 If allocated, Prologis would deliver a high-quality, flagship, mixed-use employment development with an emphasis on life science manufacturing and modern logistics development. A Vision document for the site is included in Appendix 1 and summarised below.

3.2 Prologis has undertaken extensive assessment work to appreciate the development potential of this location, acknowledging that it provides significant opportunities to deliver a sustainable mixed-used development. This work has facilitated the progress of masterplanning exercises that demonstrate the site's potential to accommodate a range of new employment-focussed development, featuring:

- 26,500 sq.m [GIA] Life Sciences Manufacturing (B2/Eg(iii)) across five zones;
- 58,300 sq.m [GIA] of B2/B8/E(g) industrial floorspace across three zones;
- 5,000 sq.m [GIA] Electric Vehicle Trunk Road Service Area [EV TRSA] featuring an electrical hub charging station, parking area, amenity / training hub, retail outlet, security facilities and washroom block. This would have room for expansion as demand requires and associated commercial, business and service use that could provide, refreshments, meeting space, leisure and play area for customer use whilst vehicles charge. It would reflect similar design principles to those found at the recently opened Braintree 'Electric Highway' charging station operated by GridServe;
- 700 sq.m flexible community uses;



- A development in a high-quality landscape setting that will create new habitats, net biodiversity gains, a network of public footpaths/cycleways, improvements to the underpass to enhance sustainable connections to the site; and respect the legacy of the

Former Land Settlement Association through the provision of a community orchards and allotments. This would include enhancing existing wetland and proposed parkland areas;

- Landscape buffer to sensitive receptors and along the A1 corridor;
- Existing land drains enhanced to be integrated in landscape strategy;
- Vehicular access from a new roundabout on the A1 Northbound Off-Slip to Great North Road at the A1/A428 interchange and from The Lane to the south;
- Public rights of way adjusted and integrated into pedestrian links;
- Public Art indicated as a focal point towards the end of the first estate road approach;
- Bus stops indicated adjacent to primary vehicle access point; and,
- Community parkland indicated with associated parking and access.

3.3 Prologis will create a highly sustainable development which will be a leading BREEAM development. It will be a beyond net zero carbon development in line with Prologis' pledge to be net zero carbon in emissions by 2040.

3.4 Indicative Build Timings (assuming allocation in current BLP) are as follows:

- Enabling Infrastructure: Q1 2024 to Q1 2025;
- Phase 1 (Zones 3, 4,5 & 6): Q3 2024 to Q4 2025;
- Phase 2 (Zones 1 & 2): Q4 2025 to Q2 2027;
- Phase 3 (Zones 7,8 & 9): Q4 2026 to Q2 2028.

3.5 The site's allocation would represent a unique opportunity to provide a sustainable and industry-leading scheme in which its occupiers and surrounding communities can flourish. This would bring together Prologis unique expertise in life-sciences, advanced manufacturing, logistics, training and education, to deliver a project that would contribute to the future economic strength of Bedford.

An ideal location for life science manufacturing and modern logistics development

3.6 This site to the West of the A1, Wyboston, is perfectly positioned at the very heart of the Oxford-Cambridge Arc to deliver high-quality jobs for existing and new communities.

3.7 The new East-West Rail Station and the surrounding highways improvements will be a catalyst in connecting the Borough with Cambridge and opening up significant job and investment opportunities. The site is in close proximity to the new East-West Rail line that will connect Bedford with St Neots and Cambridge, and which is currently in the early stages of planning. Depending on the EWR route that is ultimately be selected, our site will either be close beside a new station at St Neots South, or nearby Tempsford. Either station would enable residents living in Bedford, Cambridge and beyond to easily and rapidly access the proposed development site by public transport. This new multi-billion rail line will be a catalyst in connecting Bedford with Cambridge and will open up significant job and investment opportunities.

3.8 The pandemic and our exit from the European Union are factors that are redistributing how manufacturing support for the life science sector will take place over future years. Traditionally, the UK has found it acceptable to outsource manufacturing in the Life Science sector to other worldwide locations. Increased demand for resilience, speed to market and security suggests that the UK will carry out more of its manufacturing domestically.

The Wyboston site is ideally located to exploit this opportunity, and, by delivering life science manufacturing and modern logistics development, can complement existing R&D facilities elsewhere in the arc.

Of particular note, the Wyboston site is less than 30 km away from the Cambridge Biomedical Campus which Prologis is currently continuing to bring forward for development. This provides a world-leading life sciences innovation and research offer, but it does not offer the life science manufacturing and modern logistics that the Wyboston site can provide. Given their proximity, linked by East West Rail, excellent strategic road infrastructure (via the A1, A428 and M1) and the fact that both are being promoted by the same developer (Prologis), the two sites could have a symbiotic relationship that would be of considerable benefit to both Cambridge and Bedford's businesses and residents.

3.9 Critically, the site on land to the West of the A1, Wyboston can achieve the viable development of life science manufacturing whereas many comparable sites elsewhere in the arc cannot. For example, the Cambridge life science ecosystem is focused on discovery and research and serviced land values can be £350+ psf. That has serious viability implications for the manufacturing part of the Life Science sector as land that could be considered for manufacturing in the wider Cambridge region has been repurposed over time for higher land values in the R&D sector and the fast-growing residential markets as the local population continues its rapid growth. For manufacturing space to be delivered viability studies suggest a sustainable land value at nearer £75psf of developable floor space. Hence locations outside of the wider Cambridge market such as the Wyboston site will be required to support the world-leading R&D discovery success of Cambridge.

3.10 This complementarity of different sites across the Arc is considered in detail in a think piece produced by Bidwells, '*Radical Capital*'. In that document, the Vice President of Astra Zeneca (who have consolidated their R&D efforts in the UK alongside its global HQ at the Cambridge Biomedical Campus) discussed the value of co-operation capital across the Oxford-Cambridge arc:

"*Being able to commercialise the wealth of incredible ideas harboured in Cambridge and elsewhere in the Arc is another vital component of a thriving ecosystem. As part of our commitment to encourage innovation and entrepreneurship in life sciences, we support a number of initiatives that help biotech entrepreneurs advance their ideas. To date around 75 start-ups have benefitted from this knowledge and experience.*

We know these types of approaches are shared widely across the Arc, providing the region with rich levels of cooperation capital – that vital ingredient is simultaneously unquantifiable but also intrinsic to our success. It stems from shared values in problem solving, seeking to improve the world for the next generation, and delivering change to peoples live today, including in the local communities where we operate.

Cambridge, as well as the wider Arc, is fortunate to have the advantages it does. But these advantages may be eroded by accelerating international competition for investment in the technologies of the future – including life sciences – unless further steps are taken to make the Arc a genuine global contender for innovation and enterprise. Supporting public and private organisations to cooperate together to accomplish shared objectives is a vital component to achieving this." [page 151]

3.11 If this can be achieved, *Radical Capital* notes that the Oxford-Cambridge Arc can become a world-leading innovation and enterprise zone, incubating businesses in the sectors of the future, including life sciences, ICT and high-tech (and green) manufacturing. Generating £110bn for the British economy each year – with £2.9bn (3%) of that coming from life sciences companies in the Cambridge cluster alone – and with higher growth rates than anywhere outside London, the Arc clearly has huge economic potential.

3.12 Land at Wyboston can be a catalyst to linking Life Sciences R&D with manufacturing facilities across the Arc, providing a world leading development for high-value growth, innovation and productivity and provide exemplary models of a new 21st Century development that drives inclusive green growth in Bedford.

Electric Vehicle Trunk Road Service Area

3.13 The location of the proposed Electric Vehicle Trunk Road Service Area [EV TRSA] in Zone 4b at the site is ideal in a number of respects:

a It is located within 800m of the major electricity sub-station, located close to the northern site boundary. The grid supply will be used to meet the load, supplemented by PV electricity generation panels within the TRSA;

b The EV TRSA is conveniently situated at the junction of the A1 and the A428 to maximise visitors;

c There are major residential and commercial areas within 5km radius of the EV TRSA. This EV charging facility will serve those properties that cannot be easily connected to the Grid at home or work. This will significantly increase in the event that further housing development proceeds to the west and/or east of Wyboston;

d The proposal is fully compliant with UK Government Climate Change policy as regards provision of charging facilities for sustainable transport. This facility will be fully operational well in advance of the impending ban on the sale of ICE (Internal Combustion Engine) powered vehicles that comes into force within 8 years;

e This EV TRSA is designed to serve future sustainable transport demands; the proposal does not include facilities for ICE powered vehicles, other than parking, restaurant and toilet facilities.

3.14 Additionally, any TRSA will include Sustainable Urban Drainage for surface water and the opportunity to provide habitat for fauna and flora.

Economic Role

3.15 The proposed development at Wyboston will be a first for in-combination development of life science manufacturing and modern logistics development. The scheme will enhance

Bedford's employment diversity offer by combining Prologis's unparalleled knowledge and delivery expertise in these two exciting employment sectors.

3.16 As set out above, Bedford Borough has an insufficient supply of employment land to meet its requirements in full. This shortfall could be at least 29 ha and as much as 66 ha depending on the growth scenario pursued by the Council and could be considerably higher if strategic B8 logistics needs are correctly factored into the calculation. BBC will need to identify new sites such as Prologis' site on Land to the West of A1 at Wyboston to address this substantial shortfall.

3.17 The proposed light industrial development on land to the West of the A1, Wyboston, has the potential to make a significant contribution to meeting the current need for high quality industrial and modern distribution floorspace, **contributing 17.05 ha net (40.32 ha gross), or 84,113 sqm of Eg/B2/B8 floorspace** in an area of high demand.

3.18 This has the potential to meet 59% of the unmet need at the lower end of Lichfields' range, and 26% of the unmet need at the upper end of the range.

3.19 In addition, the logistics sector plays a very significant role in supporting the UK economy and communities. The occupation of existing logistics building stock, requirements for new logistics development and consequent employment levels in the sector (both operational and in construction) all rose under the Covid-19 pandemic, acting as a partial counter-balance to the downward trend in other sectors of the economy.

3.20 The delivery of mixed employment uses at this location in Wyboston will help address the needs of both of these key growth sectors here in Bedford and will create a range of direct, indirect and induced economic impacts on a local and regional scale.

Table 3.1 Indicative Development Areas

Zones	Floorspace [GIA] and Use Class
1, 2 and 3	58,260 sq.m (10.59 ha) B2/B8/E(g) employment
4	4,960 sq.m (1.24 ha) EV charging facility, retail and amenity training uses at the Hub
5, 6, 7, 8 and 9	25,852.97 sq.m (6.46 ha) Eg(iii) / B2 Life Sciences Manufacturing employment
10	677 sq.m (0.17 ha) Community facility
TOTAL	**89,750 sq.m (18.46 ha) Mixed use employment**

3.21 Based on these indicative parameters, the proposals will therefore contribute to building a strong, high value, responsive and competitive economy, with the quantifiable economic impacts for Bedford including:

1 Total Capital Investment of £110 million including the delivery of infrastructure and build costs;

2 Up to 193 direct FTE jobs during construction, with a further 215 indirect and induced construction jobs in the wider supply chain;

3 Around £41.6 million construction GVA per annum (both direct and indirect);

4 Up to 1,675 direct FTE operational jobs. This would include 1,058 B2/B8 jobs and a further 603 jobs at the proposed Life Sciences / Manufacturing facility;

5 Up to 486 FTE local jobs supported indirectly through supply chains and employee spending once operational;

6 Employment and training opportunities at the Hub targeted at the local population;

7 Generation of over £122m GVA per annum during operation, based on the FTE jobs; and,

8 Generation of £1.7m in business rates revenue per annum.

3.22 The development therefore represents a very significant new capital investment in the area, which will help to enhance the profile of Bedford and will raise the overall level of skills, economic activity and expenditure in the area.

Social Role

Skills and Training Benefits of the Development

3.23 Prologis has introduced the Prologis Warehouse and Logistics Training Programme [PWLTP], a digital learning and development programme aimed at training those leaving education, the unemployed and those looking to re-skill, equipping them with the knowledge needed to pursue a career in the logistics sector. The PWLTP is based at The Hub at DIRFT in Daventry, which is Prologis' first bespoke education facility and is a dedicated space for logistics and skills training and a recent RTPI award winning excellence in planning recipient. The proposed development at Wyboston would deliver a similar scheme (albeit one that is commensurate with the role and scale of this Park) located on Zone 4 at the heart of the complex including a central training hub building and education facility.

3.24 As with The Hub at DIRFT, the facility here at Wyboston would comprise of a bespoke education facility built by Prologis with the intention of providing a dedicated space for logistics and skills training of a size commensurate with the Park's role and scale.

3.25 Both logistics and manufacturing are key employers nationally and provide a wide array of jobs at various skill levels in warehouse, industrial and office environments. Logistics in particular increasingly requires positions in managerial, administrative and high-tech occupations including electrical and mechanical engineering and IT. In the short and medium term, it is likely to be one of the biggest employment growth sectors. The Hub at Wyboston would therefore make a positive impact in terms of both economic growth and social value by promoting the advancement of skills, expertise and capabilities in the sector.

3.26 The PWLTP would also be a socially geared initiative. On other Prologis sites across the country, the PWLTP is already assisting those in society who really need help by providing access to fully funded courses that will enable them to gain a recognised industry qualification and kickstart their careers in the logistics and supply chain sector.

3.27 For instance, the PWLTP is currently:

1 Engaging with the rehabilitation of prisoners in conjunction with Release on Temporary Licence [ROTL] scheme with the Ministry of Justice and the HM Prison and Probation Service;

2 Working with care leavers, schools and education providers in Northamptonshire to encourage future talent into the logistics industry;

3 Helping those from other industries such as retail to re-skill; and

4 Promoting careers for women in logistics.

3.28 This approach would be transferred to the Hub at Wyboston to ensure that current opportunities to maximise employment levels from the existing local labourforce are maximised.

3.29 The value of the logistics industry is of critical importance to the economy and it is essential that supply chains have access to a reliable supply of skilled labour to successfully facilitate the flow of goods across the country. By facilitating connections between businesses and the local community, the PWLTP is proactively building a pipeline of skilled individuals to work within local businesses, ultimately increasing economic productivity.

3.30 In social terms, the Hub at Wyboston would help to unlock career pathways in the logistics and supply chain sector through the delivery of the PWLTP. The focus of the PWLTP nationwide is on supporting local communities by providing valuable career opportunities to the young, unemployed and disadvantaged. A number of people completing the training programme at DIRFT have secured employment with local logistics employers. The project has therefore already made a contribution to the upskilling of individuals and enabled them to secure entry into a sector which offers a broad range of job opportunities and career progression.

3.31 Prologis also works collaboratively with supply chain customers, employees and local schools to help create vibrant and sustainable communities. This will ensure that the economic benefits and opportunities of the development are experienced by all sections of the local community.

Community Space

3.32 As well as being home to the PWLTP at the Hub, Prologis has also made provision for a 700 sqm community facility in Zone 10 at the site. Whilst the final details of this would be discussed with BBC and surrounding communities/stakeholders, it is Prologis's intention that this would comprise of an area that would enhance the facilities on the Park to the benefit of everyone. This could include a creche, community allotments etc.

3.33 The importance of providing the very best spaces and places in which to work is not underestimated by Prologis and it places great emphasis on sustainability, health and wellbeing in the design of its developments. The PARKlife™ initiative puts people at the very centre of its approach, helping to create a sense of place and belonging.

Linkages with Higher / Further Education Facilities

3.34 The Wyboston proposals and its location will allow Prologis to provide a dedicated teaching and training building that will have links to Cranfield University and other further and secondary education institutions. This will be highly attractive to future employers and people looking for jobs and homes in the Borough.

Environmental Role

3.35 The proposed development would contribute to meeting the future growth ambitions of Bedford and the wider Oxford-Cambridge Arc in a way that takes the opportunity to drive environmental improvement, including through biodiversity net gain.

3.36 With an appropriate landscape and habitat creation scheme a key element of any development proposals, substantial opportunities exist to enhance the biodiversity value of the site. This could include enhancements to the existing wetland and proposed parkland areas at the heart of the site, and also the large Wetland area to the south.

3.37 Prologis is committed to embedding sustainability into every aspect of its business operations and these principles would be driven forward within this site.

Environmental Stewardship, Social Responsibility and Governance [ESG]

3.38 At Prologis we have a long-standing commitment to excellence in ESG performance. We have embedded ESG across our business. The Wyboston scheme will deliver:

- A sustainable park that could provide a photovoltaic solar cell and battery system to serve the energy needs of the park.
- A net zero carbon development through exemplar standards in sustainable design and construction.
- Opportunities to enhance biodiversity and provision of high-quality multi-functional green spaces including the provision of a community orchard and a community area with the potential to provide allotments.

Parklife

3.39 Prologis's landscape-led philosophy and desire to ensure customer and local community well-being is integral to the success of our Parks. At Wyboston we will deliver:

- A landscape-led development which will provide biodiversity net gain and will create recreational benefits for the whole community which will respect the history of the former Land Settlement Association through the provision of:
- A local community orchard, allotments and education boards around the site that will provide information on the history of the nearby cottage homesteads and the agricultural production/market garden.
- Public art to the entrance of the site that will represent the evolving culture and collective memories of the site.
- Areas of open space, new footpaths, woodland, water enhancements and other habitats.
- A thriving park community through provision of an EV TRSA to provide an electrical hub charging station, parking area, amenity hub, retail outlet and washroom block.
- Flexible use community area that could provide community and ancillary park facilities.

4.0 Can the Site's Vision be Delivered?

Is the Site Available?

4.1 Prologis is entering into a Memorandum of Understanding with the landowners in relation to the future development of the site. The site is owned by a number of parties all of whom are agreeable to its promotion through the Bedford Local Plan review and development once allocated.

4.2 The existing uses within the site, infrastructure requirements and the relationship with future development proposals has been carefully considered and Prologis is confident that the land can be delivered as set out in the Vision.

Is the Site Deliverable?

4.3 Prologis is looking to work with the Council and local communities through the plan-making process. The scheme is deliverable from adoption of the Plan in 2023.

4.4 Prologis has decades of experience developing new facilities from the ground up. In the design and delivery of new developments, Prologis adopts a co-ordinated forward-looking approach to sustainable design, development and operations which has enabled it to create the industry's leading portfolio of high-quality logistics and manufacturing facilities.

4.5 This Site Specific Representation is accompanied by a series of detailed technical appraisals [Appendices 3-4] which confirm that there are no insurmountable constraints to bringing the site forward for development.

4.6 We have undertaken our own analysis of the capacity of the highways following comments from officers and we can robustly demonstrate that there is no transport reason preventing the development of the site.

4.7 We have undertaken our own high-level assessment of the highways network, reviewed its development history and National Highways' current plans for the A1, Black Cat roundabout and Wyboston/Great North Road interchange. Reviewing these against our proposed development plans, we are confident that the proposal can be delivered that integrates with, and strengthens, these committed improvements. The proposal has a number of beneficial features such as:

1 The removal of numerous smaller and sub-standard accesses onto the A1, replacing them with a single access proposal that improves highway safety;

2 Public access to a small service area within the site near to the access point for EV charging;

3 Improved bus connectivity for local residents by allowing services to be routed into the development site onward to St Neots; and 4) following the planned Black Cat – Caxton Gibbett link road and improvements, there will be a degree of severance and disconnection which will be mitigated by connections through and within the site and that will benefit the Strategic Road Network due to such trips not using the A1.

Is the Site Suitable?

4.8 The Wyboston site is located at the heart of both the Golden Triangle of Logistics which is the most strategically important location for logistics operations in the UK, and the Oxford-Cambridge Arc. Prologis's site is therefore ideally located to exploit this opportunity, and, by delivering life science manufacturing and modern logistics development, can complement existing R&D facilities elsewhere in the Arc.

4.9 The site is suitable for development and is considered to be the most logical, sustainable spatial option for accommodating life science manufacturing and modern logistics floorspace. A number of issues were raised by BBC in response to the earlier Call for Sites submissions for employment development at this site, relating to highways access, noise, heritage and other matters. We consider these issues in turn below:

Highways and Access

4.10 There are considered to be a number of benefits that would be delivered on the site from a highways and access perspective, including:

- The inclusion of an EV charging station that will be made available to public supplementing the roadside amenity of the A1 in the area;
- The inclusion of a dual carriageway access link into site to address any concerns over development traffic backing back on to the Wyboston Junction and the A1;
- Significant improvements to local connectivity between Wyboston and St Neots through the provision of a new development spine road linking The Lane to the A1 Wyboston Junction;
- Full compatibility with the 'A428 Black Cat to Caxton Gibbet' proposals (currently subject to a draft DCO);
- An opportunity to improve safety along the A1 and the Wyboston Junction northbound off-slip following the removal of existing property accesses;
- An opportunity to re-locate the bus stops on the A1, serving Routes X5 and 905 and providing new bus stops within the proposed development; and,
- Improved connectivity through and around the proposed development for walkers, cyclists and horse riders.

Access

4.11 Vehicular access to the northern end of the site is limited. Currently Northfield Road provides access from the west. A single track links the site under the A1 to Eaton Socon Industrial Estate to the east, via Alpha Drive. The track size and A1 crossover limits the height and size of vehicles that can use it and prohibits access to most agricultural vehicles and machinery.

4.12 It is proposed to create two access points. The first would be to the south via No.48 The Lane which would be demolished to create the access. The second would be the provision of a new junction directly off the A1. This would comprise a new roundabout on the A1 Northbound Off-Slip to Great North Road at the A1/A428 interchange.

4.13 This access will extend from the new roundabout in a north westerly direction into the site to an internal roundabout junction. The internal roads then extend north and south off the internal roundabout to serve the site with the northern link providing access to the local centre, employment and some residential. The southern link would provide access to residential areas.

4.14 The main internal road of the development will be designed to accommodate bus services.

4.15 The proposed vehicular access into the site from a new roundabout on the A1 Northbound Off-Slip was assessed and accepted as a Departure from Standard by Highways England when the site was previously considered for a TRSA.

4.16 The access proposals have been discussed with Highways England (now National Highways [NH]) in 2020 and they do not consider that they will have any adverse impact on the A1 trunk road. They would provide highway improvements and benefits by allowing for the closure of a number of existing access points onto the A1, including the sub-standard egress from the existing garage onto the A1 Northbound Off-Slip, and a bus route through the site allowing for the safe siting of bus stops away from the A1. Engagement with NH has continued with a presentation of the scheme to NH in July 2022.

Local Highways Improvements

4.17 Highway England's major highway improvement scheme which will see the realignment of the A428 between the A1/A428 interchange and the A1198 Caxton Gibbet roundabout to join at the Black Cat roundabout south of the proposed development, has been subject to public consultation and a planning application is due to be submitted to the Planning Inspectorate later this year, with completion planned by 2025.

4.18 Work undertaken by the Wormald Burrows Partnership, on behalf of the landowners, concludes that the realignment of the A428 will have a significant positive impact upon the traffic conditions of the local road network associated with the proposed development.

4.19 Once the A428 realignment has been opened, the traffic demand on the A428/B1428/Great North Road/A1 Southbound Off-Slip/Phoenix Park roundabout, as well as the Great North Road/Wyboston Lakes access signalised junction, which form the local road network will be reduced significantly.

4.20 The strategic network traffic movements will be redistributed to the realigned A428 at the Black Cat roundabout meaning that the local road network associated with the proposed development will need to accommodate local traffic only.

Pedestrian and Cycle Access

4.21 A series of pedestrian and cycle access routes within the development will ensure full permeability, with priority on the internal access roads for foot and cycle access rather than the car.

4.22 An existing foot/cycleway extends from Lakes Autos along the eastern site boundary and crosses under the A1 into the Eaton Socon Industrial Estate. Prologis is willing to invest in enhancing the existing underpass, which is currently poorly lit and defaced by graffiti. From the A1 underpass there are footpath routes to the west to Northfield Road and Wyboston to the south west. New foot/cycleway links will be provided that connect to this

existing shared foot/cycleway and the wider network, providing safe off-road routes for pedestrians and cyclists.

4.23 The existing Public Rights of Way through the site will be adjusted and integrated into pedestrian links.

4.24 The site location is such that there is good potential for the future residents of the site to travel to work, shops, leisure sites and day-to-day services by foot and cycle.

Public Transport

4.25 The nearest bus stop are Heddings Farm and Top Farm on The Lane for east-and north-bound services between Tempsford and Biggleswade (no.112); and the footbridge on the A1 (south of the site) where the X5 service runs between St Neots and Milton Keynes. The A1 stops and those on The Lane are approximately 320m and 480m respectively from the southern access to the site.

4.26 As stated above the internal access will be designed to accommodate a bus service, enabling the provision of more localised bus stops to serve the development.

4.27 St Neots train station lies 5.4km to the east of the site. It is on the east coast mainline. Thameslink offers regular services between Peterborough and Horsham via London St Pancras. At peak times there are also Great Northern services between London Kings Cross and Peterborough.

4.28 Proposals for a new East-West rail line, with a new station in the Tempsford area, are under discussion and could in time further increase rail connectivity for the site.

Flood Risk

4.29 The site is at low risk of flooding from tidal, groundwater, existing sewers and artificial sources. The whole of the site is within Flood Zone 1 and at low risk of fluvial flooding (an annual probability of less than 1 in 1,000 in any year). All land uses are therefore appropriate in this zone. It is considered that the development will not impact upon the surrounding levels of flood risk which will remain low.

4.30 Surface water drainage can be addressed within the site using sustainable drainage systems, including soakaways and infiltration structures below ground level to ensure that there is no impact elsewhere.

Utilities

4.31 A capacity assessment has been carried out to determine point of connection to the proposed mixed use commercial development at Wyboston, Bedfordshire by utilityconnections in July 2022. This provided an overview of the local electricity distribution networks to assess feasible locations to provide the development's anticipated load requirements.

4.32 Based on the desktop assessment of the local distribution networks, the report assumes that 20mVA supply capacity will be provided via UK Power Networks' Little Barford Bulk Supply Point (BSP) Substation, located off Barford Road, Little Barford. Utilityconnections has based the connection on 20mVA of import load fed via either 2 x new 33kV circuit

breakers at Little Barford BSP 33,000-volt compound, or via a looped connection from 33kV circuits fed via Little Barford BSP, to provide a new 33kV connection to the development and a new 33/11kV Primary substation.

Landscape

4.33 The Bedford Borough and Central Bedfordshire Landscape Character Assessment indicates the site falls within the area classified as 4A Great Ouse Clay Valley. Its character is that of a low lying, level broad valley following the course of the River Great Ouse. Large and medium scale geometric fields are bounded by hedgerows in mixed condition with some hedgerow trees. Land use is a mix of arable and pasture, quarrying and recreation. An urban fringe character comes from the aural and visual presence of major roads (A1[M] and A421), large scale industrial development, restored sand and gravel workings and large arable fields particularly close to Bedford.

4.34 The site is not located within or adjacent to any landscape designations and is not a Green Belt location. The site itself is relatively flat and has no landscape features, other than the field boundary hedgerows and vegetation that define the site boundaries and the lakes to the rear of Lakes Autos. Its proximity to the A1 and large industrial area to the north east both of which are evident from within the site are indicators of its urban fringe character.

Biodiversity

4.35 The site is not located within or adjacent to any designated nature conservation sites and its ecological value will have been affected by the agricultural activities. As part of any future planning application the site will be surveyed and measures to enhance the biodiversity of the site will form part of the proposal to develop the site. The site would therefore be subject to a Preliminary Ecological Assessment and any necessary Protected Species Survey as part of any planning application.

4.36 This is a major development site and biodiversity net gain will be a consideration for any planning application. Prologis considers that this site has the potential to achieve a net gain in biodiversity.

Heritage

4.37 A Cultural Heritage report has been prepared by RPS Group in relation to the proposed development site at Wyboston and is included in Appendix 3. The report reaches the following conclusions in relation to the site's archaeological and built heritage potential:

Archaeology and Historic Landscape

- There are no designated heritage assets within the Site.
- A Scheduled Monument referred to as *Moated enclosure and associated building platforms, The Lane, Wyboston* is located immediately south of the Site. The RPS assessment identified a potential for the development to impact on the setting of the monument, due to visual intrusion from the proposed buildings and access within the southern part of the Site. Incorporating design measures including the setting back of the built development edge and using mitigation such as planting screening and using colour banding on the buildings will reduce the visual impact on the setting of the

monument. With these measures in place, RPS considers that the effect on the Scheduled Monument is likely to be at the lower end of the spectrum of less than substantial harm in heritage terms and therefore should not be a constraint to the allocation and subsequent development of the Site.

- In accordance with Local Authority policy and Government policy as set out in the NPPF the archaeological desk-based assessment part of RPS's report was undertaken to clarify the below ground archaeological potential of the Site. This assessment identifies a high potential for archaeological remains dating to the Roman and Medieval periods and a moderate to high potential for Iron Age and Saxon remains within the Site. The archaeology of prehistoric to Medieval date has been truncated to some degree by intensive modern ploughing. In addition, where quarrying has occurred within the Site it has likely removed any archaeological remains. Based on current evidence, RPS considers that archaeology should not be a constraint to the allocation and subsequent development of the Site.

Built Heritage

- No built heritage assets would be directly (materially) affected by the Proposed Development.
- RPS considers that the development of the Site has the potential to affect the settings and thus significance of two Listed Buildings on Great North Road. However, whilst development on the Site is likely to be visible from the Listed Buildings, this inter-visibility is considered to contribute only a minor level of harm, within the spectrum of less than substantial harm and therefore is not a constraint to the allocation and subsequent development of this Site.

4.38 Prologis is in the process of engaging with the archaeological officer to understand the potential impacts and sensitivities regarding these heritage assets. This will involve a geophysical survey, alongside a programme of targeted trenching prior to the determination of any planning application.

Agricultural Land Classification

4.39 The agricultural land within the site is classified as Grade 1 Agricultural land.

4.40 However, as noted above, the track size and A1 crossover limits the height and size of vehicles that can use it and prohibits access to most agricultural vehicles and machinery. Almost the entire area of the proposed development site between the A1 and the former Land Settlement Association houses, being landlocked, is unsuitable for modern agricultural production. It is therefore semi-derelict and includes the heavily polluted scrap yard and garage that will be cleaned as part of the proposed redevelopment of the wider site, bringing ecological benefits.

4.41 As such, the proposed development of this site would represent a negligible incursion into the open countryside. Whilst part of the site is used for agriculture, it is land locked and suffers from poor access via the A1 underpass which makes it unsuitable for modern farm machinery.

Contamination

4.42 Lakes Autos within the site is a known waste disposal site for automotive vehicles. As part of any planning application a Phase 1 Environmental Desk study, together with any ground investigation works would be undertaken to identify the type and scope of any potential contamination insofar as it relates to this site.

Noise

4.43 In response to comments from Officers following the original Call for Site submission that "*noise from A1 would affect housing all other uses would affect existing premises in Wyboston*", a Noise Assessment was prepared by Cass Allen.

4.44 The Assessment concludes that "*the site is considered to be acceptable for residential development subject to the adoption of acoustically upgraded glazing and ventilation, strategic positioning of the dwellings to protect gardens from road traffic noise and acoustic screening to gardens where appropriate*".

4.45 Furthermore, appropriate limits for noise from mechanical plant and commercial activities have been calculated and are considered to be achievable.

Mineral Safeguarding Area

4.46 The site lies within the Bedfordshire Mineral Safeguarding Area. A Mineral Resource Assessment has been commissioned and is attached as Appendix 4. It concludes that the development of this site would not sterilise a commercially viable reserve due to site, access and utility infrastructure constraints. This report has been previously submitted to the Council under previous Call for Sites exercise and is appended to this Addendum for completeness.

5.0 Summary

5.1 The Land West of A1, Wyboston site represents a uniquely propitious location to meet the need for in-combination development of life science manufacturing and modern logistics development in this part of the South East Midlands. The critical importance of both the Life Science industry and modern logistics is recognised at a national, regional and local level and it is essential that sufficient land is available in the right places to meet requirements. The Oxford-Cambridge Arc creates a once in a generation chance to develop a higher value economy, and Bedford is the natural location to respond to pent-up growth in the life sciences, tech and advanced manufacturing that are unfulfilled in Cambridge. However, Bedford Borough has a shortfall of between 29 ha and 66 ha over the Plan period and possibly significantly more. New, deliverable employment allocations in sustainable locations are urgently required.

5.2 If allocated, Prologis would deliver a flagship, high-quality mixed-use employment development with an emphasis on life science manufacturing and modern logistics development at Wyboston. The site is in close proximity to the new East-West Rail line that will connect Bedford with St Neots and Cambridge, and which is currently in the early stages of planning. This will further aid connectivity with Life Science R&D facilities further afield, most notably the Cambridge Biomedical Campus which Prologis is also bringing forward.

5.3 The proposed light industrial development on land to the West of the A1, Wyboston, has the potential to make a significant contribution to meeting the current need for high quality industrial and modern distribution floorspace, **contributing 17.05 ha net (40.32 ha gross), or 84,113 sqm of Eg/B2/B8 floorspace** in an area of high demand. The proposed £110 million investment could deliver over 400 direct and indirect jobs during construction, and around 1,675 direct FTE operational jobs. This would include 1,058 B2/B8 jobs and a further 603 jobs at the proposed Life Sciences / Manufacturing facility, plus over 485 jobs further down the supply chain and up to £1.7m of business rate revenue per annum. Employment and training opportunities at the Wyboston Hub would be targeted at the local population.

5.4 Prologis' proposals have been formulated based on a clear understanding of the site opportunities and constraints and it has been demonstrated that there are no significant technical or environmental constraints that will prevent its delivery.

5.5 The landscape-led Masterplan demonstrates how the development would respond sensitively to the site and its context. The principles of place-making and Prologis' PARKlife™ initiative would be embedded in the detailed design and Prologis is committed to delivering a net zero carbon development with exemplar standards in sustainable design and construction.

5.6 Prologis is looking to work with the Council and local communities through the plan-making process. The scheme would be deliverable from adoption of the Plan in 2023, and could be delivered in full by 2028, in stark contrast to the uncertain delivery programmes of other much larger business parks elsewhere in the Borough.

5.7 We have undertaken our own analysis of the capacity of the highways network following comments from officers and we can robustly demonstrate that there is no transport reason preventing the development of the site.

5.8 It has no significant constraints in terms of natural or historic assets. Lake Autos is a brownfield site and this will be decontaminated and cleaned up as part of the proposals to the benefit of the local area.

5.9 **The site therefore provides a unique, high-quality scheme which the Council should support and allocate for employment-led mixed use in its emerging Local Plan, or at the very least, identify this as a reserve candidate site, of which the merits could be debated at the forthcoming Local Plan EiP.**

Appendix 1 Summary Vision Document

PROLOGIS®

WYBOSTON
SUMMARY VISION DOCUMENT

JULY 2022

Introduction

This document sets out Prologis' vision for the development of land west of the A1, Wyboston.

About

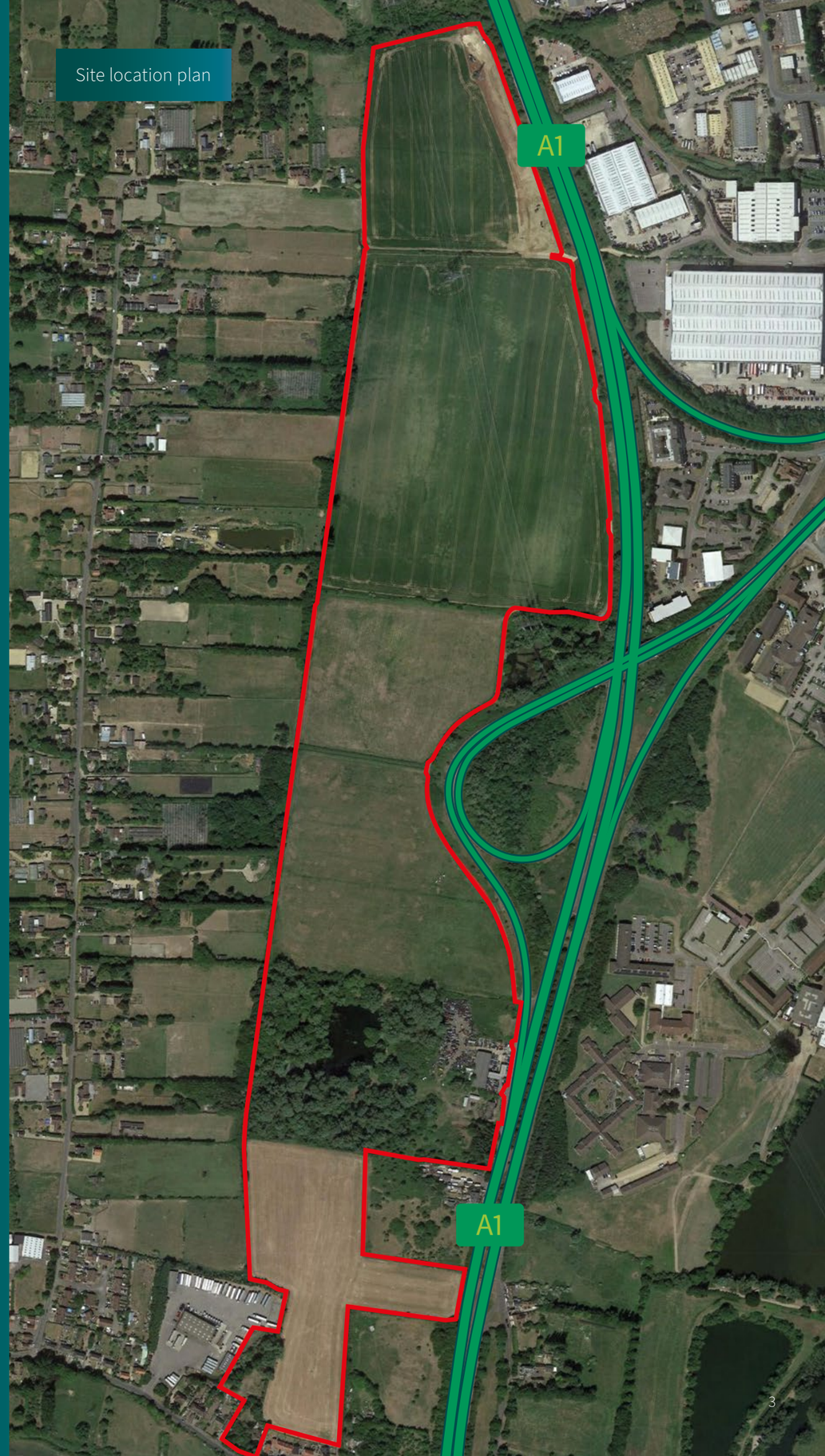
Did you know... that Prologis is also delivering Life Science development as well as being the global leader in modern manufacturing and logistics real estate.

We are currently delivering the second phase of a 10 year 290,000 sq.m expansion of a significant life sciences project at the Cambridge Biomedical Campus.

Our landscape-led philosophy and vision is to enhance the employment diversity offer on land at Wyboston within Bedford by combining our unparalleled knowledge and delivery expertise in these two exciting employment sectors.

We will deliver a unique development that delivers a sustainable and industry-leading scheme where communities and occupiers can flourish. The close proximity of our Cambridge Biomedical Campus also promotes a level of synergy with the Wyboston Site. We will join together our unique expertise on life-sciences, advanced manufacturing, logistics, training and education to deliver a project that Bedford can be proud of.

Cambridge Biomedical Campus



Our Vision and Proposals

Prologis will deliver a flagship, high-quality mixed-use employment development which will provide:

- An innovation/training hub and manufacturing/ business/science campus of around 7.87 ha
- 10.6 ha of supporting logistics floorspace
- An EV TRSA and ancillary community/park facilities
- Improvements to the under-pass to enhance experience and connectivity
- A development that will be a high-quality landscape setting that will create new habitats, net biodiversity gains, a network of public footpaths/cycleways, and respect the legacy of the Former Land Settlement Association through the provision of a community orchards, allotments and the provision of public art.

The Hub at DIRFT. Awarded the Best Project Award for its sustainability at the RTPI East Midlands Awards for Planning Excellence 2022

The Illustrative Masterplan

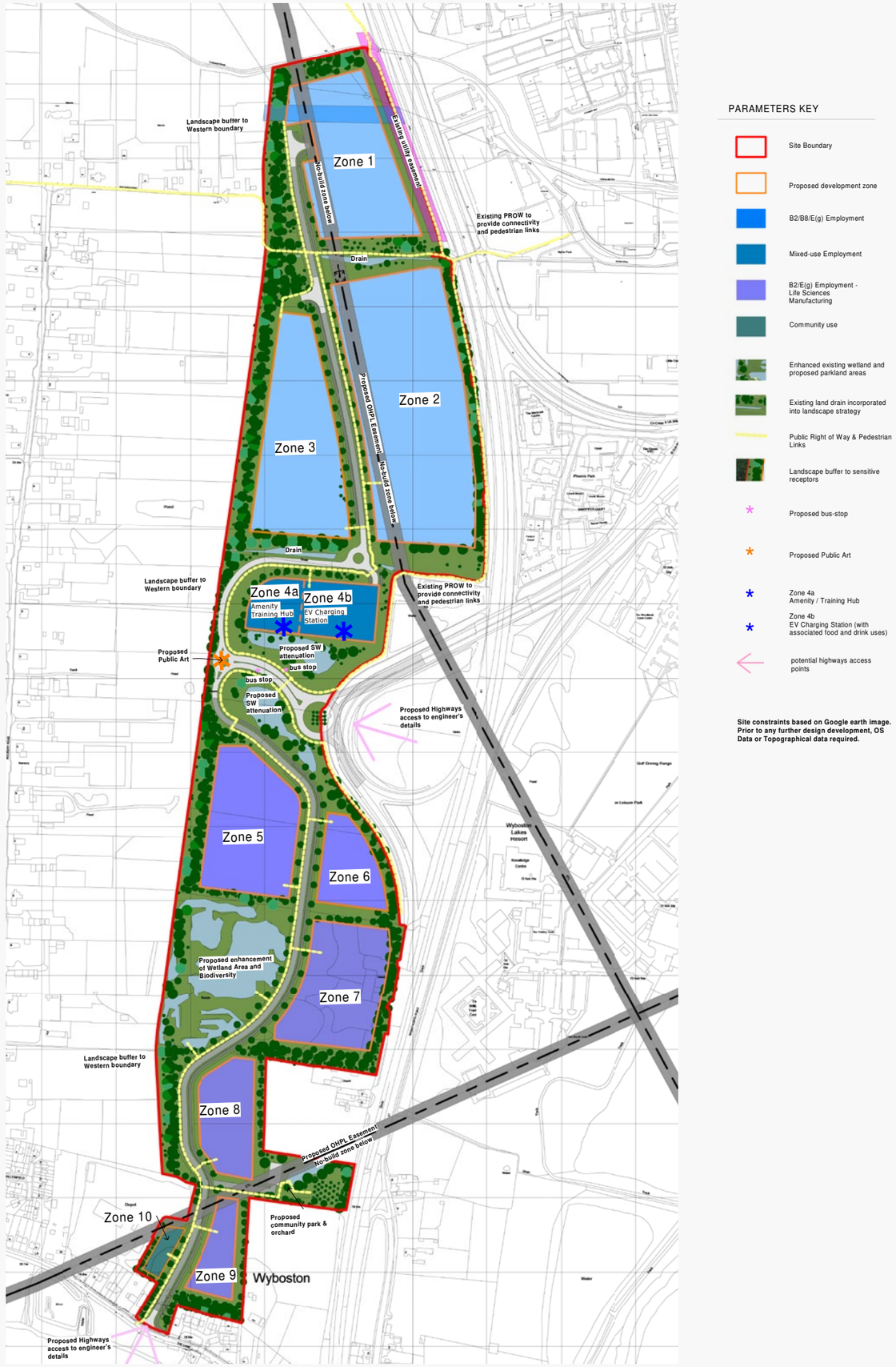
We will create a highly sustainable development which will be a leading BREEAM development. It will be a beyond net zero carbon development in line with Prologis' pledge to be completely net zero carbon in emissions by 2040.

The location of the site within the Oxford Cambridge Arc has the potential to deliver high-quality jobs for existing and new communities. The new East-West Rail Station and the surrounding highways improvements will be a facilitator in connecting the Borough with Cambridge and opening up significant job and investment opportunities.

Land at Wyboston will be a catalyst to providing a world leading development for high-value growth, innovation and productivity. It will provide exemplary models of a new 21st Century development that drives inclusive green growth in Bedford.

Why now?

Bedford is reviewing its Local Plan which will guide development in the area up to 2040. The site has not [yet] been identified by the Council as an allocation but there are compelling reasons why the site should be allocated.



What are the benefits of the scheme?

1 Investment, jobs and training:

At Prologis we are committed to investing in people. The Wyboston proposals and its location will allow us to provide a dedicated teaching and training building that will have links to Cranfield University and other further and secondary education institutions. This will be highly attractive to future employers and people looking for jobs and homes in the Borough.

At Wyboston, we will:

Provide our successful Prologis Warehousing and Logistics Training Programme (PWLTP) to train and re-skill unemployed people by equipping them with the knowledge needed to pursue a career in logistics.

Economic Benefits

Estimated Capital Investment of £110 million including the delivery of infrastructure and build costs.

Up to 193
direct FTE jobs during construction, with a further 215 indirect and induced construction jobs in the wider supply chain.

Around £41.6 million
construction GVA per annum (both direct and indirect).

Up to 1,675 direct FTE operational jobs;

Up to 486
FTE local jobs supported indirectly through supply chains and employee spending once operational.

Generation of over £122m
GVA per annum during operation, based on the FTE jobs.

Generation of £1.7m
in business rates revenue per annum.

Unique Training Opportunities

Provision of new on-site facilities including a central training hub building and education facility

2 Environmental Stewardship, Social Responsibility and Governance (ESG):

At Prologis we have a long standing commitment to excellence in ESG performance. We have embedded ESG across our business.

The Wyboston scheme will deliver:

A sustainable park that could provide a photovoltaic solar cell and battery system to serve the energy needs of the park.

A net zero carbon development through exemplar standards in sustainable design and construction.

Our first net zero carbon building in operation

Prologis is the only logistics developer, globally, to be awarded HRH Terra Carta Seal for Sustainability.

3 PARKlife

Our landscape-led philosophy and desire to ensure customer and local community well-being is integral to the success of our Parks.

At Wyboston we will deliver:

A landscape-led development which will provide biodiversity net gain and will create recreational benefits for the whole community which will respect the history of the former Land Settlement Association through the provision of:

A local community orchard, allotments and education boards around the site that will provide information on the history of the nearby cottage homesteads and the agricultural production/ market garden.

Public art to the entrance of the site that will represent the evolving culture and collective memories of the site.

Areas of open space, new footpaths, woodland, water enhancements and other habitats.

A thriving park community through provision of an EV TRSA to provide an electrical hub charging station, parking area, amenity hub, retail outlet and washroom block.

Flexible use community area that could provide community and ancillary park facilities.

Improvements to the existing under-pass.

Deliverability

Prologis has a proven track record for deliverability and is looking to work with the Council and local communities through the plan-making process. The scheme is deliverable from adoption of the Plan in 2023.

Kings Hill, Kent

The Bridge at Dartford

Highways

We have undertaken our own high-level assessment of the highways network, reviewed its development history and National Highways' current plans for the A1, Black Cat roundabout and Wyboston/Great North Road interchange. Reviewing these against our proposed development plans, we are confident that the proposal can be delivered that integrates with, and strengthens, these committed improvements.

The proposal has a number of beneficial features such as:

- The removal of numerous smaller and sub-standard accesses onto the A1, replacing them with a single access proposal that improves highway safety;
- Public access to a small service area within the site near to the access point for EV charging;
- Improved bus connectivity for local residents by allowing services to be routed into the development site onward to St Neots; and, following the planned Black Cat – Caxton Gibbett link road and improvements, there will be a degree of severance and disconnection which will be mitigated by connections through and within the site and that will benefit the Strategic Road Network due to such trips not using the A1.

The site already has a frequent passing bus service directly linking Bedford and Cambridge (Route 905) providing an opportunity to route directly into the proposed Wyboston development.

There is no transport reason preventing the development of the site.

Summary

Prologis is a global leading real-estate developer and our proposals at Wyboston will be transformational for the area. The location of the East-West Rail Station and the surrounding highways improvements along the A1 will be a catalyst in connecting the Borough with Cambridge and opening up significant job and investment opportunities. The site provides a unique, high quality scheme which the Council should support and allocate in its Local Plan.

Meet the team

We'll be your main points of contact through the process if you need any additional information, please get in touch.

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Appendix 2 Parameters Plan

Rev	Date	By	Description
A	29/06/22	RS	Updated following review with the client
B	01/07/22	RS	Updated to suit comments received. Zone 4 split. Life Sciences plot coverage increased. Part dual carriageway included. Area schedules updated.
C	04/07/22	RS	Updated to include OS Data and additional comments received. Dual carriage way and community orchard.
D	05/07/22	RS	General update
E	14/07/22	RS	Proposed bellmouth junction off The Lane inidcated

Unit Property Schedule

Boundary	Hectares	Acres
GSA	40.32 hectare	99.64 acres

Zone - Area Schedule B2/B8/E(g) Employment

Name	Area (Hectares)	Area (Acres)	potential GIA_55%
Zone_1	2.57 hectare	6.36 acres	14157.95 m²
Zone_2	5.27 hectare	13.01 acres	28966.39 m²
Zone_3	2.75 hectare	6.8 acres	15135.65 m²
	10.59 hectare	26.18 acres	58259.99 m²

Zone - Area Schedule

Name	Area (Hectares)	Area (Acres)	potential GIA_40%
Zone_4	1.24 hectare	3.06 acres	4959.74 m²
Zone_5	2.1 hectare	5.18 acres	8390.30 m²
Zone_6	0.87 hectare	2.15 acres	3478.80 m²
Zone_7	1.9 hectare	4.68 acres	7583.58 m²
Zone_8	1.05 hectare	2.58 acres	4182.22 m²
Zone_9	0.55 hectare	1.37 acres	2218.06 m²
Zone_10	0.17 hectare	0.42 acres	677.42 m²
	7.87 hectare	19.45 acres	31490.13 m²

All zones potential GIA = c89,750 sqm

PARAMETERS KEY

- Site Boundary
- Proposed development zone
- B2/B8/E(g) Employment
- Mixed-use Employment
- B2/E(g) Employment - Life Sciences Manufacturing
- Community use
- Enhanced existing wetland and proposed parkland areas
- Existing land drain incorporated into landscape strategy
- Public Right of Way & Pedestrian Links
- Landscape buffer to sensitive receptors
- * Proposed bus-stop
- * Proposed Public Art
- * Zone 4a Amenity / Training Hub
- * Zone 4b EV Charging Station (with associated food and drink uses)
- potential highways access points

Site constraints based on Google earth image. Prior to any further design development, OS Data or Topographical data required.

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SGP

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Prologis
Wyboston Masterplan
Bedfordshire

Drawing Name:
Parameters Plan

Drawing Stage:	**Feasibility**
Status:	**S0**
SGP File Ref:	7342-SGP-F01-ST-M3-A-0001

7342	30/05/22	RS	RS	As indicated	@ A1	E
SGP Project No:	Date:	Drawn:	Team:	Scale:		Rev:

Drawing Number:
7342- SGP- F26-ST-DR-A-001
Project Code Originator Volume Level Type Role Number

- Parameters Plan
1 : 2500

SCALE 1:2500
0m 125m 250m

Appendix 3 Cultural Heritage Assessment

WYBOSTON, BEDFORDSHIRE

Cultural Heritage Assessment

F

JAC28275
Wyboston,
Bedford Borough Council
Final
July 2022

rpsgroup.com

Document status					
Version	**Purpose of document**	**Authored by**	**Reviewed by**	**Approved by**	**Review date**
V1 Draft	Client Review	SD	SD	SD	July 2022
V2 Draft	Client Review	SD	SD	SD	July 2022
Final					July 2022
Approval for issue					
				[Date]	

Prepared by**: Sally Dicks**

Prepared for**: Prologis UK**

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EXECUTIVE SUMMARY

- This assessment has been prepared to consider the key heritage constraints and opportunities associated with a site at Wyboston in advance of its proposed allocation for a high quality mixed-use development.

Archaeology and Historic Landscape

- There are no designated heritage assets within the Site.
- A Scheduled Monument referred to as *Moated enclosure and associated building platforms, The Lane, Wyboston* is located immediately south of the Site. This assessment has identified a potential for the development to impact on the setting of the monument, due to visual intrusion from the proposed buildings and access within the southern part of the Site. It is advised that wireframe images are produced for viewpoints looking towards the Site from the monument to better understand the visual impact of the development. Incorporating design measures including the setting back of the built development edge and using mitigation such as planting screening and using colour banding on the buildings will reduce the visual impact on the setting of the monument. With these measures in place the effect on the Scheduled Monument is likely to be at the lower end of the spectrum of less than substantial harm in heritage terms and therefore should not be a constraint to the allocation and subsequent development of the Site.
- In accordance with Local Authority policy and Government policy, as set out in Section 16 of the NPPF (see Section 4 of this report) the archaeological desk based assessment part of this report has been undertaken to clarify the below ground archaeological potential of the Site. This assessment identifies a high potential for archaeological remains dating to the Roman and Medieval periods and a moderate to high potential for Iron Age and Saxon remains within the Site. The archaeology of prehistoric to Medieval date has been truncated to some degree by intensive modern ploughing. In addition, where quarrying has occurred within the Site it has likely removed any archaeological remains. Based on current evidence, it is considered that archaeology should not be a constraint to the allocation and subsequent development of the Site.

Built Heritage

- No built heritage assets would be directly (materially) affected by the Proposed Development.
- It is considered that the development of the Site has the potential to affect the settings and thus significance of two Listed Buildings on Great North Road. However, whilst development on the Site is likely to be visible from the Listed Buildings, this inter-visibility is considered to contribute only a minor level of harm, within the spectrum of less than substantial harm and therefore is not a constraint to the allocation and subsequent development of this Site.

Contents

Figures

1 INTRODUCTION AND SCOPE OF STUDY

1.1 This Cultural Heritage Assessment has been prepared by Sally Dicks on behalf of Prologis UK.

1.2 The subject of this assessment, also known as the Site or Study Site, is known as Wyboston (Prologis) and is centred at TL 16298 57586 (Figs. 1 and 2).

1.3 Prologis UK has commissioned RPS Heritage to establish the archaeological potential of the Site, Heritage constraints upon the allocation of the Site for a mixed-use development and to provide guidance on ways to address any archaeological and built heritage constraints identified.

1.4 The c.40.7 ha Site is located to the east of Wyboston, just to the west of the A1. It currently comprises predominantly arable farmland.

1.5 In accordance with relevant policy and guidance on archaeology and planning, and in accordance with the 'Standard and Guidance for Historic Environment Desk-Based Assessments' (Chartered Institute for Archaeologists October 2020), this assessment draws together the available archaeological, topographic and land-use information in order to clarify the archaeological potential of the Site.

1.6 The assessment also takes into account guidance provided within Principles of Cultural Heritage Impact Assessment in the UK (IFMA, IBHC and CIFA, July 2021).

1.7 To compile the baseline assessment, the following actions were undertaken.

- A July 2022 search of the Bedfordshire and Cambridgeshire Historic Environment Records (HERs) database for all heritage assets (including archaeological sites, Listed Buildings, locally listed buildings, Conservation Areas, etc.) recorded within their respective Study Areas;
- A search of the National Heritage List for England;
- An examination of national and local planning policies in relation to heritage assets;
- A map regression exercise looking at the cartographic evidence for the Site;
- An assessment of available historical, archaeological, documentary and cartographic evidence (web based and other sources);
- A review of the results of archaeological fieldwork undertaken within the vicinity of the Site;

1.8 This assessment thus enables relevant parties to assess the archaeological potential of various parts of the Site and to consider the need for design, civil engineering, and archaeological solutions to the archaeological potential identified.

Limitations

1.9 In any desk-based assessment a degree of uncertainty is attached to the baseline data sources. This includes:

- At the time of writing this assessment it was not possible to undertake a walkover of the Study Site or the Scheduled Monument. This assessment is therefore based on a review of GoogleEarth StreetView Images taken along The Lane, Wyboston.
- The HER can be limited because it often depends on "random" opportunities for research, fieldwork and discovery;
- Lack of dating evidence for sites;

- Documentary sources are rare before the Medieval period and many historic documents are inherently biased; and
- The extent of truncation caused by previous development impacts and landscaping works cannot be fully ascertained.

1.10 Non-designated archaeological assets and find spots have been plotted for a 1km Study Area around the Site (Fig. 4a).

1.11 Non-designated features identified through the National Mapping Programme have been plotted on Figure 4b.

1.12 In addition, Scheduled Monuments, Grade I and II* Listed Buildings and Conservation Areas have been plotted within a wider 2.5km Study Area (Fig. 3). Grade II Listed Buildings will be considered within a 1km Study Area only (Fig. 3).

2 LEGISLATIVE & POLICY FRAMEWORK

Legislation: Planning (Listed Buildings and Conservation Areas) Act 1990

2.1 Section 66(1) states that decision makers must give special regard to the desirability of preserving listed buildings, or their settings, or any features of special architectural or historic interest they possess.

Planning Policy: NPPF (2021)

2.2 The National Planning Policy Framework (NPPF) sets out the strategy for the conservation of heritage assets (both designated and non-designated). Paragraph 199 states that great weight should be given to the conservation of heritage assets and the more important the asset, the greater this weight should be. This applies irrespective of whether the harm is substantial, or less than substantial, as defined by the NPPF.

Planning Practice Guidance

2.3 The Planning Practice Guidance (PPG) has been adopted to aid the application of the NPPF. It reiterates that conservation of heritage assets in a manner appropriate to their significance is a core planning principle.

2.4 The PPG defines the different heritage interests as follows:

- archaeological interest: As defined in the Glossary to the National Planning Policy Framework, there will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
- architectural and artistic interest: These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skill, like sculpture.
- historic interest: An interest in past lives and events (including pre-historic). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation's history, but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.

Historic England Guidance

GPA1: The Historic Environment in Local Plans (March 2015)

2.5 This advice note focuses on the importance of identifying heritage policies within Local Plans. The advice echoes the NPPF by stressing the importance of formulating Local Plans based on up-to-date and relevant evidence on economic, social and environmental characteristics and prospects of the area, including the historic environment.

GPA2: Managing Significance in Decision-Taking in the Historic Environment (March 2015)

2.6 This document provides advice on numerous ways in which decision making in the historic environment could be undertaken, emphasising that the first step for all applicants is to understand the significance of any affected heritage asset and the contribution of its setting to that significance. In line with the NPPF and PPG, the document states that early engagement and expert advice in considering and assessing the significance of heritage assets is encouraged. The advice suggests a structured, staged approach to the assembly and analysis of relevant information:

1. Understand the significance of the affected assets;
2. Understand the impact of the proposal on that significance;
3. Avoid, minimise and mitigate impact in a way that meets the objectives of the NPPF;
4. Look for opportunities to better reveal or enhance significance;
5. Justify any harmful impacts in terms of the sustainable development objective of conserving significance balanced with the need for change; and
6. Offset negative impacts to significance by enhancing others through recording, disseminating and archiving archaeological and historical interest of the important elements of the heritage assets affected.

GPA3: The Setting of Heritage Assets (Second Edition; December 2017)

2.7 This advice note focuses on the management of change within the setting of heritage assets. This document replaces GPA3: The Setting of Heritage Assets (March 2017) and Seeing History in the View (English Heritage, 2011) in order to aid practitioners with the implementation of national legislation, policies and guidance relating to the setting of heritage assets found in the 1990 Act, the NPPF and PPG. The guidance is largely a continuation of the philosophy and approach of the 2011 and 2015 documents and does not present a divergence in either the definition of setting or the way in which it should be assessed.

2.8 As with the NPPF the document defines setting as *'the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve'*. Setting is also described as being a separate term to curtilage, character and context. The guidance emphasises that setting is not a heritage asset, nor a heritage designation, and that its importance lies in what it contributes to the significance of the heritage asset, or the ability to appreciate that significance. It also states that elements of setting may make a positive, negative or neutral contribution to the significance of the heritage asset.

2.9 While setting is largely a visual term, with views considered to be an important consideration in any assessment of the contribution that setting makes to the significance of an asset, and thus the way in which an asset is experienced, setting also encompasses other environmental factors including noise, vibration and odour. Historical and cultural associations may also form part of the asset's setting, which can inform or enhance the significance of a heritage asset.

2.10 This document provides guidance on practical and proportionate decision making with regards to the management of change within the setting of heritage assets. It is stated that the protection of the setting of a heritage asset need not prevent change and that decisions relating to such issues need to be based on the nature, extent and level of the significance of a heritage asset, further weighing up the potential public benefits associated with the proposals. It is further stated that changes within the setting of a heritage asset may have positive or neutral effects.

2.11 The document also states that the contribution made to the significance of heritage assets by their settings will vary depending on the nature of the heritage asset and its setting, and that different

heritage assets may have different abilities to accommodate change without harming their significance. Setting should, therefore, be assessed on a case-by-case basis.

2.12 Historic England recommends using a series of detailed steps in order to assess the potential effects of a proposed development on significance of a heritage asset. The 5-step process is as follows:

1. Identify which heritage assets and their settings are affected;
2. Assess the degree to which these settings and views make a contribution to the significance of a heritage asset(s) or allow significance to be appreciated;
3. Assess the effects of the proposed development, whether beneficial or harmful, on the significance or on the ability to appreciate it;
4. Explore ways to maximise enhancement and avoid or minimise harm; and
5. Make and document the decision and monitor outcomes.

HEAN3: The Historic Environment and Site Allocations in Local Plans

2.13 This document provides more detailed advice on identifying suitable sites for local plan allocations. It contains a similar stepped process to GPA3 for undertaking assessment work. This is:

1. Identify which heritage assets are affected by the potential site allocation
2. Understand what contribution the site (in its current form) makes to the significance of the heritage asset(s)
3. Identify what impact the allocation might have on that significance
4. Consider maximising enhancements and avoiding harm
5. Determine whether the proposed site allocation is appropriate in light of the NPPF's tests of soundness

2.14 These steps are undertaken in the assessment below. Section 4 provides an assessment of the significance of the heritage assets and the contribution made by their settings, in accordance with steps 1 and 2. This assessment is presented in a summary table at paragraph 4.17.

2.15 Section 5 subsequently illustrates the impact to their significance arising from the allocation and subsequent development of the Site, in accordance with step 3. This section also identifies the key constraints and opportunities associated with the development and the mitigation measures incorporated within the masterplan to minimise harm, as required by step 4. Paragraph 6.3 concludes that any potential impacts will be limited and should not preclude the allocation and development of the Site from a heritage perspective and that the allocation of the Site is appropriate and suitable.

Relevant National and Local Designations

Designated Archaeological Sites within the Study Area

2.16 In terms of relevant designated heritage assets, as defined above and as shown on Figure 3 no designated World Heritage Sites, Registered Parks and Gardens, Historic Battlefield sites or Historic Wreck sites lie within the vicinity of the Study Site or the 2.5km Study Area.

2.17 A Scheduled Monument (SM) referred to as *Moated enclosure and associated building platforms, The Lane, Wyboston* (SM Ref. 1012076) is located immediately south of the Site. The Site and the moat earthworks are intervisible, particularly where the Site fronts The Lane. However, the Site itself contributes only a relatively minor element of the significance of the SM, as a small part of its extended landscape setting, whilst this setting has previously been eroded by modern residential and industrial development along The Lane.

2.18 There are two further Medieval SMs between 900m and 1,000m of the Site. These include Chawston Manor (SM Ref. 101114) and The Hillings, Castle Hills (SM Ref. 1009629). The Site does not contribute to their extended settings. In terms of views there is currently no inter-visibility between the Site and the two SMs due to a combination of topographical and modern development screening.

2.19 In line with relevant planning policy and guidance, this desk based assessment seeks to clarify the site's archaeological potential and the need or otherwise for additional mitigation measures.

Designated Built Heritage Assets within the Study Areas

2.20 This Built Heritage Assessment covers a 2.5km Study Area for Conservation Areas and Grade I and II* Listed Buildings and a 1km Study Area for Grade II Listed Buildings. This was based on professional judgement, with the understanding that it would provide a more extensive study of the potential effects of the Proposed Development on built heritage assets within this zone.

2.21 After undertaking research, it was established that the settings, and thus significance, of the majority of the built heritage assets would not experience any effect from the Proposed Development and these were therefore scoped out from further analysis. This is due to one or a combination of the following factors: their settings and thus significance are not reliant upon the development site, they have no known association with it, or they remain well removed and/or are heavily screened from it, so that is not possible to appreciate their significance.

3 GEOLOGY AND TOPOGRAPHY

Geology

3.1 The British Geological Survey (BGS) mapping indicates that the Site is Located on 'Oxford Clay Formation – Mudstone' with overlaying superficial deposits of 'River Terrace Sand and Gravel' (http://mapapps.bgs.ac.uk/geologyofbritain/home.html). The BGS describes these Anglian Stage glacial deposits as '*Quarternary, sedimentary deposits are fluvial in origin…ranging from coarse- to fine-grained and form beds and lenses…*'.

3.2 At present there are no Site Investigation records available for the Site.

Topography

3.3 The natural topography of the Site is generally flat at between 19m and 21m Above Ordnance Datum (AOD) with an imperceptible fall from west to east.

3.4 There are no water courses within the Site, however the River Great Ouse floes only 300m to the east. Quarrying has historically taken place within the Site and this has resulted in the creation of a series of ponds.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE

Timescales used in this report

Prehistoric

Palaeolithic	900,000 -	12,000 BC
Mesolithic	12,000 -	4,000 BC
Neolithic	4,000 -	2,500 BC
Bronze Age (including Chalcolithic)	2,500 -	800 BC
Iron Age	800 -	AD 43

Historic

Roman	AD 43 -	410
Saxon/Early Medieval	AD 410 -	1066
Medieval	AD 1066 -	1485
Post Medieval	AD 1486 -	1799
Modern	AD 1800 -	Present

Introduction

4.1 This chapter reviews the available archaeological evidence for the Site and the archaeological/historical background of the Study Site and surrounding area, and, in accordance with NPPF, considers the potential for any as yet to be discovered archaeological evidence on the Site prior to any assessment of any later development or below ground impacts.

4.2 What follows comprises a review of known archaeological assets and historic landscape character within a 1km buffer of the Site boundary (Fig. 4a and b), also referred to as the Study Area, held on the Bedfordshire and Cambridgeshire Historic Environment Records (HERs) (provided July 2022), together with a historic map regression exercise charting the development of the Study Area from the 18th century onwards until the present day.

4.3 The map regression exercise has demonstrated that the majority of the Site has remained open land until the present day.

4.4 This chapter subsequently considers the site conditions, later development and below ground impacts, and whether the Proposed Development is likely to impact archaeological assets and potential archaeological assets identified below.

Previous Archaeological Work

4.5 The archaeological background is partly informed by baseline studies and summaries of fieldwork undertaken within the Study Area.

4.6 Various programmes of archaeological investigation and excavation have been undertaken to the north-east of the Study Site at Bell Farm, Eaton Socon on sites also known as Priors Gate, Alpha Park and Great North Road (CHER Refs ECB2263, ECB2719, ECB1963-65 and EC3108, ECB3052

and ECB4416). The excavations recorded an extensive, multi-phase Roman field and enclosure system, predominately dating to the mid-late 2nd to later 3rd/4th centuries. Evidence for Roman gravel and sand extraction was also noted. Early Saxon settlement, in the form of Sunken-Floored Buildings was identified at the western end of the Site.

4.7 An archaeological trench investigation was undertaken on land adjacent to Heddings Farm, The Lane, Wyboston (BHER Ref. EBB1324). Three trenches were excavated, one of which contained no archaeology, one contained 10th to 11th century features and a third trench contained the remains of 18th and 19th century evidence of occupation.

4.8 An archaeological trench investigation at No. 41 Rookery Road, Wyboston (BHER Ref. EBB1176) recorded no archaeological finds of features.

4.9 A geophysical survey (June 2010) and a programme of archaeological evaluation trenching (February 2011) on land adjacent to the Black Cat Roundabout, Chawston (BHER Ref. EBB908) recorded Roman ditches and pits. These were possibly related to an extensive cropmark site focussed to the field immediately to the west. Further archaeological work was undertaken on an extension to the Black Cat Roundabout in 2015 (HER Ref. EBB951, EBB952 and EBB950).

4.10 A programme of evaluation trenching was undertaken on land to the rear of No. 2 Great North Road, Chawston (HER Ref. EBB561). No archaeological features or finds were recorded on the site.

4.11 A programme of archaeological monitoring during the construction of a property extension recorded human remains, possibly imported during quarrying and earthmoving operations (BHER Ref. EBB792).

4.12 A programme of geophysical survey and archaeological evaluation trenching on land west of Brook Cottages, Chawston (BHER Ref. EBB1331) recorded Roman ditches and pits.

4.13 A watching brief at Chawston Crossroads (BHER Ref. EBB1342) was undertaken during the excavation of foundations for a large industrial building. A Post-Medieval ditch and a large undated pit (possibly a quarry pit) were recorded.

4.14 An archaeological evaluation was carried out on land at Nos 20 and 48 The Lane, Wyboston (BHER Ref. EBB1318). The trenching revealed features of probable 19th and 20th century date with residual Medieval pottery. A follow up programme of archaeological excavation revealed Medieval ditches and pits along with modern features (BHER Ref. EBB1041).

4.15 Various programmes of archaeological work have been undertaken on Black Cat Quarry (North) including a strip, map and sample excavation and a watching brief (BHER Ref. EBB1458). Archaeological remains dating to the Neolithic period, Iron Age and Late Iron Age/Roman period were identified on the site. In addition, a Mesolithic presence was evidenced by the residual deposition of struck flints in later features.

Palaeolithic

4.16 The earliest archaeological finds in the wider region date to the Palaeolithic period. There are no Palaeolithic artefacts within the Study Area. Such artefacts, in combination with surviving lands-surfaces, are very rarely '*in-situ*'. On this basis there is a low potential for Palaeolithic remains at the Study Site.

Mesolithic

4.17 Mesolithic hunter-foragers were operating within a largely forested inland environment and consequently their camps are usually found in coastal areas, and where within inland areas, by rivers and streams, used both for communication and resources.

4.18 Mesolithic worked flints have been recovered from later features during excavations at Black Cat Quarry suggesting activity nearby during this period (BHER Ref. EBB1458).

Neolithic

4.19 The first farmers of the Neolithic created post-glacial forest clearances for the newly domesticated crops and stock. As in all the following periods the river terraces proved a focus for settlement and are generally proven to be more attractive to Neolithic and Bronze Age farmers than the claylands.

4.20 There are no known Neolithic sites or finds within the Study Site. Archaeological excavations at Colmworth Business Park, Eaton Socon recorded two pits which contained Neolithic pottery, burnt flint, charred hazel nut shells and carbonised plant remains (CHER Ref. MCB16709).

4.21 An archaeological evaluation of land at Alpha Park Eaton Socon revealed a pit containing an antler pick, the date of which was suggested to be Neolithic (CHER Ref. 18206). A further programme of excavation revealed a number of pits, containing various artefacts including struck flint, an antler pick and an aurochs horn core. Palaeolithic flint tools were also found within later Neolithic features.

4.22 A Neolithic hearth was discovered on land to the rear of a cottages at Little End, Eaton Socon (CHER Ref. MCB00369). A second Neolithic hearth was recorded in Mr Wright's garden in Eaton Socon (CHER Ref. MCB28834).

4.23 Archaeological excavations on land off the Great North Road in 2008 recorded a single linear ditch dated to the Neolithic period (CHER Ref. MCB30667).

4.24 Based on the available information, a low to moderate potential for Neolithic remains is identified for the Study Site.

Bronze Age

4.25 The Bronze Age provides the first substantial evidence for settlement and farming within the wider area. It is also notable that the emergence of Middle and Late Bronze Age field-systems, representing a further intensification of land clearance for the first permanent farming settlements, are a common phenomenon close to the major rivers such as the Great Ouse. The Biddenham Loop of the River Great Ouse provides one particularly fine example of a Middle Bronze Age field-system (Luke and Mortimer 2016).

4.26 Within the Study Area the HER records the discovery of a large ring-ditch of probable Bronze Age date visible as a cropmark on aerial photographs south of Northfield Road. The ring-ditch is up to 3.9 metres wide and encloses an area of about 17.9 metres in diameter (BHER Ref. MBD16738). A second cropmark site north/northwest of Spinney View Farm has been identified as a possible Bronze Age round barrow (BHER Ref. MBB22313).

4.27 The HER records the discovery of a Bronze Age flint arrowhead at Eaton Socon Lock (HER Ref. 00372). In addition, worked flint material dating to the Bronze Age has been found in later contexts at various sites within the Study Area (CHER ref. MCB28834, CHER Ref. MCB18206 and CHER Ref. MCB16504).

4.28 Based on the available evidence, low to moderate potential for Bronze Age features at the Study Site, although residual flint artefacts may be present in low density.

Iron Age

4.29 Iron Age society seems to have become increasingly territorial, with political power apparently focussed on hillforts (and later on oppida in southern and south-eastern England).

4.30 In addition to hillforts the East Midlands area is characterised by diverse settlement forms. These included single undefended farms, defended farms (e.g. 'Wotton Hill' style enclosures), 'pit cluster settlements' that appear to show an emphasis on arable production, and 'aggregated settlements' that comprise a number of residential units.

4.31 Bedfordshire was located within the territory of the powerful Catuvelluani tribe in the Late Iron Age at which time some of the defensive farms appear in the archaeological record.

4.32 There are no known hillforts within the close vicinity of the Site, although farmsteads, hamlets and villages of Iron Age date are known across the wider region from most geologies (with increasing recognition that heavier clay regions were by no means exempt from settlement).

4.33 Several cropmark sites of probable Iron Age date have been recorded within the Study Area. These include the following:

- A cropmark site comprising two rectangular enclosures and four ring ditches was recorded at Wyboston Lakes (BHER Ref. MBD480).
- Cropmarks representing possible Iron Age and Roman settlement remains have been identified on land northwest of the Black Cat Roundabout (HER Ref. MBD745).
- A cropmark site comprising sub-rectangular enclosures is recorded south of Maple Tree Farm (BHER Ref. MBD1651).
- A possible Iron Age or Roman sub-rectangular enclosure visible as a cropmark has been identified southeast of Folly Farm (BHER Ref. MBD1793).
- A possible Iron Age or Roman settlement has been identified by cropmarks south of Field Farm Cottages (BHER Ref. MBD16737).
- A number of probable Iron Age or Roman joined rectilinear enclosures and linear boundary ditches visible as cropmarks have been recorded to the west of Dovehouse Farm (BHER Ref. MBD17147).
- A cropmark showing an L-shaped ditch of possible Iron Age date was recorded southeast of Westfield Road (BHER Ref. MBB22308).
- A fragmentary sub-rectangular ditched enclosure of probable Iron Age or Roman date is visible as a cropmark north of Heddings Farm (BHER Ref. MBB22310).
- A probable Iron Age pit alignment visible as a cropmark is recorded north of Maple Tree Farm (BHER Ref. MBB22312).
- A possible settlement of Iron Age or Roman date is visible as a cropmark southeast of Cobholden Farm (BHER Ref. MBB22338 and MBB22339).
- Two conjoined square enclosures of probable Iron Age or Roman date were recorded west-north-west of Bell Farm (CHER Ref. 100064).
- A cropmark site was recorded adjacent to the Great River Ouse at Wyboston. Later archaeological excavations on the site in 1986 recorded a compact block of sub-rectangular enclosures with internal round house ring ditches (BHER Ref. MBD476).

4.34 An archaeological evaluation at Bushmead Road, Eaton Socon recorded a Middle Iron Age ditch and a follow up excavation revealed the remains of a sub-rectangular which an enclosure on its north-eastern side. The ditch was full of Middle Iron Age pottery and animal bone (BHER Ref. MCB16945).

4.35 An archaeological evaluation and excavation at the Wheatsheaf Public House, 125 Great North Road recorded two linear ditches containing late Iron Age pottery and a loom weight (BHER Ref. ECB3718).

4.36 In view of the number of Iron Age sites and finds within the Study Area, a moderate to high potential is identified for this period within the Study Site.

Romano-British

4.37 With the Roman period came a re-organisation of the settlement system with the establishment of an efficient road network. The major Roman route of Watling Street linking Londinium with Wroxeter, is now followed by the A5 road well to the west of the Study Area.

4.38 The further rise of non-agriculturally based professions such as traders and administrators was indicative of a boom in the Romano-British rural economy. As a result of an increase of wealth, stability and rising population settlement sites are common in the area and across the East Midlands in general, even within areas of heavier clays. The usual settlement density for Roman farms is between 500m and 1km apart.

4.39 The National Mapping Programme has recorded a number of cropmarks and earthwork features within the Study Site and the wider Study Area (see Figure 4b). Within the Study Site the HER records a cropmark site comprising a double-ditched rectilinear enclosure and attached ditched boundaries of probable Roman settlement (BHER Ref. 1881: Figure 4a). The site is described on the HER as follows:

'Located about 500 metres west of Bell Farm, Little End, the 3 metres wide ditches form a rectangular enclosure about 116 metres WNW-ESE and 67 metres NNE-SSW that encloses an internal area about 96 x 48.5 metres. Attached to the SSW facing side is a ditched rectilinear enclosure that may measure 105 x 83 metres, through which is a possible trackway about 128 metres aligned NW-SE. There is also a possible 40 metre long 5 pit alignment, pits, a roughly 9 metre square macula, as well as other linear features. The features are not visible on aerial photographs taken in 2008.'

4.40 Various programmes of archaeological investigation and excavation have been undertaken to the north-east of the Study Site at Bell Farm, Eaton Socon on sites also known as Priors Gate, Alpha Park and 21-35 Great North Road (CHER Refs ECB2263, ECB2719, ECB1963-65 and EC3108, ECB3052 and ECB4416). The excavations recorded an extensive, multi-phase Roman field and enclosure system, predominately dating to the mid-late 2nd to later 3rd/4th centuries. Evidence for Roman gravel and sand extraction was also noted. The focus of Roman activity appears to be within the central and eastern parts of the excavation area with only field ditches running towards the Study Site.

4.41 Parts of the Study Area and surrounding local landscape were undoubtedly settled and farmed at this time. Indeed, many of the cropmark sites mentioned in paragraph 4.3.1 above may date to the Roman period or have components that are late Iron Age/Roman in date (BHER Refs MBD476, MBD745, MBD1651, MBD1793, MBD16737, MBD17147, MBB22308, MBB22310, MBB22312, MB22338, MBB22339 and CHER Ref. 10064).

4.42 Archaeological excavations at Colmworth Business Park, Eaton Socon recorded a Roman ditch and a series of Roman irrigation channels (CHER Ref. MCB16710).

4.43 In view of the potential Roman site within the Study Site visible as a cropmark (BHER Ref. 1881), and the number of Roman sites and finds nearby, a high potential is identified for archaeological remains this period within the Study Site.

Anglo-Saxon

4.44 The Saxon period is marked by the evacuation of the Roman army and administration under Honorius in AD410. The character, extent and location of Post-Roman/Saxon settlement in the area is poorly understood.

4.45 Castle Hills a Scheduled Monument (SM Ref. 1009629) overlies part of the late Saxon vill (BHER Ref. 00374).

4.46 Archaeological excavations at Alpha Park recorded Early Saxon settlement, in the form of Sunken-Floored Buildings at the western end of the site c.100m east of the Study Site (CHER Ref. MCB18207). A single Saxon pit containing Late Saxon/Early Medieval pottery was discovered during the investigations at 21-35 Great North Road (CHER Ref. MCB20473).

4.47 The HER records the discovery of Saxon finds at a number of sites within the Study Area including:

- A Saxon brooch in St Neots (CHER Ref. 11779). A single sherd of Saxon pottery was recovered during excavations at Priors Gate (CHER Ref. MCB16504).
- Anglo-Saxon metalwork was recovered from the site of a cropmark to the east of Little End, in an area which has also produced Roman finds (BHER Ref. MBD3239).
- Anglo-Saxon brooches were also discovered on a cropmark site to the west of the Bell Inn (BHER Ref. MBD15167).

4.48 In view of the discovery of Saxon Sunken-Floored Buildings c.100m east of the Study Site, a moderate to high potential is identified for further evidence of Saxon settlement within the Study Site itself. Overall, a moderate to high potential is identified for this period.

Medieval

4.49 Throughout the Midlands, there is increasing evidence to suggest that the early Saxon settlement pattern began to change in the 7th/8th century to a nucleated, village pattern based around a Church and Manor, a pattern that was maintained through the Medieval period.

4.50 The Domesday Book records six manors, or holdings, in Wyboston in 1086. The first of these was held by the Benedictine Abbey of Ramsey in Huntingdonshire and comprised a small area of one and a half virgates "It has been laid waste; value however 16 pence". Another manor was held by Eudo the Steward or Eudo, son of Hubert, who held twenty seven manors in Bedfordshire as well as other manors in other counties. His holding comprised six hides, three virgates and had eight villagers, eight smallholders and three slaves. A small half virgate holding was in the hands of Hugh de Beauchamp, later created Baron of Bedford. A fourth holding was in the hands of Nigel de Albini whose tenant was a man named Pirot, who also held a manor in Northill from Eudo. This manor extended to nine hides, one virgate and had twelve villagers and six smallholders. Richard, son of Count Gilbert held another manor in Wyboston. He is also known as Richard FitzGilbert, Richard, Lord of Clare, Richard Bienfaite and Richard of Orbec and Tonbridge. His Wyboston manor was tenanted by the "monks of Saint Neot". The manor had woodland for a hundred pigs and had belonged outright to Saint Neot's in 1066. The last manor was held by Azelina, wife of Ralph Tallboys and was tenanted by a man named Ludichael. It comprised five and a half virgates, one villager and two smallholders. Based on the records in the Domesday Book, Wyboston had a population of twenty one villagers, sixteen smallholders and three slaves in 1086 (c. forty men), which suggests it had an overall population of approximately one hundred and sixty, making it a large settlement in contrast to its present size (www.british-history.ac.uk).

4.51 The Medieval settlement of Wyboston was centred around the village green (BHER Ref. MBD8621), along The Lane immediately to the south of the Study Site and Great North Road to the east of the Study Site (BHER Ref. MBD17102). Archaeological investigations at Heddings Farm, The Lane Wyboston recorded an early Medieval pit and other ‘probable Medieval features’ including a pit and two gullies (BHER Ref. MBB2287).

4.52 The remains of a Medieval moated site, a Scheduled Monument, are located south of The Lane close to the southern boundary of the Study Site (SM Ref. 1012076 and BHER Ref. MBD474). The Bedfordshire HER records the site as follows:

‘The site includes the Medieval enclosure and an adjacent series of building platforms. The moated enclosure is D-shaped in plan and measures approx. 85m along the straight southern edge of the moat. The surrounding moat is 8m wide and about 1.2m deep and is dry except for part of the east arm. Prominent external banks, surviving up to 1.2m high, flank the west and east sides. The island is believed to be the site of a manor house and a number of deep hollows mark the positions of former buildings. A square platform outside the north east corner of the moat forms part of an original entrance to the moated enclosure. To the east a number of rectangular platforms mark the site of at

least five buildings associated with the medieval moat. Some of the platforms survive up to 0.3m in height while others are defined by wall lines and hollows partly obscured by vegetation.'

4.53 During the Medieval period, the Study Site also comprised parts of the open fields of Wyboston and Eaton Socon and these survived until the parliamentary enclosure of Eaton Socon in c.1799. Individual elements of the Medieval open field system which survive as ridge and furrow have been identified from aerial photographs within the Study Site and the wider Study Area. Historically, ridge and furrow earthworks were identified within the southern part of the Study Site, however it is noted on the HER that these are no longer extant as a result of ploughing (BHER Ref. MBD5209).

4.54 Based on the available information, a high potential is identified for Medieval settlement remains within the southern part of the Study Site and a high potential is identified for evidence of Medieval agricultural practises within the remainder of the Site.

Medieval sites, villages, manors and churches within 2.5km of the Study Site

4.55 There are several key Medieval sites, villages, manors and churches within the wider 2.5km Study Area (Fig. 3).

4.56 Domesday Eaton Socon was the seat of Eudo Dapifer, who had succeeded Wulfmar, the great Bedfordshire thegn. His lands later became known as the barony of Eaton. Eaton Manor comprised 20 hides, and included two mills worth 36*s*. 2*d*., 100 eels, woodland for 400 swine, and 2 acres of vineyard. Eudo Dapifer died in 1120, when his Bedfordshire lands, escheating to the Crown, were granted to a member of the house of Beauchamp.

4.57 The Church of St Mary (Grade II Listed) within Eaton Socon dates from the early14th century (CHER Ref. 00371). To the east of the church is Castle Hills a Scheduled Norman ringwork castle comprising a large horse-shoe ditch enclosing on the river side two sub-rectangular wards (SM Ref. 1009629 and BHER Ref. 00374). The earthworks of the two wards constituted a Norman earthwork castle, datable by pottery to the 12th century. The HER describes the monument as follows:

"Castle Hills is a Norman ringwork castle overlying part of a late Saxon vill and medieval village which was deserted, at least in part, to make way for the stronghold. The monument is situated on a gravel terrace on the west bank of the River Great Ouse. The ringwork has a bailey on its north side and is surrounded to the west by a ditch enclosing an outer court. The ringwork itself is irregular in plan, rounded at its western end with its eastern side straight and parallel with the course of the river. The vill was probably the residence of Ulmar, Thegn of Eaton Socon under King Edward the Confessor. After the Conquest of 1066 his Bedfordshire lands (Eaton Socon was formerly in that county) passed to the Norman Baron Eudo `Dapifer' whose holding is recorded in Domesday as `Etone'. Eudo died in 1120 without issue and Eaton Socon was eventually granted to the first Hugh de Beauchamp. Geoffrey de Mandeville, who was connected by marriage or obligation to de Beauchamp, is accredited with the construction of the ringwork during his war with Stephen in the 1140's."

4.58 The site of a leper hospital is documented at Sudbury near Eaton Socon in the 1267 (CHER Ref. MCB28838).

4.59 The HER records the site of the Medieval settlement of Chawston c. 650m south of the Study Site (BHER Ref. MBD17097). At the time of the Domesday Survey William Spec held 7 hides and 3 virgates of land in Chawston, and Eudo Dapifer 1 hide and 1 virgate in Chawston. Following a period of dual overlordship between the 11th and 13th centuries, Chawston Manor is stated to be held by the de Roos of Hamlake. Chawston manor moated site and associated fishpond, a Scheduled Monument, is located at the western end of the village (SM Ref. 101114 and BHER Ref. MBD3407).

Post-Medieval and Modern

4.60 There are several Post-Medieval Grade II Listed Buildings within the 1km Study Area, the closest buildings are those located along Great North Road including the Crown Inn (National List

111464453), No. 31 (NL1146425), No. 64 (NL114928), Nos 66 & 68 (NL 1114929), Brook Cottages (NL1311862), Forty Farmhouse (NL11464418) and Dovecote at Forty Farm (NL1321213).

4.61 To the west of the A1 within the village of Wyboston there are three Grade II Listed Buildings including Chawston Lodge (NL1245334), Heddings Farmhouse (NL1114930) and Moat Cottage (NL1146457).

4.62 Further to the south of the Study Site within the village of Chawston there are a further five Listed Buildings including Claygates (NL1138337), Scuttle Cottage (NL1321208), Bridge Farmhouse (NL1114920), Holly Cottage (NL1311859), Laburnum Cottage (NL1321207).

4.63 St Neots Conservation Area contains the remaining Post-Medieval Grade II Listed Buildings within the Study Area. These include Nos 32, 36 & 38 Akerman Street (NL1127987), The White House (NL1129907), No. 5 Peppercorn Lane (NL1162199), No. 134 Peppercorn Lane (NL1161952), No. 108 Great North Road (NL 1309849), No. 134 Great North Road (NL1161952), No. 206 Great North Road (NL1161964), Eaton Mills, School Lane (NL1162299), The Old Sun Inn (NL1309869), Nos 162, 164, 168B and 168 Great North Road (Group NL1330992), No. 184 Great North Road (Wagon and Horses PH: NL 1330993), The Old Plough Inn, Great North Road (NL1331026) and No. 111 Great North Road (NL1331027).

4.64 The St Neots Conservation Area and component town of Eaton Socon is characterised as follows (Huntingdon District Council 1992):

'St Neots is a town in Huntingdonshire located approximately 12km south of Huntingdon. It is comprised of a number of ancient settlements, taking its name from the largest of these. These settlements are situated on either side of the Great River Ouse. Those on the east bank were in the historic county of Huntingdonshire, whilst those on the west bank were in Bedfordshire. The present town was formed when the county boundary was extended westwards in 1965 and the whole area was incorporated into Cambridgeshire in the 1972-4 local government reorganisation.'

Eaton Socon was recorded in Doomsday Book as a manorial estate, with its origin in Saxon times. Between the site of the modern village and the river lie some earthworks associated with a castle built during the Anarchy at the time of Stephan and Matilda by Geoffrey of Mandeville. The village economy was boosted during the early modern period by the coach traffic along the Great North Road, along which the settlement lies. Eaton Socon has one Scheduled Ancient Monument, being the Hillings (the site of the 12th century castle SAM 20434). There are 30 listed buildings in the settlement. The first conservation area for Eaton Socon was designated in May 1991.'

4.65 The HER records a high number of Post-Medieval sites and finds within the Study Area and these are largely related to evidence of agricultural activity in the form of ridge and furrow earthworks (HER Refs MBD3538, MBB22421) and field boundaries (HER Ref. MBD1793). Other Post-Medieval HER entries within the Study Site include quarry sites (BHER Ref. MBD1651, MBD8629, MBB22311), a milestone (BHER Ref. MBD8809), a decoy pond (BHER Ref. MBD9068) and the navigable extent of the Great River Ouse (BHER Ref. MBB2261).

4.66 The following is a review of cartographic and aerial photographic evidence for the Study Site and its immediate surroundings.

Table 1: Cartographic and Aerial Photographic Evidence

Map	Information
1765 Jeffreys Map (Fig. 5)	This pictorial map shows the majority of the Study Site occupying undeveloped land to the west of the Great North Road. Properties along the northside of The Lane are evident within the far southern part of the Study Site.

Wyboston about 1799 (Fig. 6)	This map shows how the land was divided up into parcel. Properties are visible along The north side of the Lane within the far southern part of the Study Site.
1808 Ordnance Survey (Fig. 7)	This map shows no detail for the Study Site itself.
1815 Ordnance Survey Drawing (Fig. 8)	This map shows the layout of the field boundaries within the Study Site.
1882 1st Edition (Fig. 9)	This map shows the Study Site occupying parts of 11 fields.
1900-02 Ordnance Survey (Fig. 10)	No change to the layout of the Study Site.
1950 Ordnance Survey (Fig. 11)	No change to the layout of the field boundaries, however one of the fields is shown containing quarry pits. In additional two buildings are shown to the east of the pits. To the west of the Study Site the Ordnance Survey shows *Small Holdings.* The Land Settlement Association was responsible in the 1930s for the allocation of cooperative smallholdings, each with its own house, to unemployed workers, resulting in a distinctive pattern of fields and buildings.
1958-1960 Ordnance Survey (Fig. 12)	No change to the layout of the Study Site.
1968 Ordnance Survey (Fig. 13)	No change to the layout of the Study Site.
1974 Ordnance Survey (Fig. 14)	This map shows the layout of the field boundaries within the Study Site. A petrol filling station and a property called The Limes can be seen to the east of the quarry pits. In addition, a junction off the A1 had been constructed to the immediately east of the Study Site. Pylons are shown crossing the northern half of the Study Site.
1981 Ordnance Survey (Fig. 15)	No change to the layout of the Study Site.
1987 Ordnance Survey (Fig. 16)	No change to the layout of the Study Site.
1999 Aerial photograph (Google Earth) (Fig. 17)	No change to the layout of the Study Site.
2002 Aerial Photograph (Google Earth) (Fig. 18)	No change to the layout of the Study Site.
2006 Aerial Photograph (Google Earth) (Fig. 19)	No change to the layout of the Study Site.
2020 Aerial Photograph (Google Earth) (Fig. 20)	No change to the layout of the Study Site.

4.67 A number of other buildings and features of Post-Medieval date located on Figure 3 are somewhat distant from the Site and are not considered relevant to this assessment. Based on the above, the potential for agricultural features of Post-Medieval date is high but the potential for settlement and industry is low.

Historic Landscape

4.68 The Study Site is within gently rolling Oxford Clay landscape characterised within the Natural England National Character Area 88 Bedfordshire and Cambridgeshire Claylands (NE555) as a broad, gently undulating clayland plateau, dissected by shallow rivers and characterised by large scale commercial arable farming (Natural England 2014). The Key Characteristics of the area are described as follows:

'Underlying geology of Jurassic and Cretaceous clays overlain by more recent Quaternary glacial deposits of chalky boulder clay (till) and sand and gravel river terrace deposits within the river valleys. Lime rich, loamy and clayey soils with impeded drainage predominate, with better-drained soils in the river valleys.

Settlements cluster around major road and rail corridors, with smaller towns, villages and linear settlements widely dispersed throughout, giving a more rural feel. Small villages are usually nucleated around a church or village green, while fen-edge villages are often in a linear form along roads.'

4.69 The Bedford Borough Landscape Character Assessment (Bedford Borough Council, May 2014, updated October 2020). The Site lies mainly within the Type 4A Great Ouse Clay Valley. Key Characteristics relating to the Study Site and its immediate vicinity include:

4A.1.4 Restored sand and gravel workings are a recreational and ecological resource including Wyboston Leisure Park and Bedford River Valley Park, while active large scale quarrying continues for instance to the north of Willington.

4A.1.8 Settlement consists of medium sized villages and large industrial complexes including the generating station at Little Barford, and mixed development around Wyboston Lakes, and clusters of nurseries e.g. around Wyboston.

4.70 The straight field boundaries and hedgerows of the Site, that represent the surviving elements of the historic landscape (see Table 1), are typical of 18th and 19th century Enclosure. There are no extant remains of Medieval or Post-Medieval ridge and furrow.

4.71 Mineral extraction operations expanded throughout the 20th century, supplying the increasing demands of the construction industry. Worked-out gravel pits are widespread throughout the Ouse Valley. Historic quarrying is evident by the presence of ponds within the central southern part of the Study Site.

Below ground truncation

4.72 The Study Site has been subject to truncation from ploughing to the extent that extant traces of artefact concentrations (e.g. within middens) and earthworks, such as ridge and furrow, will have been removed. Buried archaeological deposits and/or features below the ploughsoil are likely to have been horizontally truncated to some degree. However, the majority of deeper features cut into the geology, such as ditches pits and post-holes tend to survive below modern ploughed horizons.

4.73 Where quarrying has taken place within the Study Site archaeological remains are unlikely to survive.

Assessment of Significance and Impact

Introduction

4.74 Existing national policy guidance for archaeology (the NPPF as referenced in section 2) enshrines the concept of the 'significance' of heritage assets. Significance as defined in the NPPF centres on the value of an archaeological or historic asset for its 'heritage interest' to this or future generations.

4.75 No relevant nationally significant designated heritage assets as defined in the NPPF are recorded within, or within the vicinity of, the Study Site. Additionally, there are no non-designated archaeological assets recorded within the Study Site by the Bedfordshire and Cambridgeshire HERs.

Designated Archaeological Assets - GPA3 assessment
Summary of Impacts to Designated Archaeological Assets

4.76 There are no designated heritage assets within the Study Site. However, a Scheduled Monument (SM) referred to as *Moated enclosure and associated building platforms, The Lane, Wyboston* (SM Ref. 1012076) is located immediately south of the Site. The Site and the moat earthworks are intervisible, particularly where the Site fronts The Lane. The impact of the Proposed Development on the setting of the heritage asset is considered in Section 6 of this report.

Non-designated heritage assets including unknown archaeology

4.77 National Planning Policy Framework sets out (Paragraph 203) that:

"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."

4.78 The remains of ploughed-out ridge and furrow earthworks are recorded within the Study Site.

4.79 The National Mapping Programme has recorded a number of cropmarks and earthwork features within the Study Site. Some of these features may be evidence of below ground archaeology. Indeed, one of the cropmark sites has been identified as being of possible Roman date (see Figure 4a).

4.80 Based on the assessment criteria set out above the significance/value of the heritage assets that have been identified through the baseline assessment, within the vicinity of the Proposed Development Site by period are considered to be as follows.

Table 2: Below ground archaeological potential and significance

Period:	Identified Archaeological Potential and Likely Significance (if present):
Palaeolithic	Low potential, Low (Local) Significance;
Mesolithic	Low potential, Low (Local) Significance;
Neolithic & Bronze Age	Low to Moderate potential, low (Local) to medium (Regional) Significance;
Iron Age	Moderate to High, low (Local) to medium (Regional) Significance;
Roman	High, low (Local) to medium (Regional) Significance;
Saxon	Moderate to High, low (Local) to medium (Regional) Significance;
Medieval	High potential for settlement (along The Lane), High potential for agricultural furrows, Low (Local) Significance;
Post Medieval & Modern	Low potential for any remains aside from Post Medieval field boundary ditches; Negligible to Low Significance.

Summary of the Likely Effect on Non-Designated Assets

4.81 All mitigation measures would be undertaken prior to, or during the construction process by a suitably qualified (CIfA registered) archaeological organisation (RAO) and would be signed off as complete by the archaeological advisor to Bedford Borough Council, before being released for construction. The exact scope of any mitigation works will be agreed with the archaeological advisor in the form of a further mitigation Written Scheme of Investigation (WSI).

4.82 Public benefit of the archaeological mitigation will include a Prologis organised public open day during the excavations to enable interested local residents and schools the opportunity to observe

the archaeological work in progress. The archaeological results will also be published in an appropriate journal and a popular report on the findings, suitable for children, will also be produced.

4.83 Taking into account the contribution to archaeological knowledge that the investigations and their public dissemination would provide, it is predicted that this mitigation would lead to no more than a negligible effect from the construction of the development.

4.84 It is predicted that there would be negligible effect on Historic Landscape via removal field boundaries within the development site, although external hedges of higher significance will be retained.

5 SITE CONDITIONS, PROPOSED DEVELOPMENT AND IMPACTS ON BELOW GROUND ARCHAEOLOGICAL REMAINS AND HISTORIC LANDSCAPE CHARACTER

Site Conditions

5.1 An inspection of Google Earth and Google Street View images and aerial photographs validates the historic landscape and cartographic evidence and confirms that the majority of the site is in agricultural use.

5.2 Historic maps and the Historic Environment Record indicate that two areas with the Study Site have been quarried, a process that forms an element of the historic landscape character of the site and which also will have destroyed any archaeological potential there.

5.3 Within undeveloped parts of the Proposed Development site, ploughing has caused widespread below ground disturbance.

Proposed Development

5.4 This assessment has been prepared to support the allocation of the Site for a high quality mixed use development that will provide a business and life sciences campus and innovation hub, logistics floorspace and an EV TRSA with ancillary community park facilities. The Proposed Parameters Plan can be found at Figure 22 of this report.

Impacts on below ground archaeological remains

5.5 The NPPF Chapter 16 *Conserving and Enhancing the Historic Environment* employs the concept of significance as the basis for assessing impact on the historic environment (paragraph 189). Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local authorities should require developers to submit an appropriate desk-based assessment and where necessary, a field evaluation.

5.6 This assessment has identified a moderate to high or high potential for the Proposed Development Site to contain the following archaeological remains:

- Middle to Late Iron Age settlement and agricultural activity
- Romano-British settlement, industrial activity and agricultural activity
- Saxon settlement
- Medieval and Post-Medieval Open field systems in the form of ploughed-out ridge and furrow
- Medieval settlement remains along The Lane, Wyboston

5.7 It is anticipated that the archaeological advisor to Bedford Borough Council will request a programme of geophysical survey and targeted trial trenching prior to the determination of any planning application for the site.

5.8 Where archaeological remains will be impacted by the development a comprehensive package of archaeological investigation, recording, publication and dissemination which aims to analyse and explain the archaeological and historical interest of the asset is proposed. The results will be published in a variety of technical and non-technical formats and educational and recreation opportunities to disseminate this information on the Study Site will be pursued.

Impacts on Historic Landscape Character

5.9 The need to protect the historic landscape character of the surrounding area around the Study Site has been factored into the master planning of the Proposed Development. As a result, the Proposed Development ensures that development is set back a significant distance from key historic landscape character sensitivities within the surrounding area including Listed Buildings along The Lane and Great North Road.

5.10 Within the Study Site, historic landscape features include hedgerows and former quarry pits. The ridge and furrow earthworks recorded on the HER are no longer extant having been ploughed-out during the 20th century. The quarry pits within the central southern part of the Site will be retained as ponds within a proposed wetland area. There appears to be no internal hedgerows that would qualify as 'historic' in terms of the 1997 Hedgerows Regulations. However, there are several hedgerows around the boundary of the Site that may qualify. However, these hedgerows will be retained by the development. Overall, there will be no requirement to mitigate the loss of historic landscape character within the Site.

6 PROPOSED DEVELOPMENT AND IMPACTS ON THE SETTING OF HERITAGE ASSETS

Introduction

6.1 To assess the impact of the development on the setting of heritage assets, the height and scale of the proposed new buildings, set out in the accompanying Parameter Plans has been noted with respect to the topography. The spatial location of the site has been taken into account in terms of the industrial development to the north-east and in respect to the existing infrastructure of roads, particularly the A1 and associated junctions. The impact of development also takes account of the topography of the landscape.

6.2 The impact of the Proposed Development has also taken into account the contemporary landscape within the site including the built form, landscaping and infrastructure that has and continues to be constructed in accordance with the existing consented development in the vicinity of the Site.

6.3 Topographically the site is situated on a relatively low-lying area within the Great Ouse Valley.

6.4 The starting point of the analysis is to identify those heritage assets likely to be affected by the development proposal. In this instance, the Study Area for Scheduled Monuments, Listed Buildings and Conservation Areas was chosen on the basis of professional judgement. Figure 3 shows the distribution of designated heritage assets within 2.5km of the Study Site boundary.

6.5 Scheduled Monuments within the 2.5km Study Area comprise:

- Moated enclosure and associated building platforms, The Lane, Wyboston (SM Ref. 1012076)
- Chawston Manor (SM Ref. 101114)
- The Hillings, Castle Hills (SM Ref. 1009629)

6.6 Conservation Areas and Listed buildings Grade I and Grade II* within the 2.5km Study Area comprise:

- St Neots Conservation Area
- Roxton Conservation Area
- Parish Church of St Mary, St Neots (Grade II*)
- Church of St Mary, Eaton Socon (Grade II*)
- Tudor House, St Neots (Grade II*)
- Ford House, St Neots (Grade II*)
- Parish Church of St Denys, Little Barford (Grade II*)
- Parish Church of Saint Mary Magdalen, Roxton (Grade II*)
- Congregational Chapel, Roxton (Grade II*)

6.7 Listed buildings Grade II within the 1km Study Area comprise:

- 38 Listed Buildings (Grade II)

6.8 The guidance then asks us to consider if the development is capable of affecting the contribution of a heritage asset's setting to its significance, or the appreciation of its significance. If so, it can be considered as falling within the asset's setting.

6.9 This assessment makes reference to the 'immediate' and 'extended' setting of heritage assets. The 'immediate' setting comprises the area with the most immediate and direct relevance to the asset's significance. For example, a churchyard would form the immediate setting to a church, or a farmyard to a farmhouse. The 'extended' setting relates to the wider area that an asset may also acquire significance from, such as its environs within an area of specific character or a district within a town. This also includes the area which may have a visual impact on how a designated heritage asset is experienced, such as views to or from a particular asset at distance. However, it is important to note that "setting does not have a fixed boundary and cannot be definitively or permanently described as a spatially bounded area".

Setting of Scheduled Monuments

6.10 Historic England's Good Practice Note 3 (GPA3): 'The Setting of Heritage Assets' (Second Edition, December 2017) focuses on the management of change within the setting of heritage assets. A staged process is required. The steps are incorporated with regard to Scheduled Monuments within the 2.5km Study Area as follows:

Setting Step 1 - Identification of heritage assets which are likely to be affected by the proposed development:

6.11 There are three Scheduled Monuments within the 2.5km Study Area. Of these The Hillings, Castle Hill (SM Ref. 1009629) is scoped out of further assessment due to intervening modern industrial development and Chawston Manor moated site and associated fishpond (SM Ref. 1010114) is scoped out due to the topographical screen between the Study Site and the monument.

6.12 Inter-visibility between the Study Site and the Scheduled *Moated enclosure and associated building platforms, The Lane, Wyboston* (SM Ref. 1012076) located immediately south of the Site.

Moated enclosure and associated building platforms, The Lane, Wyboston

(Introduction and significance including GPA 3 step 1 (identification of asset that may be affected)

6.13 The Scheduled Monument is located to the south of the Study Site on the opposite side of The Lane (SM Ref. 1012076). The Scheduled Monument description on the National List is as follows:

6.14 'The monument includes the medieval moated enclosure and an adjacent series of building platforms. The moated enclosure is `D' shaped in plan and measures some 85m along the straight southern edge of the moat. The surrounding moat is 8m wide and about 1.2m deep and is dry except for part of the east arm. Prominent external banks, surviving up to 1m high, flank the west and east sides. The island is believed to be the site of a manor house and a number of deep hollows mark the position of former buildings. A square platform outside the north-east corner of the moat forms part of an original entrance to the moated enclosure. To the east a number of rectangular platforms mark the site of at least five buildings associated with the medieval moat. Some of the platforms survive up to 0.3m in height while others are defined by wall lines and hollows partly obscured by vegetation.'

6.15 Medieval moated sites are a consistent occurrence throughout the south-east Midlands with at least one example within the majority of parishes. In this vicinity moated sites are recorded to the south-west of the Site at Chawston and to the east of the Site at Little Barford. The high importance of the Scheduled Monument is largely vested in the survival of its readable earthworks including its outer court and cultivation providing a well-preserved example of a moated site and associated settlement, and its potential to contain important buried archaeological and geo-archaeological remains that could shed light on the economic and social aspects of the site and the moated sites in general.

Setting Step 2: Assessment of whether and what contribution the setting makes to the significance of a heritage asset.

6.16 At the time of writing this assessment it was not possible to undertake a walkover of the Study Site or the Scheduled Monument. This assessment is therefore based on a review of GoogleEarth StreetView Images taken along The Lane, Wyboston.

6.17 The Medieval earthworks are located within an area of pasture to the south of The Lane. Intermittent vegetation and the occasional mature tree form the boundary of the monument. The immediate setting of the monument can be defined by residential properties and the access to the lorry park (H.E. Payne) fronting The Lane to the north and the arable farmland to the south. Both the monument and landscape views to the south of the monument can be appreciated from the footpath along the north side of The Lane. The Study Site, when experienced from northside of The Lane, is overgrown with mature trees and vegetation. As a result, the majority of the Study Site is not currently visible from the footpath along north side of The Lane or from the monument itself. There is no known historical association with the proposal site, however a potential is identified for Medieval settlement evidence along the north side of The Lane. In terms of traffic noise and light, the effect of lorries travelling along The Lane to and from the lorry park opposite the monument, introduces a degree of severance between the monument and the proposal site, should also be noted as a slight detracting element.

Setting Step 3: Assessing the effects of proposed development on the significance of a heritage asset

6.18 The southern part of the Study Site has the potential to contain archaeological remains associated with the Medieval settlement of Wyboston given its location fronting The Lane. Whilst archaeological evidence within the Site could contribute to an understanding of the moated site, and thereby contribute to the significance of the monument, the likelihood is that The Lane has always provided some severance between these areas of occupation and activity.

6.19 There is a potential for the development to impact on the setting of the monument as a result of visual intrusion from the buildings within the southern part of the Site. It is advised that wireframe images are produced for viewpoints looking towards the Site from the monument to better understand the visual impact of the development.

6.20 In terms of traffic noise, there is a potential for the increased effect of lorries travelling along The Lane between the A1 and the proposed southern site access. Information relating to predicted traffic numbers will be considered when available.

6.21 It is considered that setting related impacts to the significance of the Scheduled Monument associated with views from the surrounding landscape are negligible and effects would not exceed minor adverse prior to mitigation.

Setting Step 4. Explore ways to maximise enhancement and avoid or minimise harm

6.22 In the event that significant impacts on the setting of the monument are identified during the design stages, measures will be employed to reduce, remove or mitigate these impacts. Design measure may include:

- Restricting building heights

- The use of colour banding and darker shades at lower levels, to add gravitas to the base of the building, with colours lightening up the elevations.
- Planting screening with appropriate species will be introduced at earliest stage of development.

Setting of Conservation Areas

6.23 Historic England's Good Practice Note 3 (GPA3): 'The Setting of Heritage Assets' (Second Edition, December 2017) focuses on the management of change within the setting of heritage assets. A staged process is required. The steps are incorporated with regard to Conservation Areas within the 2.5km Study Area as follows:

Setting Step 1 - Identification of heritage assets which are likely to be affected by the proposed development:

6.24 St Neots and Roxton Conservation Areas are located within 2.5km Study Site. Both Conservation Areas have been scoped out of further assessment due to either intervening topography or intervening development. Each Conservation Area and the reason for being omitted from further assessment is detailed below.

Setting of Listed Buildings Grade I and II*

Setting Step 1 - Identification of heritage assets which are likely to be affected by the proposed development:

6.25 There are seven Grade I and II* Listed Buildings within 2.5km of the Study Site. All of these Listed Buildings have been scoped out of further assessment due to either intervening topography or intervening development. Each Listed Building and the reason for being omitted from further assessment is identified below.

Setting of Listed Buildings Grade II

Setting Step 1 - Identification of heritage assets which are likely to be affected by the proposed development:

6.26 There are 38 Grade II Listed Buildings within 1km of the Study Site. This assessment identifies two Grade II Listed Buildings that have the potential to be affected by the Proposed Development. These are Nos 66 and 68 Great North Road (NL1114929) and No. 64 Great North Road (NL1114928). The following Listed Buildings have been omitted from further assessment.

Listed Building National List No.	Name	Grade
1146453	Crown Inn	II
1146425	No. 31	II
1311862	Brook Cottages	II
11464418	Forty Farmhouse	II
1321213	Dovecote at Forty Farm	II
1245334	Chawston Lodge	II
1114930	Heddings Farmhouse	II
1146457	Moat Cottage	II
1138337	Claygates	II
1321208	Scuttle Cottage	II
1114920	Bridge Farmhouse	II

1311859	Holly Cottage	II
1321207	Laburnum Cottage	II
1127987	Nos 32, 36 & 38 Akerman Street	II
1129907	The White House	II
1162199	No. 5 Peppercorn Lane	II
1161952	134 Peppercorn Lane	II
1309849	No. 108 Great North Road	II
1161952	No. 134 Great North Road	II
1161964	No. 206 Great North Road	II
1162299	Eaton Mills, School Lane	II
1309869	The Old Sun Inn	II
1330992	Nos 162, 164, 168B and 168 Great North Road	II
1330993	No. 184 Great North Road	II
1331026	The Old Plough Inn, Great North Road	II
1331027	No. 111 Great North Road	II
1331028	Eaton House	II
1127966	No. 153 Great North Road	II
1127970	Ladygrove	II
1127969	Trotwood Cottage	II
1127986	Nos 2-8 Ackerman Street	II
1127965	The White Horse Hotel	II
1127968	No. 92 Great North Road	II
1309844	No. 108 Great North Road	II
1330629	The Cage, Village Lock Up	II
1331029	Methodist Chapel	II

Nos 66 and 68 Great North Road

Setting Step 2: Assessment of whether and what contribution the setting makes to the significance of a heritage asset.

6.27 The National List contains the following List description for Nos 66 and 68 Great North Road:

> 'House. C17. Colour washed rough cast over timber frame, ground floor of N wing of colour washed brick. Old clay tile roof. L-plan, one storey and attics. N wing has 2 sashes with glazing bars to ground floor and 2 box dormers, one with 2-light casement one with 2-light horizontal sash. S projecting gable has 2 C20 ground floor casements. Doors to LH and centre of N wing, central one with gabled hood. Rebuilt ridge stack of 3 joined shafts.'

6.28 The immediate setting of the Listed Building, comprising tree-lined horse paddocks to the east of the property, make minor positive contributions to the heritage asset. However, to the west, between the Study Site and the Listed Building, is the A1 and its junction with Great North Road. These elements, along with overhead power lines, make a major adverse contribution to its significance.

Step 3 — Assessing the effects of Proposed Development on the significance of a heritage asset

6.29 Design measures have been incorporated into the proposed development to reduce the impact of the built development edge. The proposed Zone 8 building, to the west of the Listed Building, will be set back from the A1. Whilst the Zone 8 building is likely to be still visible from the Listed Building, this inter-visibility is considered to contribute a minor level of harm, within the spectrum of less than substantial harm, to the significance of Nos 66 and 68 Great North Road.

Step 4 — Maximising enhancement and reduction of harm on the setting of heritage assets

6.30 There would be no direct harm to Nos 66 and 68 Great North Road as a result of the Proposed Development. A Community Park is proposed to the east of the one 8 building. Planting within the Park will provide a degree of screening when looking towards the Site from the Listed Building.

Step 5 — The acceptability of the Proposed Development

6.31 As already identified, the Proposed Development would not cause any direct harm to the Listed Building and the minor level of harm, within the spectrum of less that substantial harm, to its setting would be reduced to a minor level due to the proposed embedded mitigation.

No. 64 Great North Road

Setting Step 2: Assessment of whether and what contribution the setting makes to the significance of a heritage asset.

6.32 The National List contains the following List description for No. 64 Great North Road:

> 'House, formerly the Queen's Head public house. C17, refronted C18. Colour washed brick over timber frame, old clay tile roof. 3-room plan, 2 storeys. 3 flush sashes to each floor, all with glazing bars, ground floor ones with cambered heads. C19 4-panel door and moulded surround, in line with rebuilt red brick double ridge stack.'

6.33 The immediate setting of the Listed Building, comprising tree-lined horse paddocks to the east of the property, make minor positive contributions to the heritage asset. However, to the west, between the Study Site and the Listed Building, is the A1 and its junction with Great North Road. These elements, along with overhead power lines, make a major adverse contribution to its significance.

Step 3 — Assessing the effects of proposed development on the significance of a heritage asset

6.34 Design measures have been incorporated into the Proposed Development to reduce the impact of the built development edge. The proposed Zone 8 building, to the west of the Listed Building, will be set back from the A1. Whilst the Zone 8 building is likely to be still visible from the Listed Building, this inter-visibility is considered to contribute a minor level of harm, within the spectrum of less than substantial harm, to the significance of No. 64 Great North Road.

Step 4 — Maximising enhancement and reduction of harm on the setting of heritage assets

6.35 There would be no direct harm to No 64 Great North Road as a result of the Proposed Development. A Community Park is proposed to the east of the one 8 building. Planting within the Park will provide a degree of screening when looking towards the Site from the Listed Building.

Step 5 — The acceptability of the Proposed Development

6.36 As already identified, the Proposed Development would not cause any direct harm to the Listed Building and the minor level of harm, within the spectrum of less that substantial harm, to its setting would be reduced to a minor level due to the proposed embedded mitigation.

7 ARCHAEOLOGY & BUILT HERITAGE ASSESSMENT CONCLUSION

7.1 This assessment has been prepared to consider the key heritage constraints and opportunities associated with a site at Wyboston in advance of its proposed allocation for a high quality mixed-use development.

Archaeology and Historic Landscape

7.2 There are no designated heritage assets within the Site.

7.3 A Scheduled Monument referred to as *Moated enclosure and associated building platforms, The Lane, Wyboston* is located immediately south of the Site. This assessment has identified a potential for the development to impact on the setting of the monument, due to visual intrusion from the proposed buildings and access within the southern part of the Site. It is advised that wireframe images are produced for viewpoints looking towards the Site from the monument to better understand the visual impact of the development. Incorporating design measures including the setting back of the built development edge and using mitigation such as planting screening and using colour banding on the buildings will reduce the visual impact on the setting of the monument. With these measures in place the effect on the Scheduled Monument is likely to be at the lower end of the spectrum of less than substantial harm in heritage terms and therefore should not be a constraint to the allocation and subsequent development of the Site.

7.4 In accordance with Local Authority policy and Government policy, as set out in Section 16 of the NPPF (see Section 4 of this report) the archaeological desk based assessment part of this report has been undertaken to clarify the below ground archaeological potential of the Site. This assessment identifies a high potential for archaeological remains dating to the Roman and Medieval periods and a moderate to high potential for Iron Age and Saxon remains within the Site. The archaeology of prehistoric to Medieval date has been truncated to some degree by intensive modern ploughing. In addition, where quarrying has occurred within the Site it has likely removed any archaeological remains. Based on current evidence, it is considered that archaeology should not be a constraint to the allocation and subsequent development of the Site.

Built Heritage

7.5 No built heritage assets would be directly (materially) affected by the Proposed Development.

7.6 It is considered that the development of the Site has the potential to affect the settings and thus significance of two Listed Buildings on Great North Road. However, whilst development on the Site is likely to be visible from the Listed Buildings, this inter-visibility is considered to contribute only a minor level of harm, within the spectrum of less than substantial harm and therefore is not a constraint to the allocation and subsequent development of this Site.

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Figures

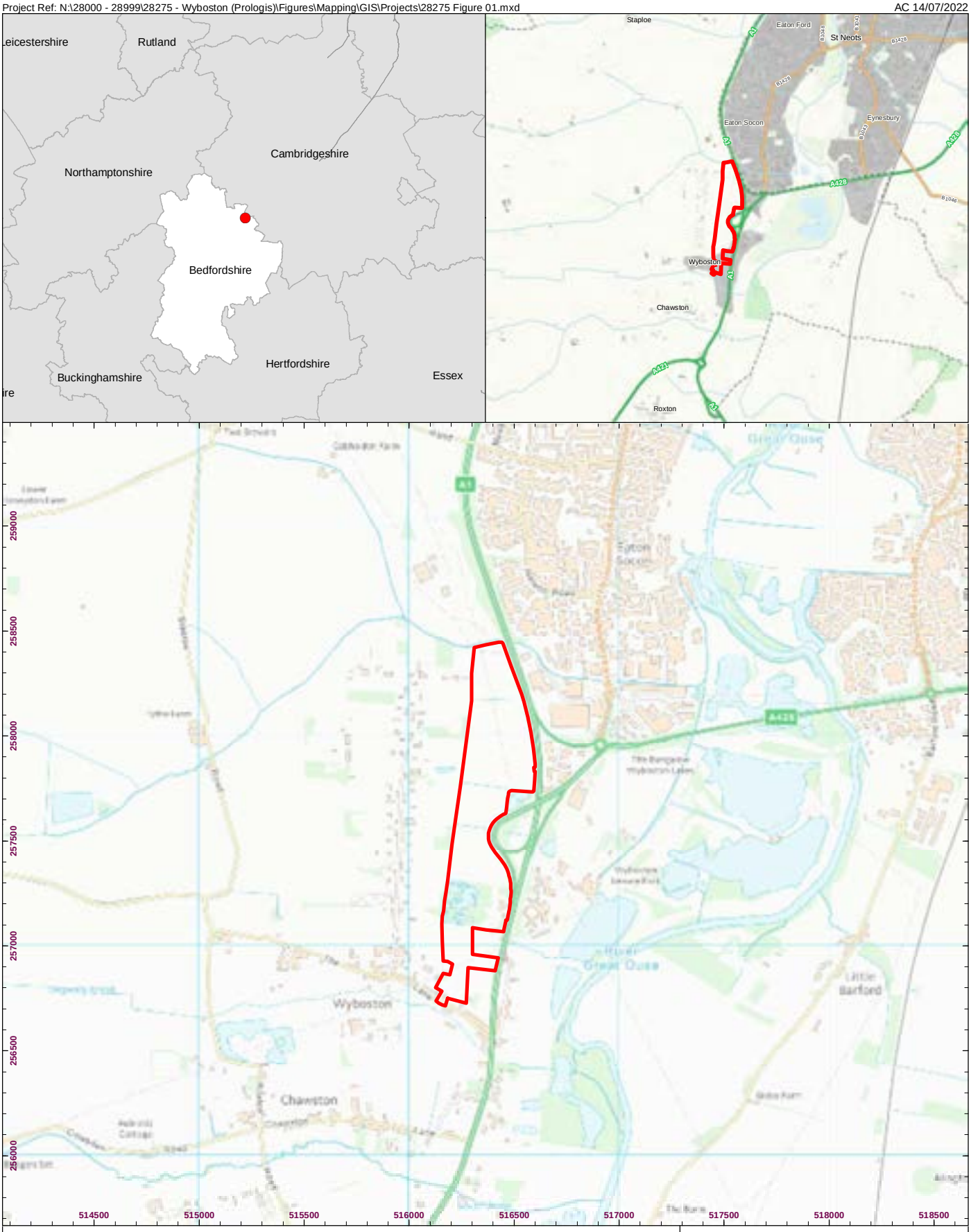

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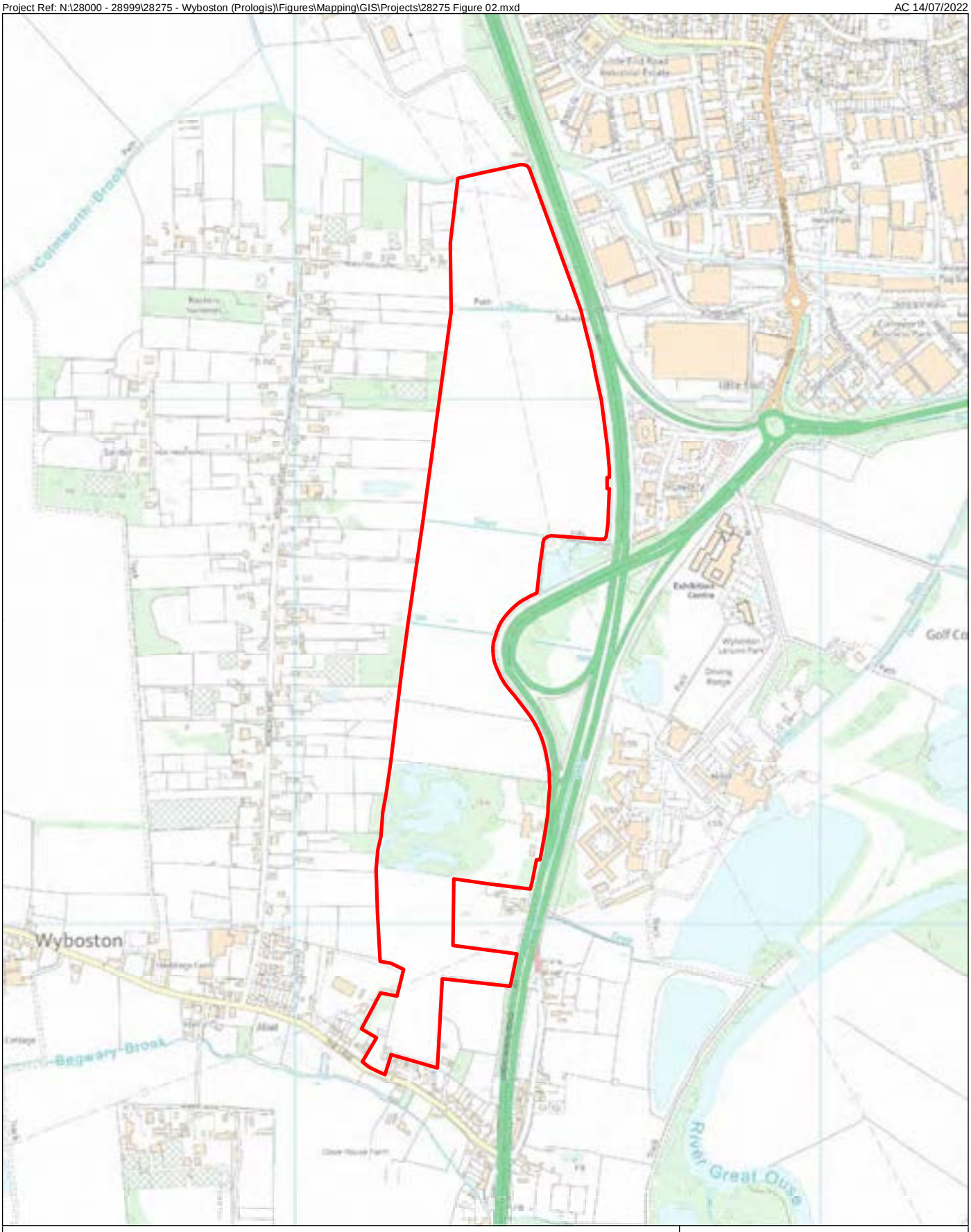
Figure 1

Site Location



Site Boundary

N

0 100 200 300m

Scale at A4: 1:10,000

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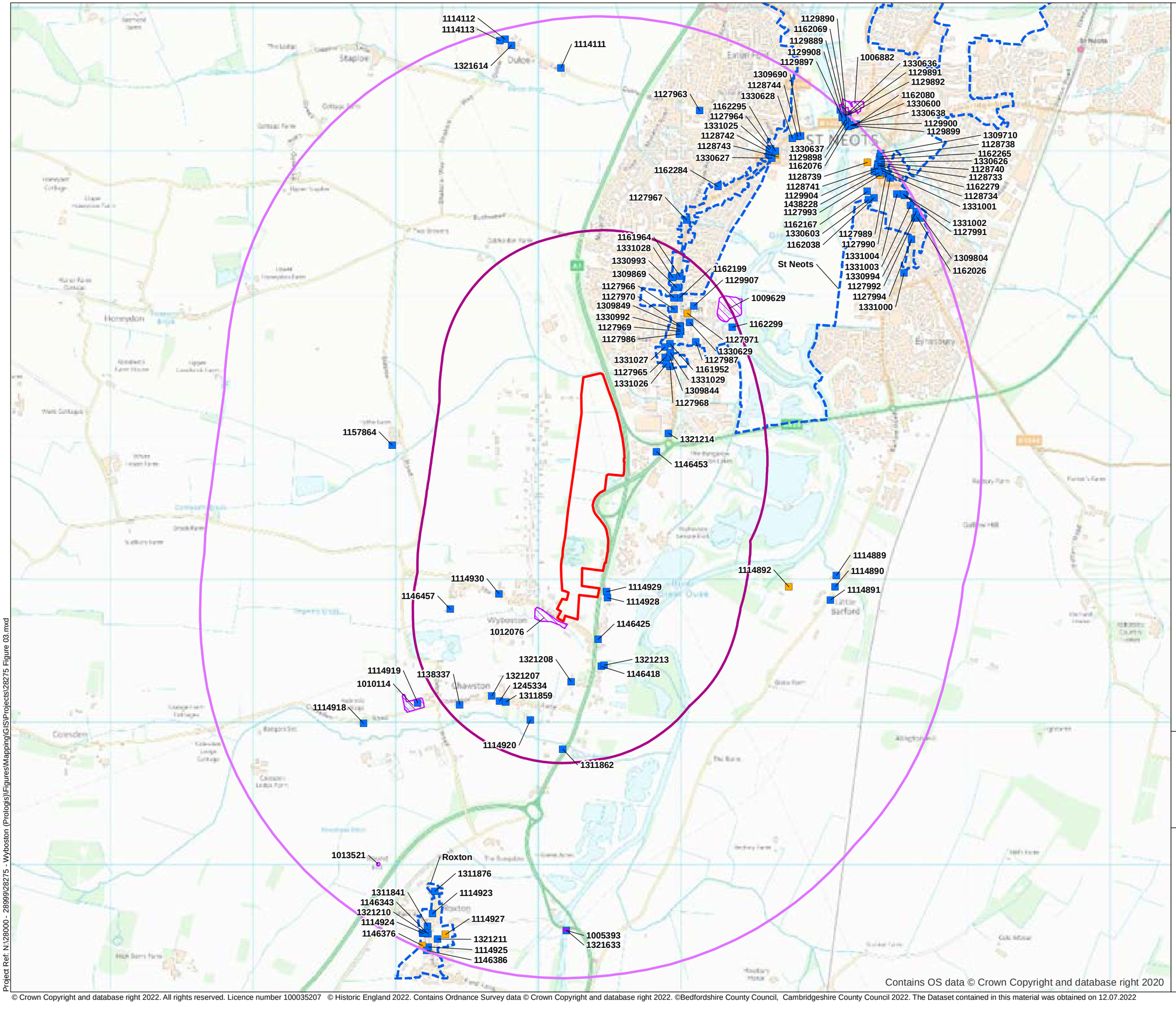
Figure 2

Site Details
(2022 Ordnance Survey)

AC 15/07/2022



Legend

- Site Boundary
- 1km Search Radius (for Grade II Listed Buildings)
- 2.5km Search Radius

Designated Heritage Assets:

Listed Buildings

- Grade II
- Grade II*
- Scheduled Monuments
- Conservation Areas

N

0 500 1,000 m

Scale at A3: 1:25,000

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Figure 3

Designated Heritage Assets (Listed Buildings, Conservation Areas and Scheduled Monuments)

Project Ref: N:\28000 - 28999\28275 - Wyboston (Prologis)\Figures\Mapping\GIS\Projects\28275 Figure 03.mxd

AC 15/07/2022

MCB17750
ECB3489
MCB16945
ECB2082
ECB2328
MBB22339
MBB22338
MCB18057
MCB31381
MCB28838
MCB2455
MCB28835
MCB11619
MCB17754
MCB29426
MCB24745
MCB24744
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MCB24747
ECB321
MCB16097
MCB15259
MBD16737
MBB22340
ECB4451
MCB28834
MCB24750
MCB16714
MCB13867
MCB484
MCB487
MCB18769
ECB1965
ECB327
MCB16504
MCB15261
MBD15267
MCB28195
ECB1964
ECB5390
MCB18207
MCB13866
MBD3239
MBD16738
MBB22308
ECB1963
ECB3108
MCB11928
ECB3052
MCB16788
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MCB16709
MCB18770
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MBB22309
MCB13868
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MBB22313
MBB22536
MBD8614
MBD12460
MBD5893
MBD880
MBB20032
MBD12456
MBD5892
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MBD1793
MBB22312
MBD16147
EBB1342
EBB561
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MBD3538
MBD12469
MBD1651
MBD5894
MBD8816
MBD17097
MBD3538
MBD745
EBB1331
EBB908
EBB1458

Legend

Site Boundary
1km Search Radius

Non-designated Heritage Assets:

HER Records Points

Monuments
Findspots
Buildings
PAS Findspots
Monuments Line

HER Records Polygons

Monuments
Landscape
Findspots
Buildings
Places

Previous Archaeological Work:

HER Events Points
HER Events Polygons

N

0 250 500m

Scale at A3: 1:14,000

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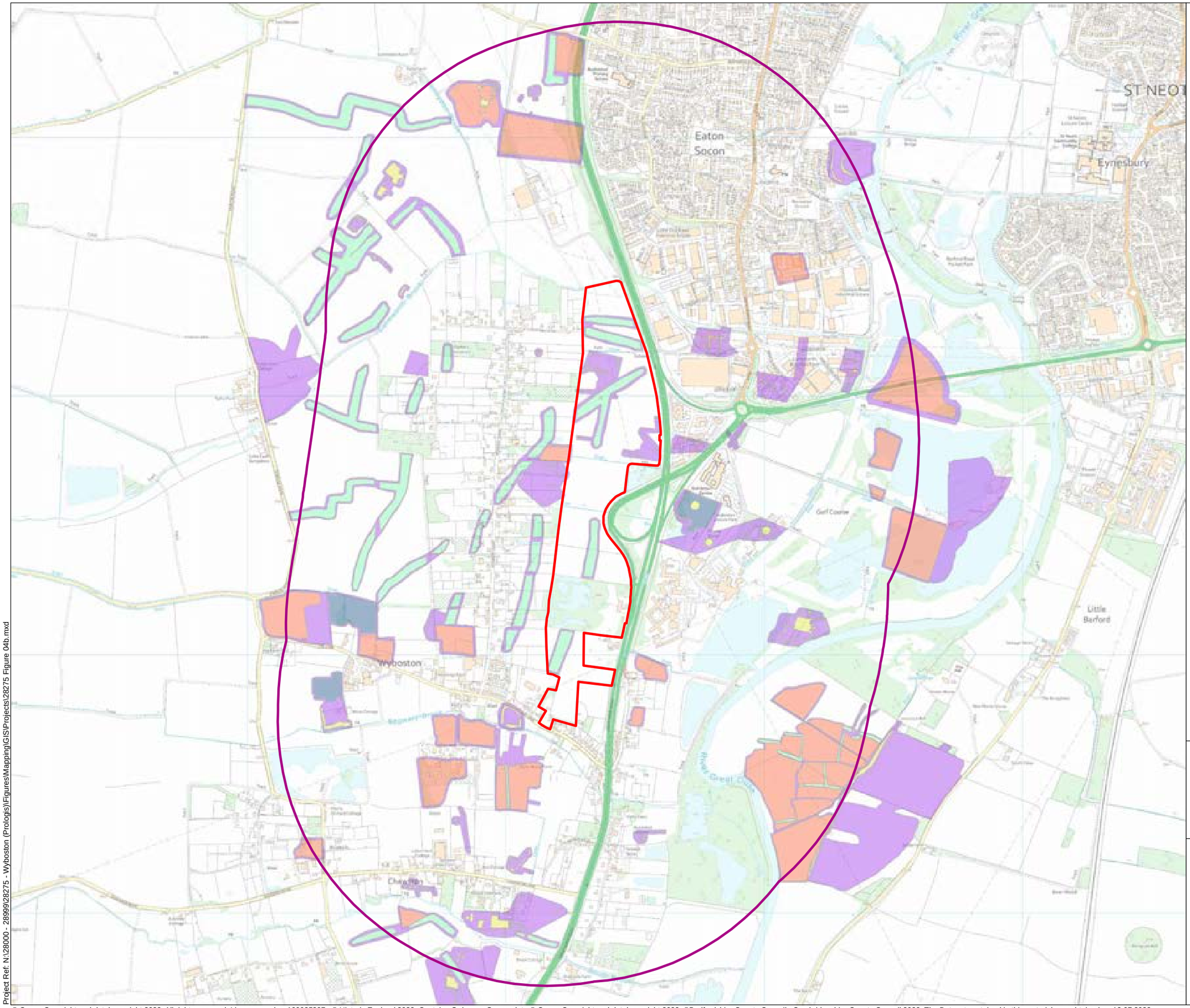
Figure 4a

HER Data Map
(Bedfordshire and Cambridgeshire HERs)

Project Ref: N:\28000 - 28999\28275 - Wyboston (Prologis)\FiguresMapping\GIS\Projects\28275 Figure 04a.mxd

AC 14/07/2022



Legend

National Mapping Programme

- BANK
- DITCH
- EXTENT_OF_FEATURE
- MONUMENT_POLYGON
- RIDGE_AND_FURROW_AREA

N

0 250 500m

Scale at A3: 1:14,000

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Figure 4b

HER Data Map
(Bedfordshire and Cambridgeshire HERs)

Project Ref: N:\28000 - 28999\28275 - Wyboston (Prologis)\FiguresMapping\GIS\Projects\28275 Figure 04b.mxd

Approximate Site Location

N

Not to Scale:
Illustrative Only

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Figure 5

1765 Jeffreys Map

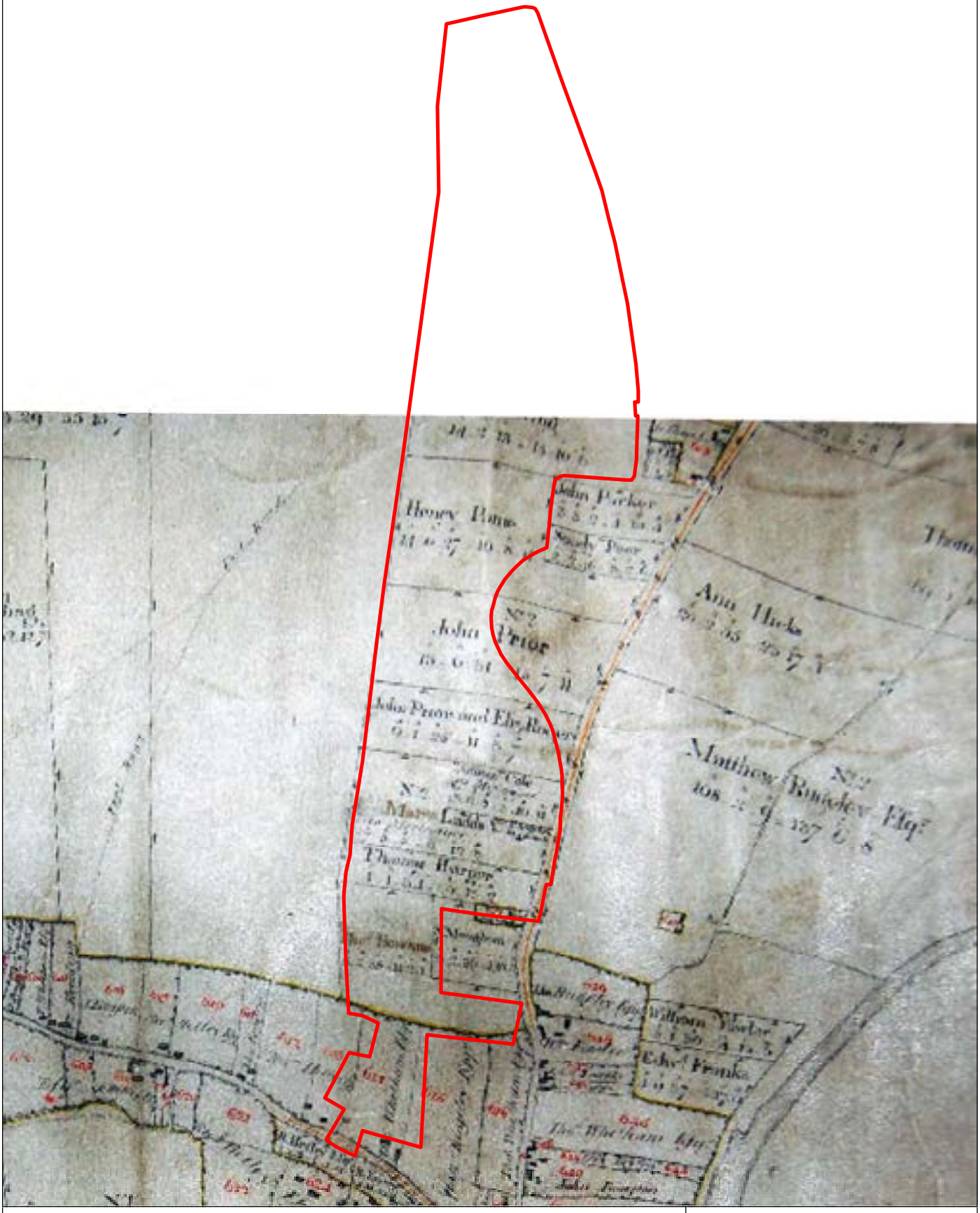

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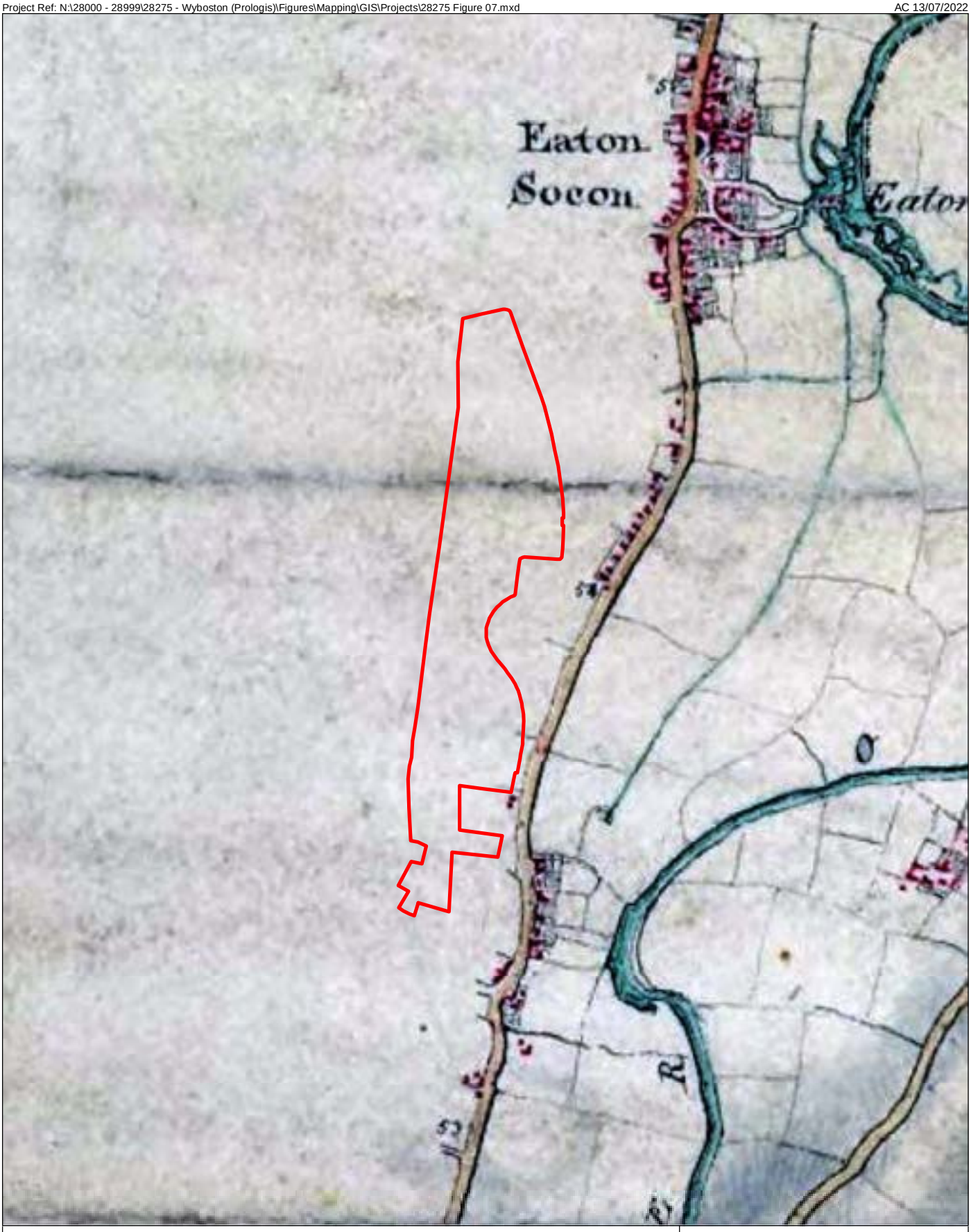
Figure 6

Wyboston about 1799
(partial coverage)



Approximate Site Location

N

Not to Scale:
Illustrative Only

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Figure 7

1808 Ordnance Survey Old Series

Approximate Site Location

N

Not to Scale:
Illustrative Only

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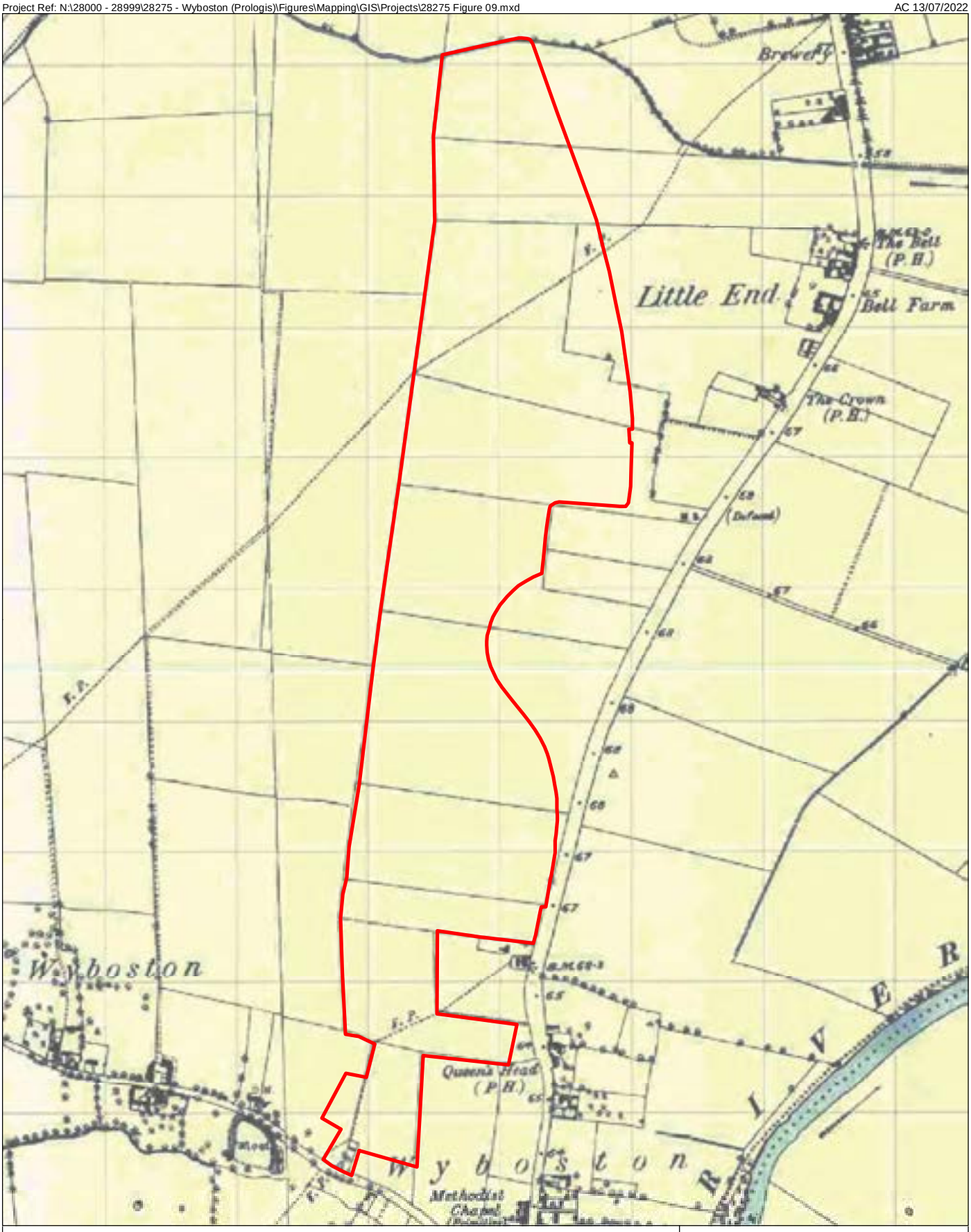
Figure 8

1815 Ordnance Survey Old Series



Site Boundary

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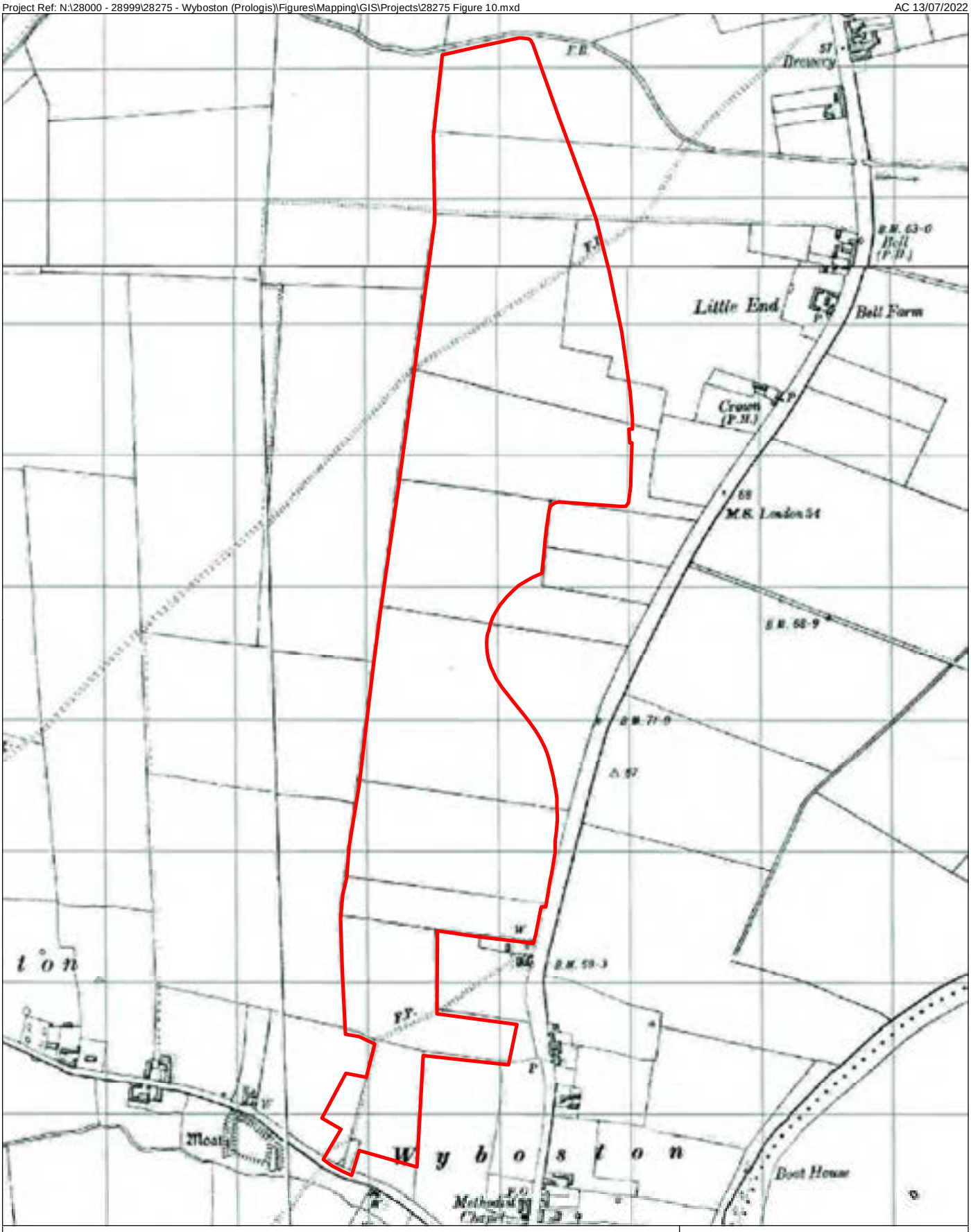
Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 9

1882 Ordnance Survey



Site Boundary

N

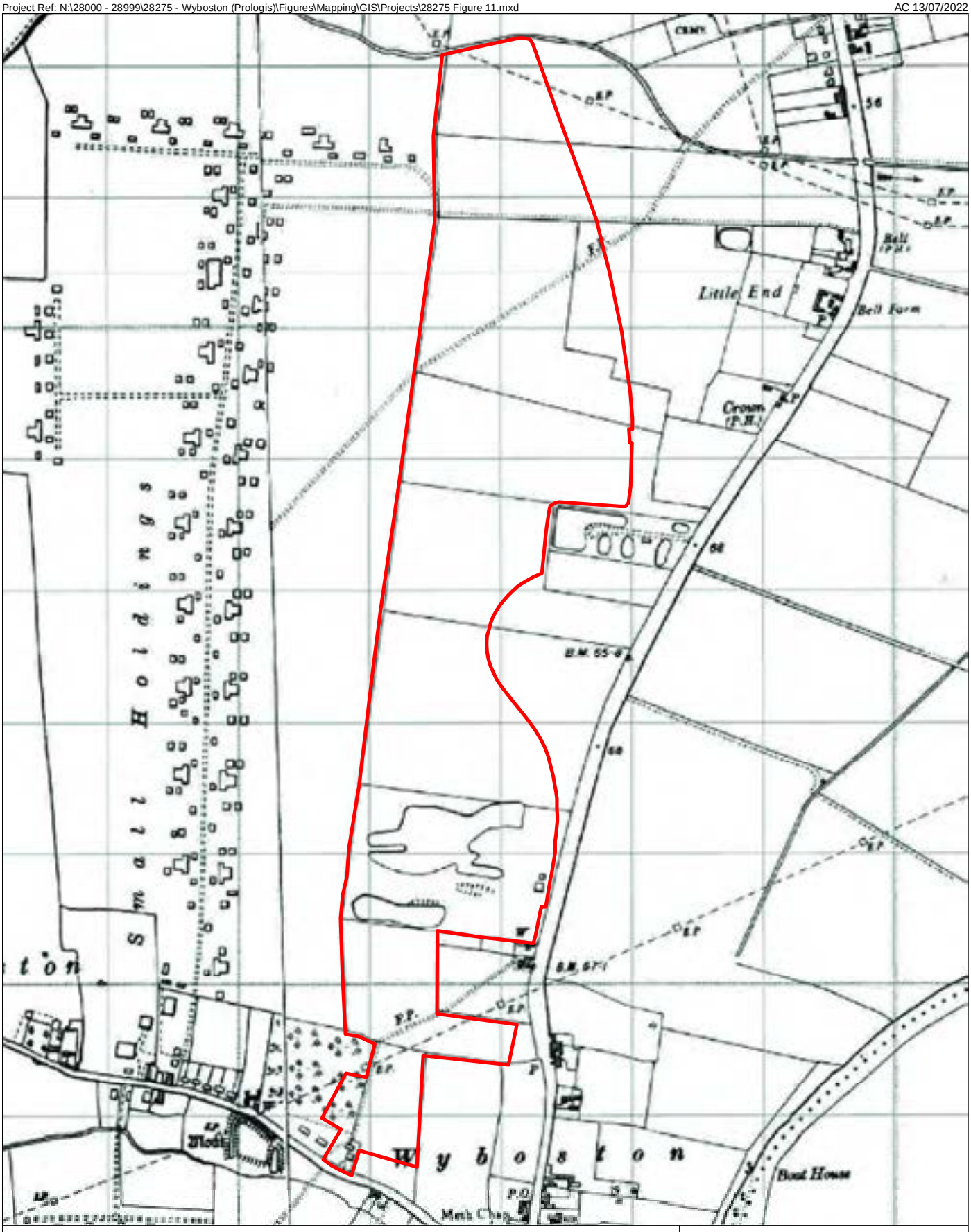
0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 10

1900-1902 Ordnance Survey



Site Boundary

N

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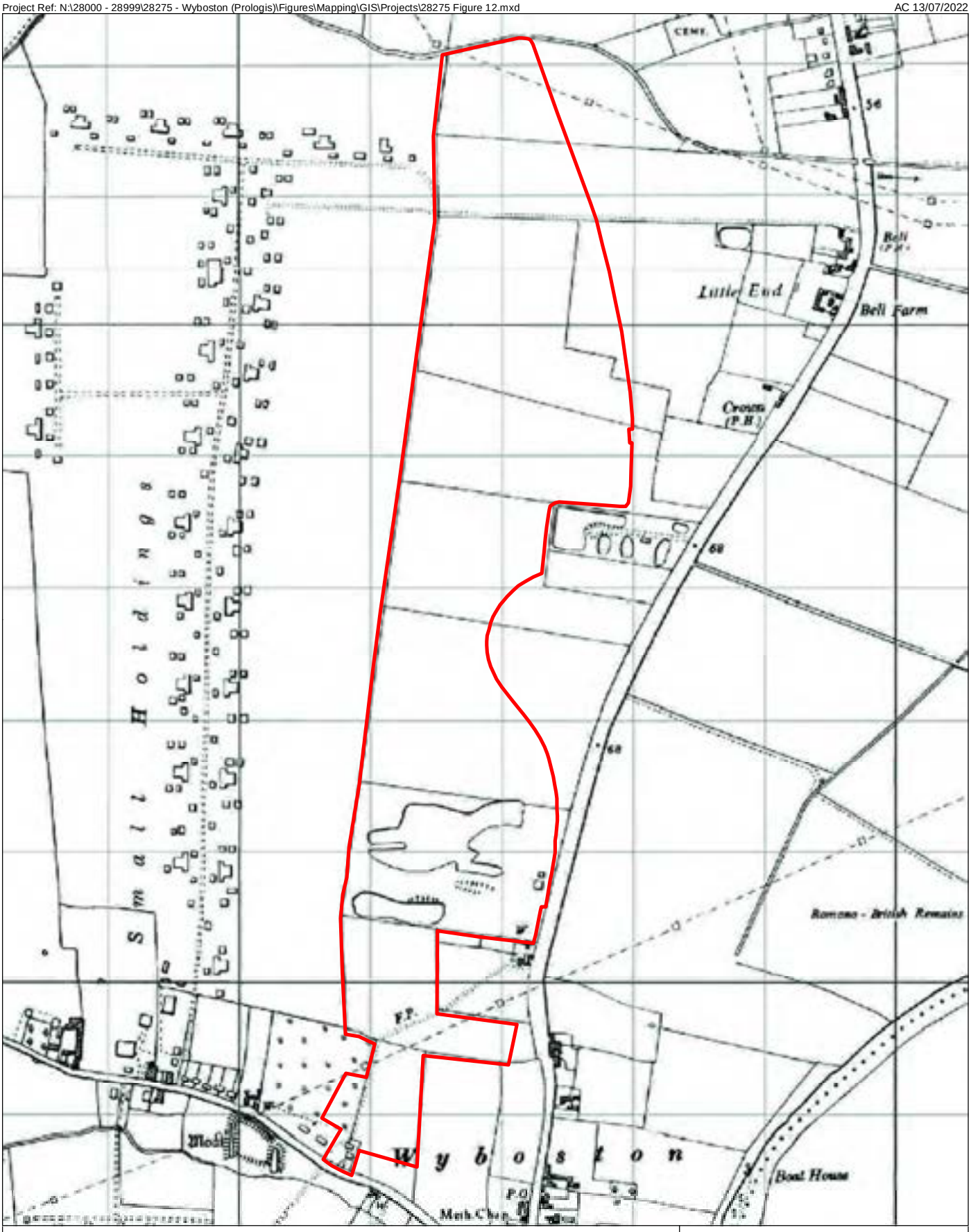
Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 11

1950 Ordnance Survey



Site Boundary

N

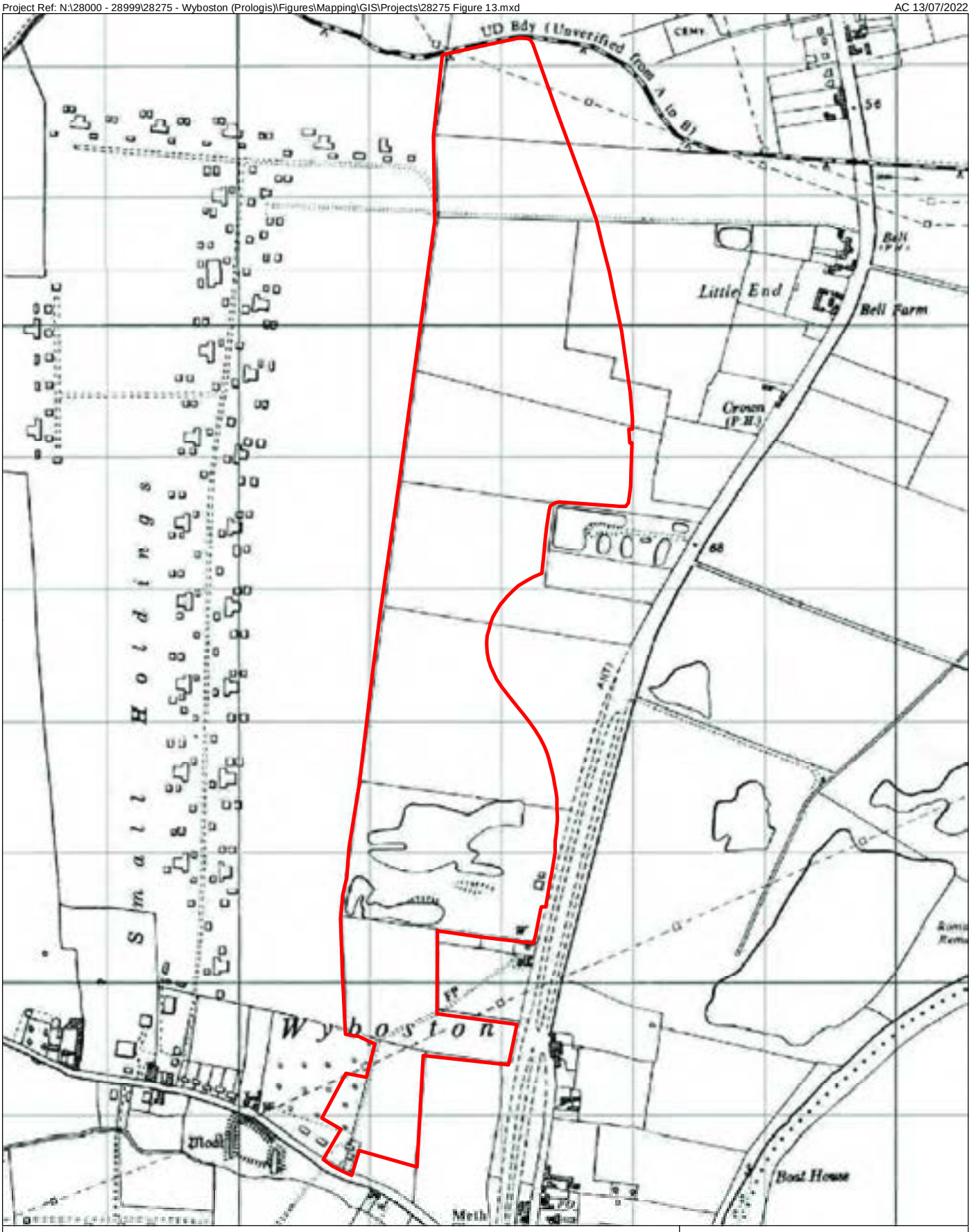
0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 12

1958-1960 Ordnance Survey



Site Boundary

N

0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 13

1968 Ordnance Survey

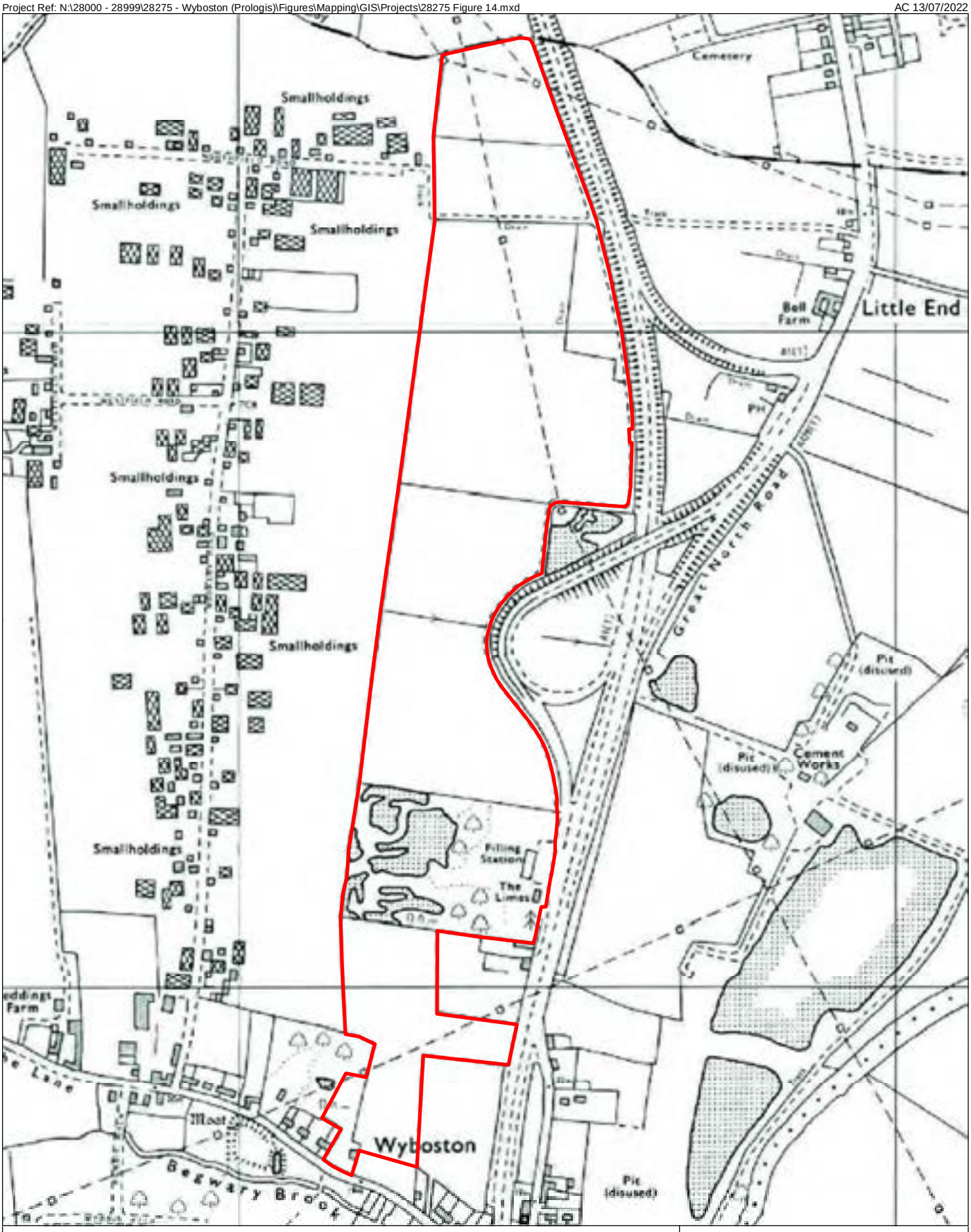


Figure 14

1974 Ordnance Survey

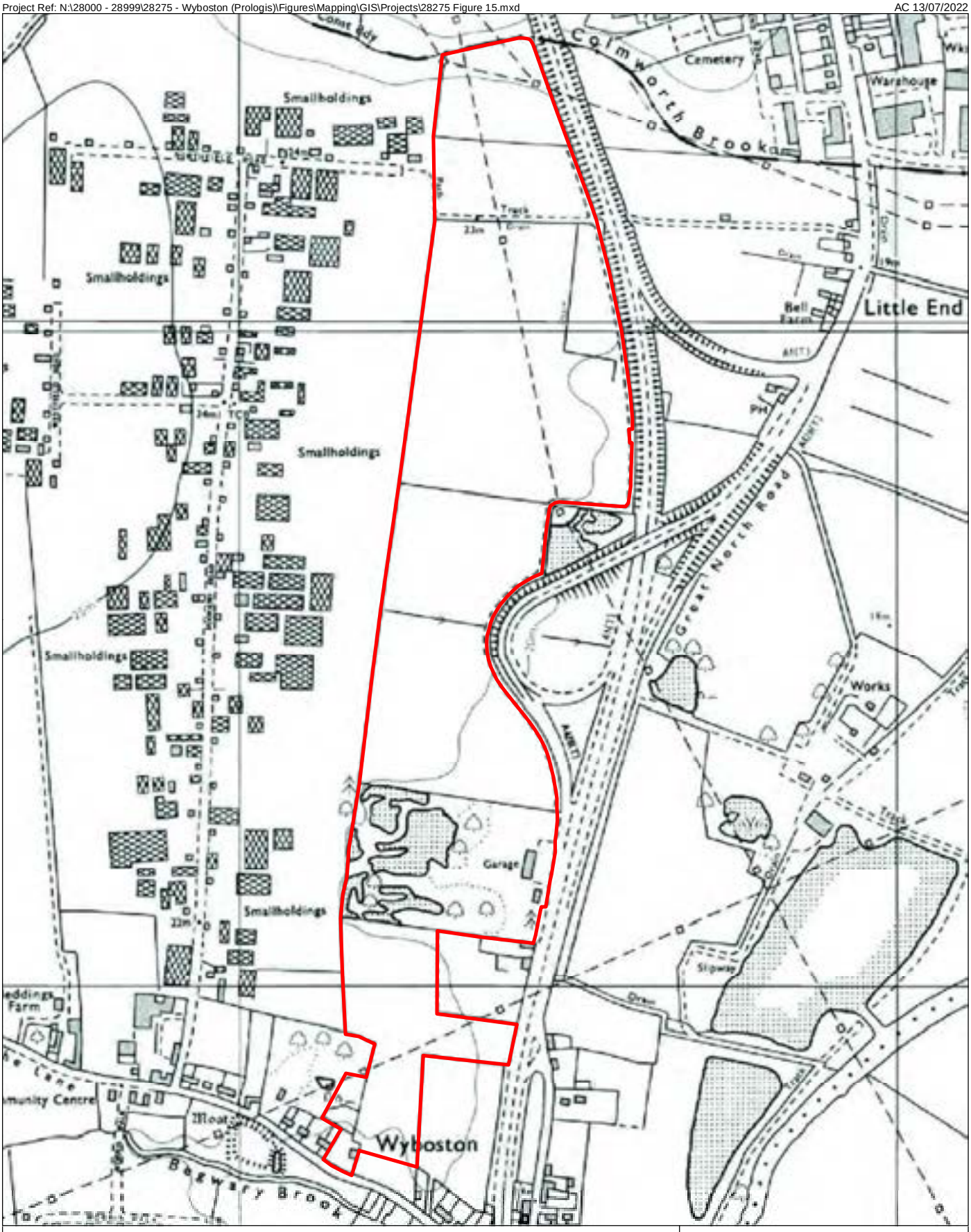


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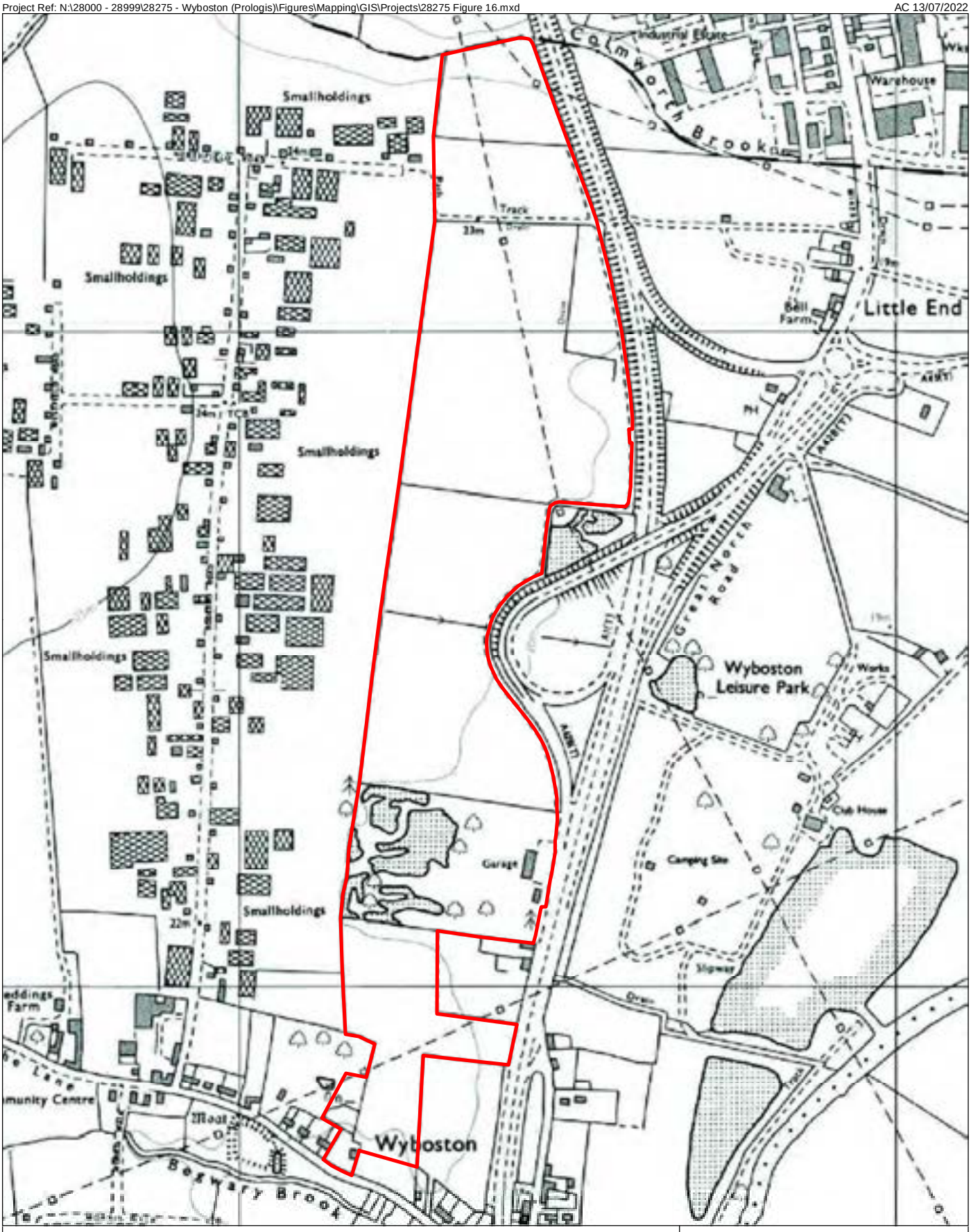
Figure 15

1981 Ordnance Survey



Site Boundary

N

0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 16

1987 Ordnance Survey

Site Boundary

N

0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 17

1999 Aerial Photograph

Site Boundary

N

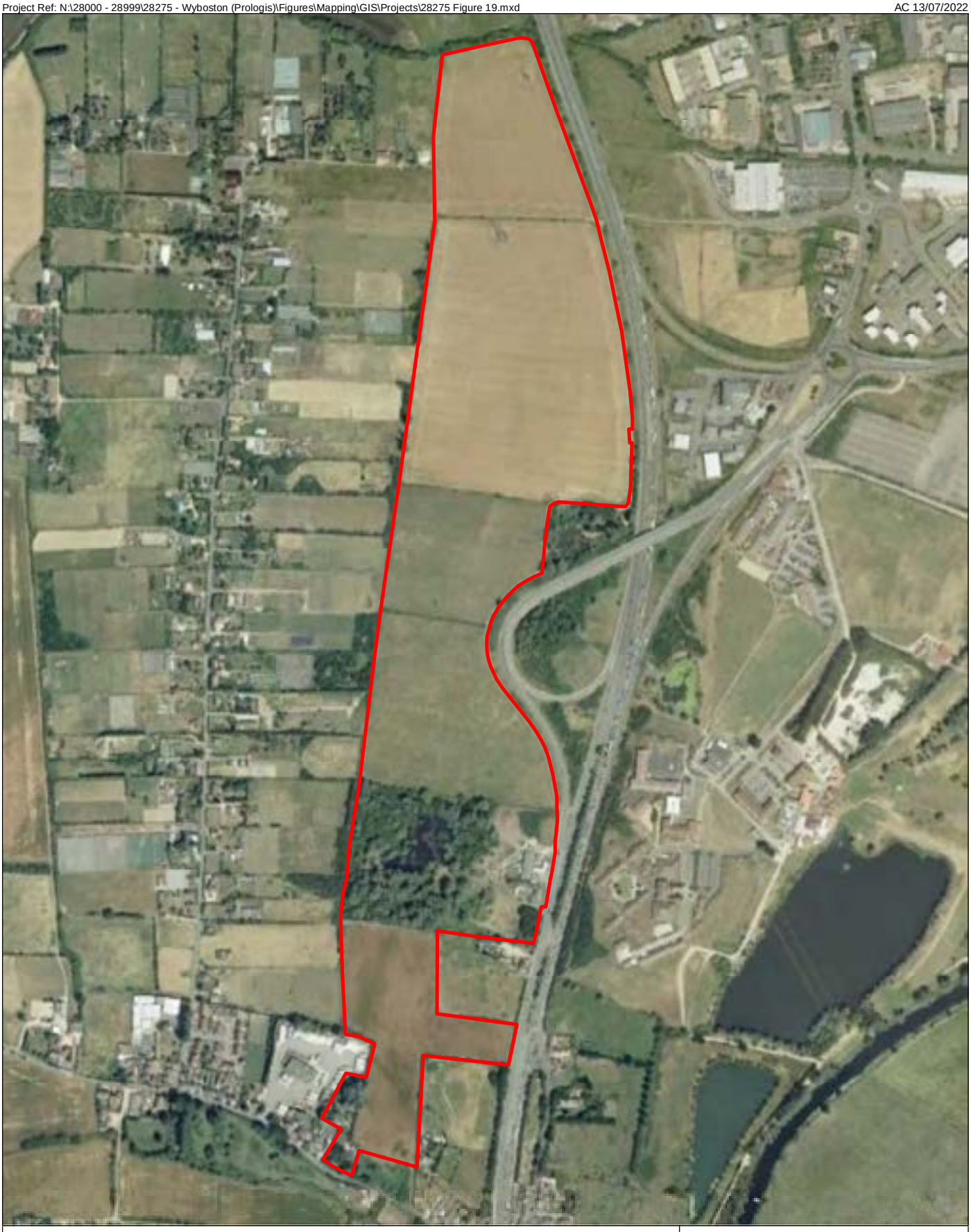
0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 18

2002 Aerial Photograph



Site Boundary

N

0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 19

2006 Aerial Photograph

Site Boundary

N

0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 20

2020 Aerial Photograph

Site Boundary

N

0 100 200 300m

Scale at A4: 1:10,000

MAKING COMPLEX EASY

Figure 21

Lidar Data Map

Site Boundary

N

0 80 160 240m

Scale at A4: 1:8,000

MAKING COMPLEX EASY

Figure 22

Proposed Parameters Plan

MAKING
COMPLEX
EASY

rpsgroup.com

Appendix 4 Minerals Report

MINERAL RESOURCE ASSESSMENT

LAND AT WYBOSTON, ST NEOTS BEDFORDSHIRE

Prepared for

L AND P CHESS LTD & OTHERS

APRIL 2021

Prepared by
William Gagie MRICS MIQ
For and on behalf of
FISHER GERMAN LLP
CHARTERED SURVEYORS
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INDEX

APPENDICES

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DATE ISSUED: APRIL 2021

REPORT NUMBER: 01

L AND P CHESS LTD & OTHERS

LAND AT WYBOSTON, ST NEOTS, BEDFORDSHIRE

MINERAL ASSESSMENT REPORT

PREPARED & APPROVED BY:

William Gagie MRICS MIQ — RICS Registered Valuer

DATED: **30 April 2021**

EXECUTIVE SUMMARY

- The site falls within the Bedfordshire Mineral Safeguarding Area based on the high-level geology.
- Part of the site has been subject to prior extraction and thus the MSA restrictions should not apply to this area in any event.
- The borehole information suggests a variable deposit, particularly towards the northern end of the site, with only one borehole showing a depth of mineral greater than 3m.
- The mineral is believed to disappear to the west of the site, which suggests the mineral depths within the site could be lower than those recorded in the boreholes which were taken from the eastern boundary.
- Some of the boreholes indicate very shallow deposits of mineral and in one case barren.
- Access for HGV traffic to the site is poor. The underpass is narrow, low, and shared with a public bridleway. This is the only viable means of access to the site and it is difficult to see how plant and machinery could be delivered, as well as safely operating HGV traffic.
- The site is affected by a series of utility infrastructure which causes large areas to be sterilised.
- The layout of the site is a long, narrow site with a number of areas that would be impractical to extract due to their small size and shape. The gross resource which could be available for extraction is in the region of 536,000 tonnes.
- The on-site use of this resource could be considered by the proposed mixed-use development.
- For the above reasons it is not believed that the proposed development will sterilise a reserve that operators would regards as commercially viable.

1 BACKGROUND

1.1 Fisher German LLP have been instructed by L and P Chess Ltd, acting for a consortium of landowners of the site at Wyboston, Bedfordshire, edged in red on the site boundary plan attached at **Appendix 1,** to prepare a Mineral Resource Assessment in support of the promotion of the site through the Bedford Borough Council local plan process.

1.2 The site is to the north of Wyboston, located in the Bedford Borough Council area. It is bounded to the east by the A1(M) trunk road, to the west by the Rookery Road smallholdings, to the south by residential development on The Lane and to the north by the Eaton Socon National Grid electricity substation.

1.3 The site is currently in agricultural use, other than the area to the rear of Lakes Garage which has a history of previous excavation and now comprises a series of shallow lakes and woodland

1.4 The site falls within the Mineral Safeguarding Area (MSA) identified by Bedford Borough Council. As the land is being promoted for a mixed-use development a Mineral Resource Assessment has been prepared in support of the site's promotion as required under the provisions of the National Planning Policy Framework and Bedford Borough Council.

1.5 This Mineral Resource Assessment has been prepared in accordance with the Guidance document issued by the Mineral Products Association and the Planning Officers Society, dated April 2019

PLANNING POLICY

2 Local Plan Update (Planning Policy)

2.1 The land in question is located to the north east of the settlement of Wyboston in Bedford Borough Council. In terms of planning policy, Bedford Borough Council adopted their New Local Plan in January 2020. This sets out the development framework until 2030.

2.2 Given the rural nature of Wyboston a settlement boundary is not defined; the site itself is unallocated and according to Bedford Borough Council's online planning search, the site has no planning history of relevance within the last 10 years.

3 National Planning Policy Framework (2019)

3.1 Paragraph 203 of the NPPF (2019) states that it is essential that there is a sufficient supply of minerals to provide infrastructure, buildings, energy, and goods that the country needs. However, since minerals are a finite resource, thought needs to be given to secure their long-term conservation.

Paragraph 204 states planning policies should:

"*safeguard mineral resources by defining Mineral Safeguarding Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);*

set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place;

set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality;"

Paragraph 206 states "*Local planning authorities should not normally permit other development proposals in Mineral Safeguarding Areas if it might constrain potential future use for mineral working*".

3.2 NPPF establishes the importance of Mineral Safeguarding Areas but accepts that site specific investigations and circumstances need to be researched in assessing whether individual sites should be so protected. NPPF also establishes the circumstances in which non-mineral development could be allowed within an MSA.

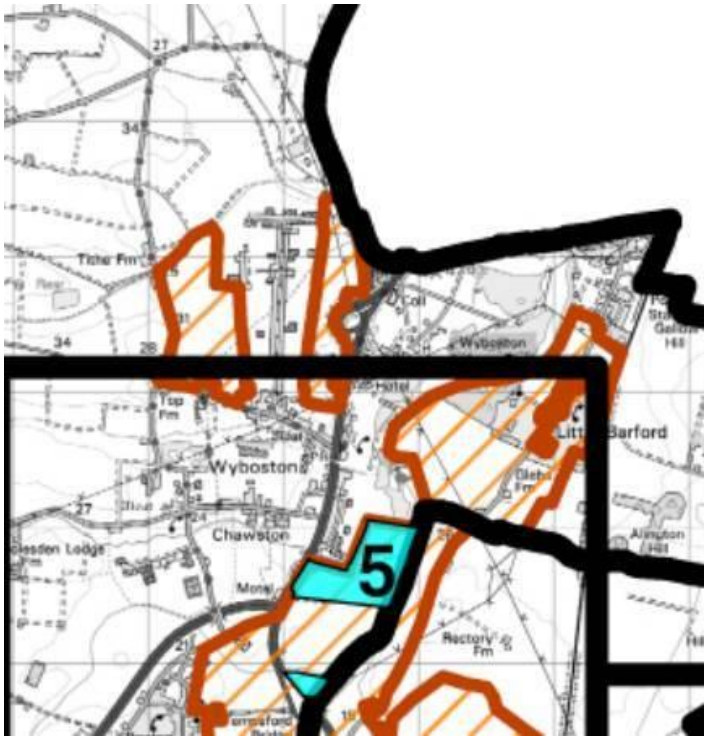
4 Minerals and Waste Local Plan (2014)

4.1 Similarly to the Local Planning Policy, the land in question falls under the mineral planning control of Bedford Borough Council. The current local plan is the Minerals and Waste Local Plan (MWLP) that covers the whole of Bedfordshire and was adopted in 2014 by the three relevant unitary authorities (Bedford Borough Council, Luton Borough Council and Central Bedfordshire Council.)

4.2 The MWLP establishes the vision, objectives and strategy for minerals and waste for the whole of Bedfordshire. This MWLP comprises of policies that set out the minerals and waste strategy until 2024.

4.3 The County is a significant producer of aggregate sands and gravels, industrial (silica) sands, as well as chalk and historically, other minerals such as Cornbrash Limestone for use as building stone. The MSA plan for the MWLP area covers not just sand and gravel but also silica sand, chalk, cornbrash limestone and clay.

4.4 The Site at Wyboston is located within the River Valley (Glacial Sand and Gravel) Mineral Safeguarding Area. The screenshot below shows this in further detail (full map included at **Appendix 2**):



4.5 MSA designations cover areas of believed mineral deposits which are desired to be kept safeguarded from sterilisation by non-mineral development (as defined in Local Plan Policy and the National Planning Policy Framework 2019). These designations normally follow geological map boundaries and are taken from high-level research. They do not necessarily indicate that mineral exists as they are not based on site specific investigations.

4.6 Key local policies of relevance for surface development are listed below:

4.6.1 Policy MSP1 (Overall Spatial Strategy for Aggregate Sand and Gravel and Silica Sand) lists the strategic minerals sites to meet supply. These are as follows:

- Willington Lock
- Blunham/ Roxton
- Black Cat
- Willowhill Farm
- Bridge Farm
- Land south of Broom Village and for specialist silica sands: Land at Clipstone Brook

4.6.2 Policy MSP 12 (Surface Development within a Mineral Safeguarding Area). This states that surface development will only be permitted within a MSA where it has been demonstrated that:

"*• The mineral concerned is proven to be of no economic value as a result of the undertaking of the Mineral Resource Assessment; or*
• The development will not inhibit extraction if required in the future; or
• There is an overriding need for the development and prior extraction cannot reasonably be undertaken; or
• The mineral can be extracted prior to the development taking place.

4.6.3 Policies MSP11 and MSP12 will not apply to the following classes of surface development as they are unlikely to lead to the long-term sterilisation of minerals:

• Extensions of existing buildings within their curtilage;
• Infilling development except for proposals within 250 metres of an existing permission for mineral extraction/waste disposal;
• Minor development (such as walls, gates, accesses);
• Individual residential caravans for a period of less than 5 years;
• Amendments to previously approved developments;
• Applications for Listed Building Consent;
• Reserved matters;
• Changes of Use (except where further built development is proposed). Where a development is applied for which is of a form not exempt under this policy and within an area of a designated Mineral Safeguarding Area, then policy MSP11 shall apply"

4.6.4 Policy MSP11 (Minerals Resource Assessment) is of relevance because it seeks to ensure that all surface development proposals within MSA's (excluding the exemptions set out in MSP12) shall be accompanied by a Minerals Resource Assessment. Extracts of Policies MSP11 and MSP 12 are attached at **Appendix 3**.

GEOLOGY

The geology of any specific area is generally divided into two separate parts, being the solid geology and the superficial deposits. These superficial deposits comprise material at, or close to, the surface whilst deposits below that are generally referred to as solid geology or bedrock.

5 Solid Geology

5.1 Attached at **Appendix 4** are two reports from the British Geological Survey which summarise the geology of the site (each report can only cover a maximum area and the layout of this land required it to straddle two separate applications.) The solid geology or bedrock of the area comprises solely mudstone from the Oxford Clay Formation and Peterborough Member, neither of which has any commercial use. These deposits are not safeguarded.

6 Superficial Geology

6.1 The British Geological Survey reports referred to in 5.1 above and attached at **Appendix 4** indicate that the majority of the superficial deposit at the site comprises River Terrace deposit of sand and gravel. A small part of the site at the northern boundary is shown as comprising a Diamicton (glacial till) deposit of the Oadby Member.

6.2 Diamicton or glacial till is not a commercial deposit as it is essentially unconsolidated clay and is not safeguarded. It should be noted that the British Geological Survey information is taken from a high level and it is likely that the precise boundary between the River Terrace deposit and the glacial till will be different from that show on the attached maps. It is noted that the glacial till to the north of the stream, which forms the northern boundary of the site, is extensive whereas it is very limited in extent to the south of the stream.

7 Borehole Information

7.1 Studies of the British Geological Survey borehole records show a number of boreholes were sunk as part of the Eaton Socon bypass project (A1) in 1965 and these are attached at **Appendix 5**. These show a modest depth of River Terrace sand and gravel with varying amounts of cover. The table below summarises the respective depths and overburden/mineral ratio:

Borehole	Overburden (m)	Mineral (m)	Ratio
1	1.83	1.52	1.204
2	1.83	1.52	1.204
3	1.98	1.22	1.623
4	0.76	2.75	0.276
5	0.9	2.45	0.367
6	0.9	2.15	0.419
7	0.91	4.88	0.186
8	0.25	2.65	0.094
9	0.3	2.75	0.109
10 (underpass)	1.68	2.13	0.789
11 (northern boundary)		Barren	-

7.2 Boreholes 1-9 all show the same grid reference point on their datasheets, being on the line of the A1 and thus on the site's eastern boundary. This is the closest location to the River Ouse, which forms the centre line of the River Terrace deposit. It is noted from the superficial deposit maps that the river terrace deposits disappear a short distance to the west of the site (roughly along Rookery Road). It could therefore be reasonably surmised that the mineral within the site reduces in depth as the distance from the River Ouse increases. As a result, the mineral depths shown and the overburden/mineral ratios along the eastern boundary of the site are probably at their most favourable.

7.3 Boreholes 10 and 11 do have grid references attached and borehole 10 indicates a shallowing of the reserve to the north, with increased levels of overburden. Borehole 11, which was located adjacent to the Colmworth Brook, was barren.

7.4 In general, an overburden/mineral ratio of greater than 1 is the threshold for commercial viability due to the cost of removing the overburden against the value of the sand and gravel. Furthermore, in any mineral extraction exercise it is impossible to extract all the mineral as the interfaces with non-mineral can be erratic and some mineral is left unextracted. As a result, extracting shallow beds of mineral can be uneconomic as c.30cm of material, on average, will remain unextracted.

7.5 In the light of this extraction in the vicinity of boreholes 1-3 and 11 would be unlikely to be economically viable.

7.6 At an average gross mineral depth at the site of 2.4m (an average of boreholes 1-10) less extraction losses of 0.3m the potential yield per hectare (at a mineral density of 1.65t/m3) would be 34,6500 tonnes.

7.7 In the light of the utility infrastructure which exists at the site (see section 9) the only area that could realistically be available for mineral extraction is the central area between the previously extracted lakes and the MoD oil pipeline (shown yellow on the plan at **Appendix 7**.) This area measures some 15.48 hectares which would give a maximum yield from the site of 536,000 tonnes. In reality the net yield would be lower than this due to the need for boundary stand-offs.

7.8 The MWLP requires a provision of 1.84 million tonnes of sand and gravel per annum across the three Council areas. As a result, the site at Wyboston would provide a maximum of 4 months mineral supply towards the MWLP.

CONSTRAINTS ON MINERAL EXTRACTION

8 Access

8.1 The site has two access points comprising one towards the northern end of the site from Alpha Drive and one at the southern end of The Lane. The northern access runs through an underpass beneath the A1 which is shared with a public bridleway. The underpass is designed for agricultural vehicles and would only be capable of taking one way HGV traffic. In addition, the underpass is shared with a public bridleway and there would be significant health and safety risks to the use of this for commercial vehicles. A diversion of the public bridleway would not be feasible as there are no other crossing points over or under the A1.

8.2 Alternative routes for HGV access are not available given that the whole of the eastern side of the site is bounded by the A1 and there are no access points from this road. The southern and western boundaries comprise residential gardens with no road frontage.

8.3 The access from the South is directly from The Lane and comprises an agricultural access between two residential properties which is approximately 12 feet wide. There is no available land to enable the widening of this access to facilitate HGV traffic, with residential properties located on both sides.

8.4 Due to the constraints presented by the boundaries of the property and the absence of a destination processing plant it would not be possible to remove the mineral by field conveyor to an off-site processing plant. Deliveries of larger plant and excavating machinery would also be impossible given the low height of the underpass under the A1.

8.5 I attach photographs at **Appendix 6** showing the underpass under the A1 and its unsuitability for HGV traffic to use for removing mineral from site.

9 Utility Infrastructure

9.1 The site is substantially affected by utility infrastructure, partly connected with the Eaton Socon National Grid substation immediately to the north. The northern part of the site is crossed by two high voltage overhead power lines on metal towers which run approximately north-south. In addition, a high voltage underground cable was recently installed along the eastern boundary of the site from the substation and exiting the site via the underpass previously referred to. Finally, there is a further high voltage power line which crosses these southern part of the site

9.2 In terms of below ground infrastructure there is a government oil pipeline which runs down the western boundary of the site before cutting diagonally across land to exit under the A1.

9.3 Due to the nature of the agreements on which this infrastructure is held diverting the equipment will be difficult. In addition, there is a lack of alternative routes that would enable any diversions to take place due to the presence of the A1 to one side and the proximity of the substation which fixes one end of the electricity infrastructure.

9.4 The northern part of the site is particularly badly affected and once reasonable safety stand-offs have been taken into account from all of the infrastructure only small pockets of mineral will be available for extraction in this area. Battered slopes will be required to maintain the support at surface level and these will further eat into the extractable volumes that could be obtained. It is therefore unlikely that any of the mineral in the northern area could be realistically extracted in a commercially viable operation.

9.5 A similar issue presents itself with the southern part of the site (i.e. south of the previously extracted ponds) where this area comprises some narrow sections of fields. Once boundary standoffs, landscaping bunds and side batters have been taken into account the actual net yield of such areas would be minimal. In addition, the overhead power line is likely to sterilise a further area of mineral in this area.

9.6 The photographs at **Appendix 6** show some of the utility infrastructure on site and the plan at **Appendix 7** indicates the location of the various utilities.

10 Opportunities for Mineral Extraction

10.1 The site does not adjoin any existing consented mineral extraction sites, nor any that have been allocated in the MWLP. Extraction of the mineral as an extension to other operating sites in the region by conveyor will not be possible due to the neighbouring uses. The land to the south and east is in residential use and no corridors exist for a conveyor route to be created. The eastern boundary comprises the A1, with commercial development sites beyond the A1.

10.2 Removal of the mineral by HGV is constrained by the size of the underpass from Alpha Drive, details of which have been set out in section 8 above.

10.3 There may be an opportunity for the extraction of the mineral in connection with the proposed development, for use in construction, landscaping, and the manufacture of concrete. This will depend on the precise details of the scheme and should be addressed as part of a detailed planning application.

10.4 I am not aware that the site has ever been promoted to any MWLP, presumably due to the constraints imposed by its access and the existing on-site infrastructure.

11 Prior Extraction

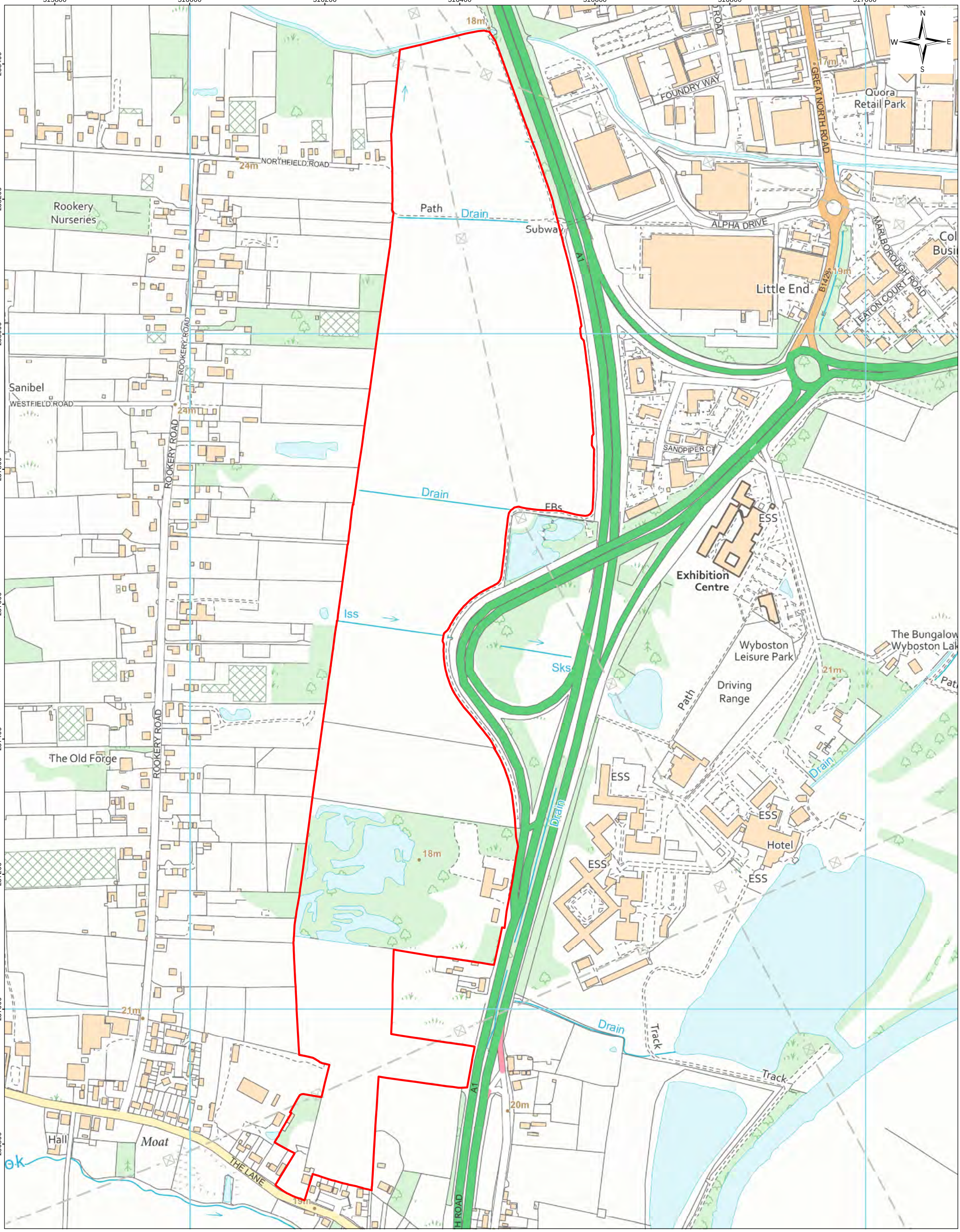
11.1 Planning policy encourages the consideration of prior extraction within mineral safeguarding areas. The area of lakes in the centre of the site has been subject to historic extraction although there is no information available as to the depth of these. However, it is understood that they are relatively shallow, and this may explain why extraction was limited to this area and did not extend either north or south at the time.

11.2 In any event this area should not be included within the MSA as prior extraction has already taken place.

11.3 As set out in section 10 above, removal of the mineral from the site is seriously constrained as would the import of any infill material to be able to restore the land to its original levels.

11.4 Prior extraction of the current agricultural area of the site would inevitably reduce the level of the land and it is noted that other extraction in the vicinity of the site has almost entirely been restored either to low lying wetland or lakes. Restoration to either of these landforms would be inappropriate for the proposed development and prior extraction is therefore not considered to be feasible in this instance. Prior extraction would also cause a delay to the delivery of the development through having to wait for the mineral extraction and restoration to take place.

Appendix 1



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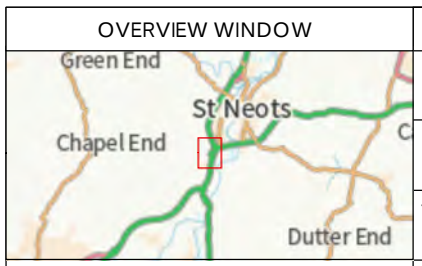		
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	TITLE: Wyboston Mineral Resource Assessment	
0 100 200 Metres	SCALE: 1:5,000 @ A3 DATE: 13/04/2021	

LEGEND:

Land of interest = 99.90 ac

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DRAWING REF:
WYBOSTON-2021-04-NI-SP
Wyboston Mineral Resource Assessment

Appendix 2

Strategic Waste Sites

1) Elstow North
2) Rookery Pit South
3) Land at Former Brogborough Landfill
4) Land at Thorn Turn

Strategic Mineral Sites

5) Black Cat
6) Blunham/Roxton
7) Bridge Farm
8) Willington Lock
9) Willowhill Farm
10) Land South of Broom Village
11) Land at Clipstone Brook

Inset Map 1
Inset Map 2
Inset Map 3
Inset Map 4
Inset Map 5
Inset Map 6
Inset Map 7
Inset Map 8
Inset Map 9

Mineral Safeguarding Areas

Mineral Strategic Policy MSP11 and MSP12

- River Valley/ Glacial Sand and Gravel MSA
- Woburn Sands MSA
- Chalk Group MSA
- Oxford Clay MSA
- Cornbrash Limestone MSA
- Gault Clay MSA

Strategic Waste Sites

Waste Strategic Policy WSP2

- Strategic Waste site

Strategic Waste Sites

Mineral Strategic Policy MSP1

- Strategic Mineral site

Mineral Strategic Policy MSP 3

- Aggregates recycling facility

Mineral Strategic Policy MSP4

- Aggregates rail depot
- Concrete batching plants
- Asphalt plant

Minerals and Waste Local Plan Strategic Sites and Policies LDD: Policies Map Location Plan

Central Bedfordshire
Bedford Borough Council
LUTON

Appendix 3

- Fuller's Earth
- Cornbrash limestone

6.38 The Plan area includes the river valleys of the Ouse, Ivel, and Flit which contain the aggregate sand and gravel resource. An additional source of aggregates occurs within the Woburn Sands formation which is an important source of concreting, building, and asphalting sands, and locally, industrial silica sands, and fuller's earth. In addition, the Marston Vale to the south of Bedford is an area of low lying land which contains significant clay deposits. Finally, in the southern part of the Plan area the land is underlain by chalk, and rises in topography to the eastern extremity of the Chiltern Hills Area of Outstanding Natural Beauty.

6.39 The areas to be subject to Mineral Safeguarding are shown on the Policies Map. Most development proposed within an area designated for Mineral Safeguarding will be subject to policies MSP 11 and MSP 12.

Mineral Strategic Policy MSP 11

Minerals Resource Assessment

Surface development proposals within a Mineral Safeguarding Area (excluding exemptions set out under policy MSP12: Surface Development within a Mineral Safeguarding Area) shall be accompanied by a Minerals Resource Assessment. This shall be undertaken by a suitably qualified professional, which establishes through site specific geological survey data, the existence or otherwise of a mineral resource of economic importance.

6.40 The areas designated as Mineral Safeguarding Areas are shown on the plans in the Policies Map Local Development Plan Document. On receipt of a Mineral Resource Assessment the Mineral Planning Authority can decide on the most appropriate course of action. According to the results of this assessment in relation to the quality and quantity of mineral that could be recovered; the practicability of extraction; and the environmental impacts of mineral extraction, the mineral resource present may be required to be extracted before the surface development takes place, or else left in situ and allowed to be sterilised. Where prior extraction is deemed appropriate a separate planning application will be required for the extraction of the mineral.

Mineral Strategic Policy MSP 12

Surface Development within a Mineral Safeguarding Area

Surface development will only be permitted within a Mineral Safeguarding Area where it has been demonstrated that:

• The mineral concerned is proven to be of no economic value as a result of the undertaking of the Mineral Resource Assessment; or

• The development will not inhibit extraction if required in the future; or

• There is an overriding need for the development and prior extraction cannot reasonably be undertaken; or

• The mineral can be extracted prior to the development taking place.

Policies MSP11 and MSP12 will not apply to the following classes of surface development as they are unlikely to lead to the long term sterilisation of minerals:

• Extensions of existing buildings within their curtilage;

• Infilling development except for proposals within 250 metres of an existing permission for mineral extraction/waste disposal;

• Minor development (such as walls, gates, accesses);

• Individual residential caravans for a period of less than 5 years;

• Amendments to previously approved developments;

• Applications for Listed Building Consent;

• Reserved matters;

• Changes of Use (except where further built development is proposed).

Where a development is applied for which is of a form not exempt under this policy and within an area of a designated Mineral Safeguarding Area, then policy MSP11 shall apply.

6.41 Where it has been determined that it is necessary for the development to take place, and that the mineral is considered to be of sufficient quality and quantity etc, the MPA will seek prior extraction of that mineral subject to the provision of satisfactory information, including a full assessment and acceptability of:

- The size and nature of the proposed surface development
- The quality and quantity of the mineral that would be recovered.
- The practicability of extraction.
- The environmental impacts of mineral extraction
- The size and nature of the proposed development

By this means valuable mineral resources will be safeguarded from needless sterilisation.

Appendix 4

GeoReports

British Geological Survey

Ben Minns
Fisher German LLP
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LE65 2UZ

Geological Map Extracts

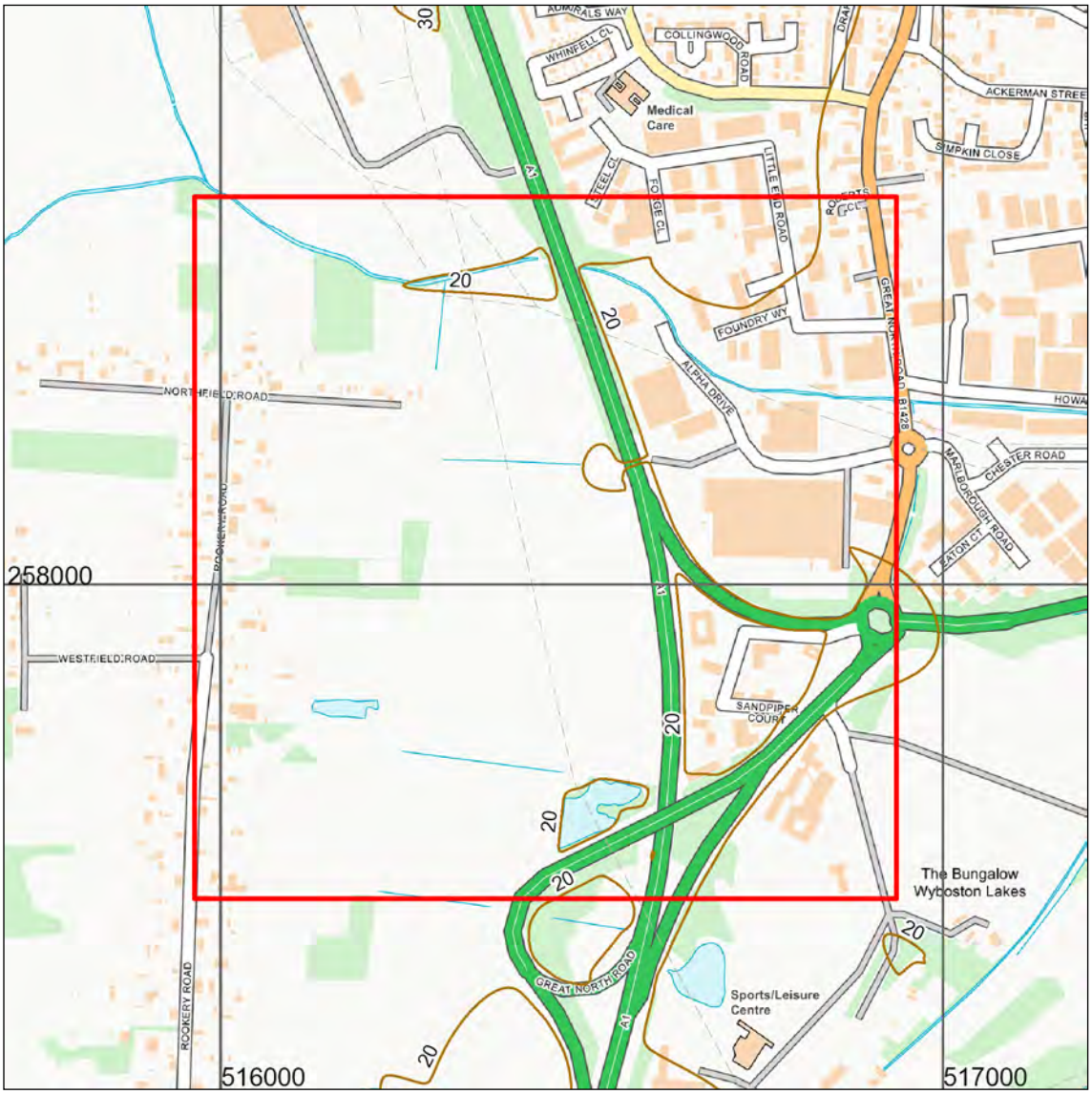
This report is designed for users carrying out preliminary site assessments who require geological maps for the area around their site, as well as for those who have a general interest in their local geology.

The report contains geological map extracts taken from the BGS Digital Geological Map of Great Britain at 1:10,000 scale (BGS Geology 10k) where available, otherwise at 1:50,000 scale (BGS Geology 50k). The various geological layers – artificial (man-made), landslip, superficial and solid (bedrock) geology - are displayed separately as 10 by 10cm extracts.

Report Id: ***BGS_315611/20292***

Client reference: Fisher German

Search location



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Search location indicated in red

This report describes a site located at National Grid Reference 516450, 258051. Note that for sites of irregular shape, this point may lie outside the site boundary. Where the client has submitted a site plan the assessment will be based on the area given.

Geological Map Extracts 1:50,000 Scale

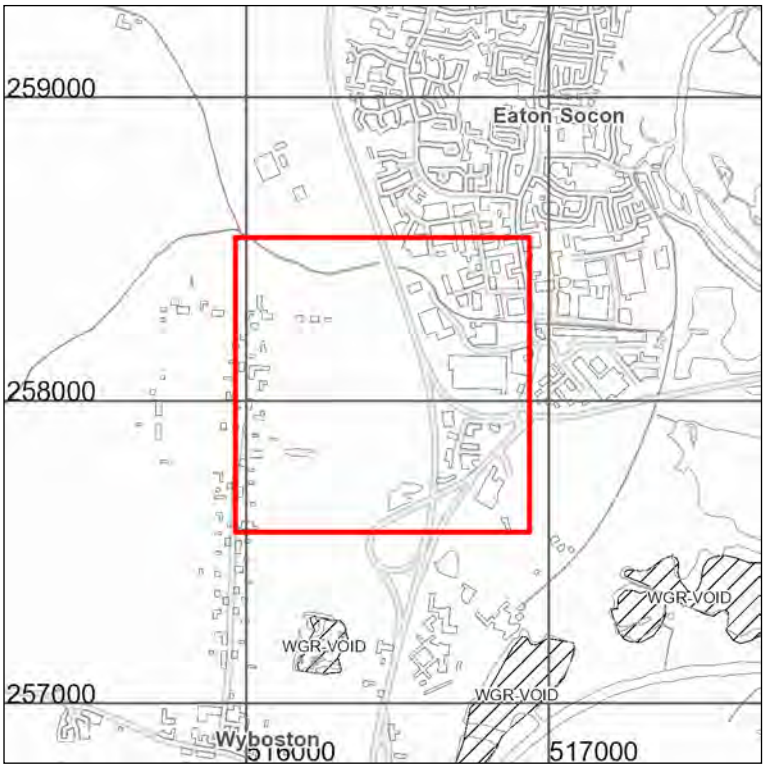
This part of the report contains extracts of geological maps taken from the 1:50 000 scale BGS Digital Geological Map of Great Britain (BGS Geology 50k). The geological information in BGS Geology is divided into four themes: artificial ground, landslide deposits, superficial deposits and bedrock, shown here in separate maps. The fifth 'combined geology' map superimposes all four of these themes, to show the uppermost geological formations.

More information about BGS Geology 50k is available here http://www.bgs.ac.uk/products/digitalmaps/DiGMapGB_50.html and information on the BGS geological classification schemes here http://www.bgs.ac.uk/bgsrcs/. The maps are labelled with two-part computer codes that indicate the name of the geological unit and its composition. Descriptions of the units listed in the map keys may be available in the BGS Lexicon of Named Rock Units (http://www.bgs.ac.uk/lexicon/). If available, these descriptions can be found by searching against the first part of the computer code used on the maps. Please consult the legend and the codes on the map in areas of complex geology. If in doubt, please contact BGS Enquiries for clarification.

In the map legends the geological units are listed in order of their age, as defined in the BGS Lexicon, with the youngest first. However, where units are of the same defined age they are listed alphabetically and this may differ from the actual geological sequence.

Artificial ground

This is ground at or near the surface that has been modified by man. It includes ground that has been deposited (Made Ground) or excavated (Worked Ground), or some combination of these: Landscaped Ground or Disturbed Ground.



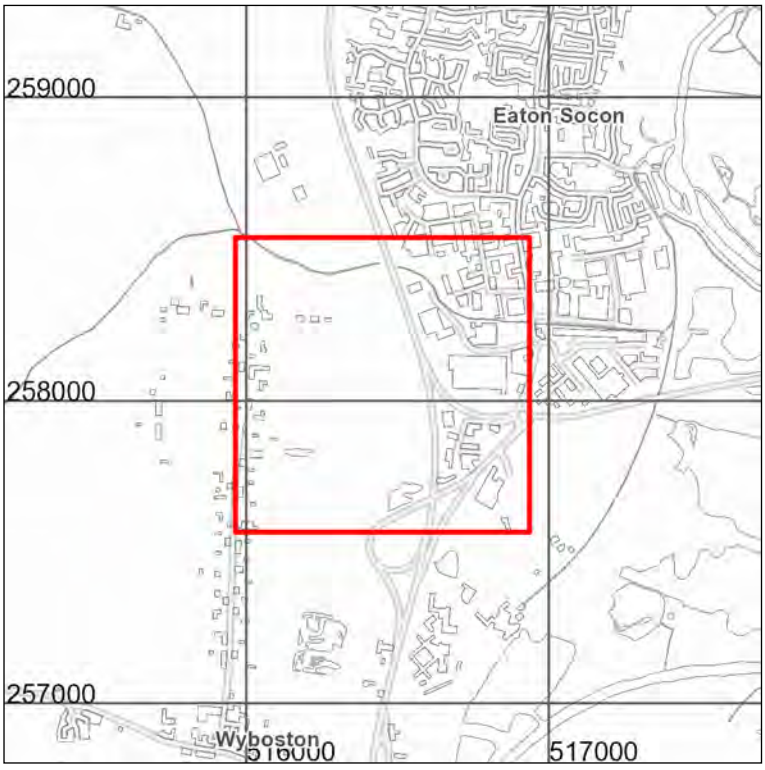
Scale: 1:25 000 (1cm = 250 m)
Search area indicated in red

Key to Artificial ground:

Map colour	Computer Code	Name of geological unit	Composition
▨	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

Landslide deposits

These are deposits formed by localised mass-movement of soils and rocks on slopes under the action of gravity. Landslides may occur within the bedrock, superficial deposits or artificial ground; and the landslide deposits may themselves be artificially modified.



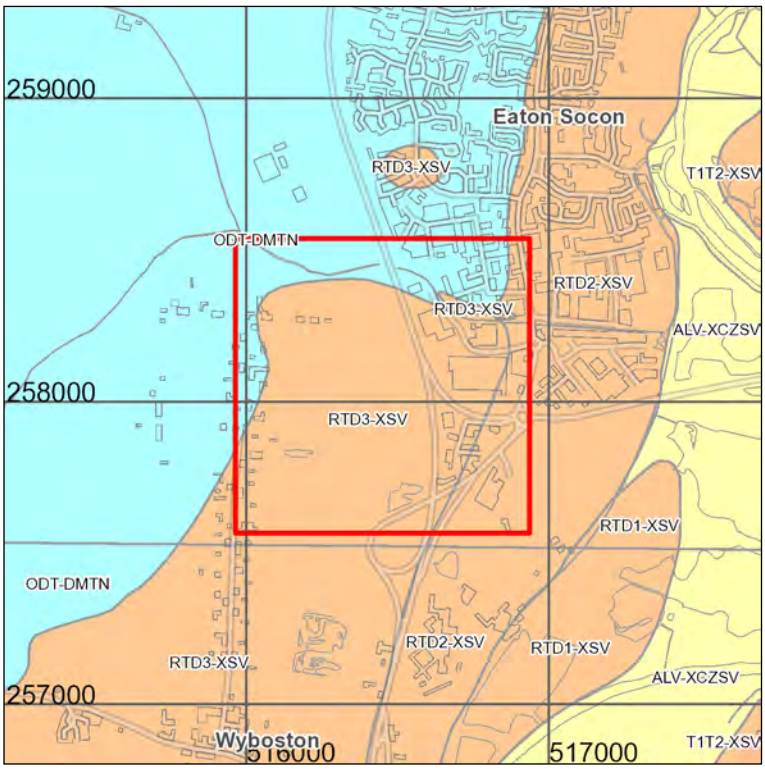
Scale: 1:25 000 (1cm = 250 m)
Search area indicated in red

Key to Landslide deposits:

No deposits found in the search area

Superficial deposits

These are relatively young geological deposits, formerly known as ‘Drift’, which lie on the bedrock in many areas. They include deposits such as unconsolidated sands and gravels formed by rivers, and clayey tills formed by glacial action. They may be overlain by landslide deposits or by artificial deposits, or both.



Scale: 1:25 000 (1cm = 250 m)
Search area indicated in red

Key to Superficial deposits:

Map colour	Computer Code	Name of geological unit	Composition
	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
	T1T2-XSV	RIVER TERRACE DEPOSITS, 1 TO 2	SAND AND GRAVEL
	ODT-DMTN	OADBY MEMBER	DIAMICTON
	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL
	RTD2-XSV	RIVER TERRACE DEPOSITS, 2	SAND AND GRAVEL
	RTD3-XSV	RIVER TERRACE DEPOSITS, 3	SAND AND GRAVEL

Bedrock

Bedrock forms the ground underlying the whole of an area, commonly overlain by superficial deposits, landslide deposits or artificial deposits, in any combination. The bedrock formations were formerly known as the ‘Solid Geology’.

Search area indicated in red

Fault

Coal, ironstone or mineral vein

Note: Faults are shown for illustration and to aid interpretation of the map. Because these maps are generalised from more detailed versions not all such features are shown and their absence on the map face does not necessarily mean that none are present. Coals, ironstone beds and mineral veins occur only in certain rock types and regions of the UK; if present here, they will be described under ‘bedrock’ below.

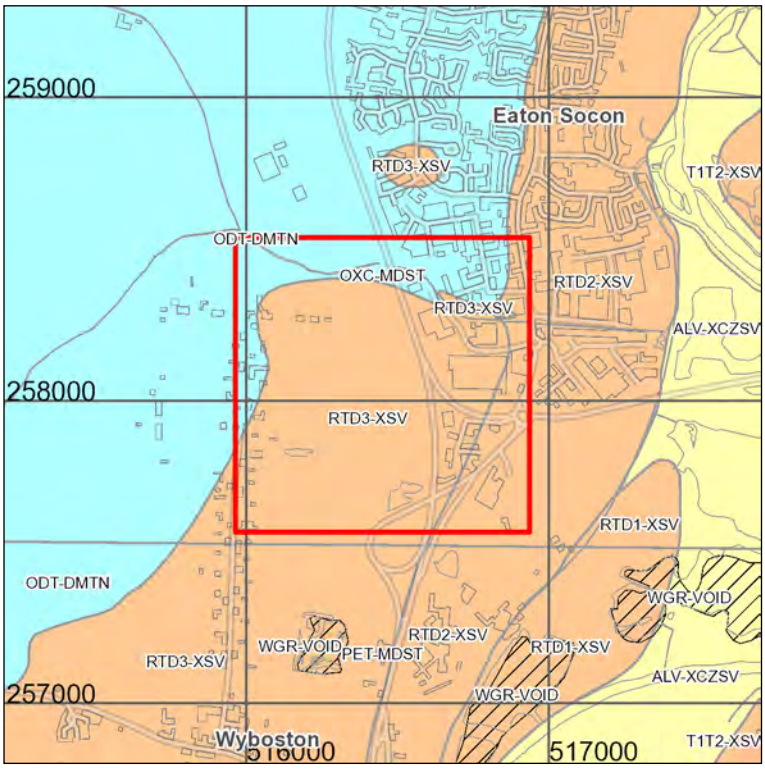
Scale: 1:25 000 (1cm = 250 m)

Key to Bedrock geology:

Map colour	Computer Code	Name of geological unit	Rock type
	OXC-MDST	OXFORD CLAY FORMATION	MUDSTONE
	PET-MDST	PETERBOROUGH MEMBER	MUDSTONE

Combined 'Surface Geology' Map

This map shows all the geological themes from the previous four maps overlaid in order of age.



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Scale: 1:25 000 (1cm = 250 m)
Search area indicated in red

Please see the Keys to the Artificial, Landslide, Superficial and Bedrock geology maps.

Contact Details

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Tel: 01491 838800
Email: hydroenq@bgs.ac.uk

Edinburgh Office
British Geological Survey
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EH14 4AP
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- Geological observations and interpretations are made according to the prevailing understanding of the subject at the time. The quality of such observations and interpretations may be affected by the availability of new data, by subsequent advances in knowledge, improved methods of interpretation, and better access to sampling locations.
- Raw data may have been transcribed from analogue to digital format, or may have been acquired by means of automated measuring techniques. Although such processes are subjected to quality control to ensure reliability where possible, some raw data may have been processed without human intervention and may in consequence contain undetected errors.
- Detail, which is clearly defined and accurately depicted on large-scale maps, may be lost when small-scale maps are derived from them.
- Although samples and records are maintained with all reasonable care, there may be some deterioration in the long term.
- The most appropriate techniques for copying original records are used, but there may be some loss of detail and dimensional distortion when such records are copied.
- Data may be compiled from the disparate sources of information at BGS's disposal, including material donated to BGS by third parties, and may not originally have been subject to any verification or other quality control process.
- Data, information and related records, which have been donated to BGS, have been produced for a specific purpose, and that may affect the type and completeness of the data recorded and any interpretation. The nature and purpose of data collection, and the age of the resultant material may render it unsuitable for certain applications/uses. You must verify the suitability of the material for your intended usage.
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Report issued by
BGS Enquiry Service

GeoReports

British Geological Survey

Ben Minns
Fisher German LLP
The Estates Office Unit A1
Norman Court
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LE65 2UZ

Geological Map Extracts

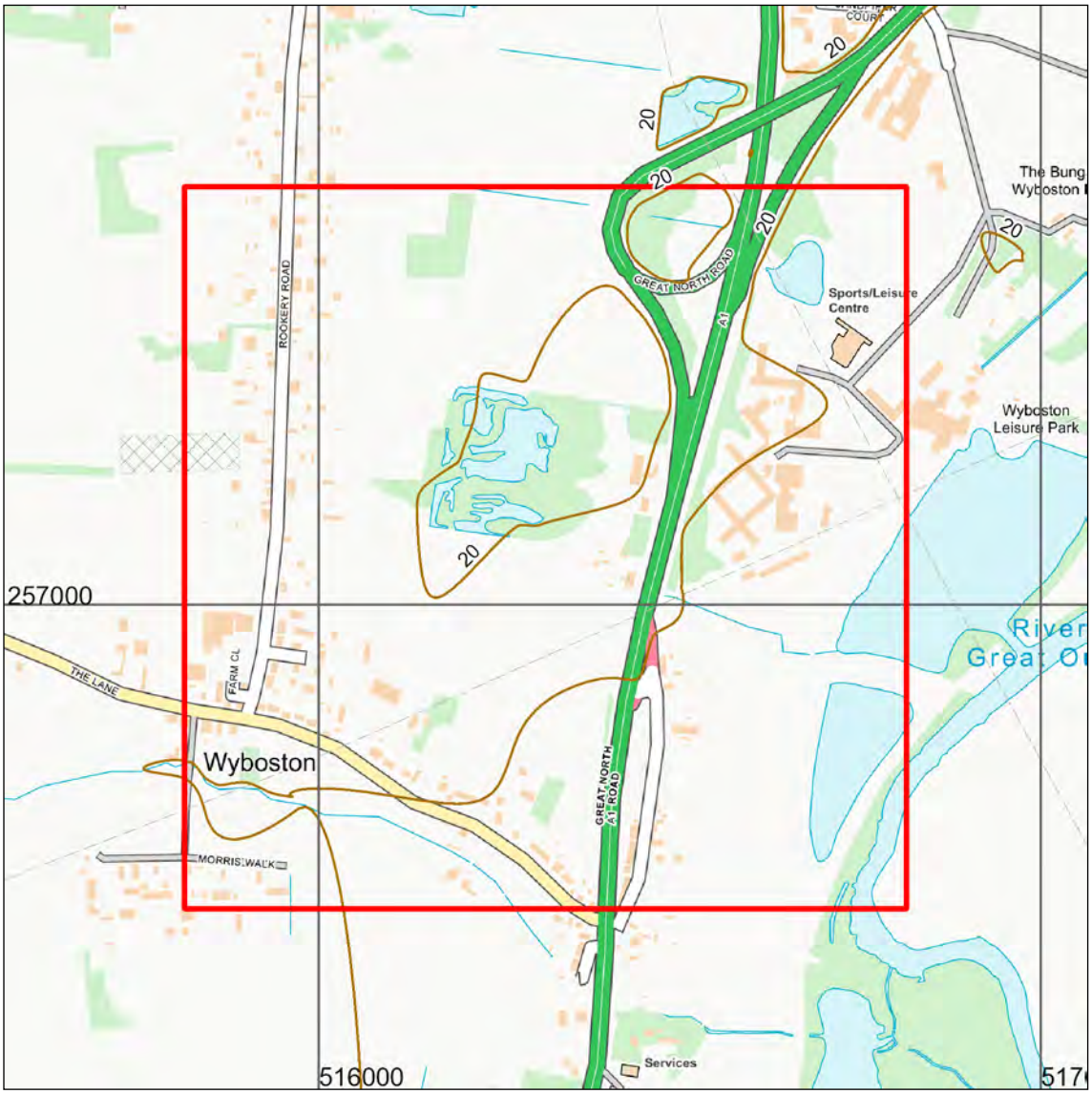
This report is designed for users carrying out preliminary site assessments who require geological maps for the area around their site, as well as for those who have a general interest in their local geology.

The report contains geological map extracts taken from the BGS Digital Geological Map of Great Britain at 1:10,000 scale (BGS Geology 10k) where available, otherwise at 1:50,000 scale (BGS Geology 50k). The various geological layers – artificial (man-made), landslip, superficial and solid (bedrock) geology - are displayed separately as 10 by 10cm extracts.

Report Id: ***BGS_315611/20294***

Client reference: Fisher German

Search location



Contains OS data © Crown Copyright and database right 2021. OS OpenMap Local: Scale: 1:10 000 (1cm = 100 m)
Search location indicated in red

This report describes a site located at National Grid Reference 516314, 257079. Note that for sites of irregular shape, this point may lie outside the site boundary. Where the client has submitted a site plan the assessment will be based on the area given.

Geological Map Extracts 1:50,000 Scale

This part of the report contains extracts of geological maps taken from the 1:50 000 scale BGS Digital Geological Map of Great Britain (BGS Geology 50k). The geological information in BGS Geology is divided into four themes: artificial ground, landslide deposits, superficial deposits and bedrock, shown here in separate maps. The fifth 'combined geology' map superimposes all four of these themes, to show the uppermost geological formations.

More information about BGS Geology 50k is available here http://www.bgs.ac.uk/products/digitalmaps/DiGMapGB_50.html and information on the BGS geological classification schemes here http://www.bgs.ac.uk/bgsrcs/. The maps are labelled with two-part computer codes that indicate the name of the geological unit and its composition. Descriptions of the units listed in the map keys may be available in the BGS Lexicon of Named Rock Units (http://www.bgs.ac.uk/lexicon/). If available, these descriptions can be found by searching against the first part of the computer code used on the maps. Please consult the legend and the codes on the map in areas of complex geology. If in doubt, please contact BGS Enquiries for clarification.

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This is ground at or near the surface that has been modified by man. It includes ground that has been deposited (Made Ground) or excavated (Worked Ground), or some combination of these: Landscaped Ground or Disturbed Ground.

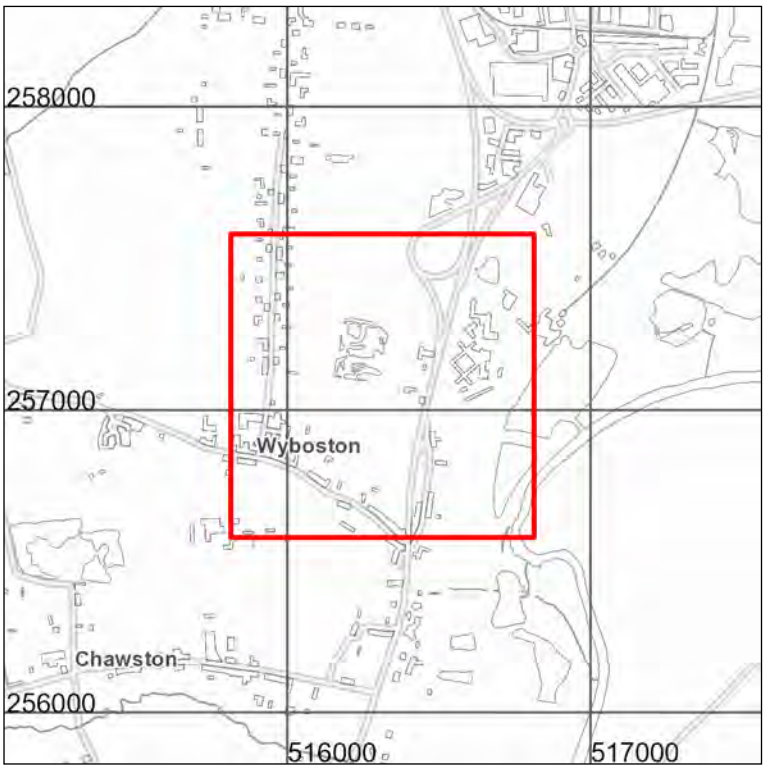
Contains OS data © Crown Copyright and database right 2021
Scale: 1:25 000 (1cm = 250 m)
Search area indicated in red

Key to Artificial ground:

Map colour	Computer Code	Name of geological unit	Composition
	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND
	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

Landslide deposits

These are deposits formed by localised mass-movement of soils and rocks on slopes under the action of gravity. Landslides may occur within the bedrock, superficial deposits or artificial ground; and the landslide deposits may themselves be artificially modified.



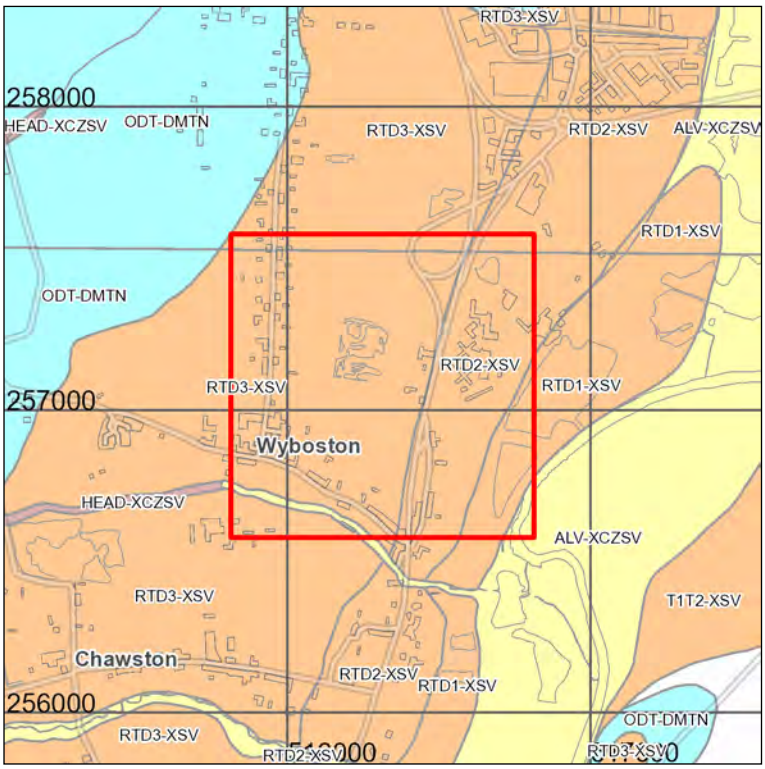
Scale: 1:25 000 (1cm = 250 m)
Search area indicated in red

Key to Landslide deposits:

No deposits found in the search area

Superficial deposits

These are relatively young geological deposits, formerly known as ‘Drift’, which lie on the bedrock in many areas. They include deposits such as unconsolidated sands and gravels formed by rivers, and clayey tills formed by glacial action. They may be overlain by landslide deposits or by artificial deposits, or both.



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Scale: 1:25 000 (1cm = 250 m)
Search area indicated in red

Key to Superficial deposits:

Map colour	Computer Code	Name of geological unit	Composition
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	T1T2-XSV	RIVER TERRACE DEPOSITS, 1 TO 2	SAND AND GRAVEL
	ODT-DMTN	OADBY MEMBER	DIAMICTON
	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL
	RTD2-XSV	RIVER TERRACE DEPOSITS, 2	SAND AND GRAVEL
	RTD3-XSV	RIVER TERRACE DEPOSITS, 3	SAND AND GRAVEL

Bedrock

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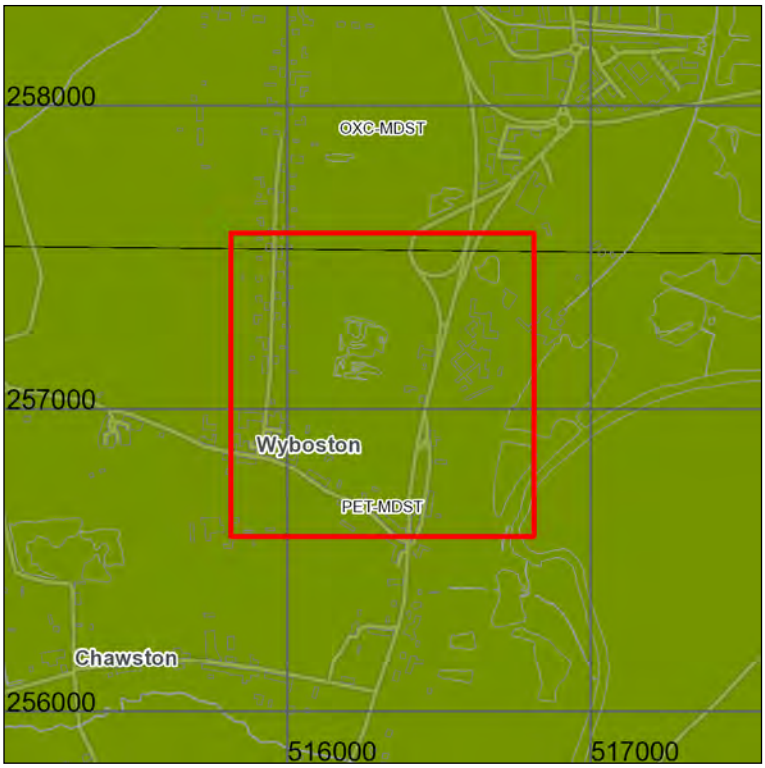

Search area indicated in red

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Coal, ironstone or mineral vein

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Key to Bedrock geology:

Map colour	Computer Code	Name of geological unit	Rock type
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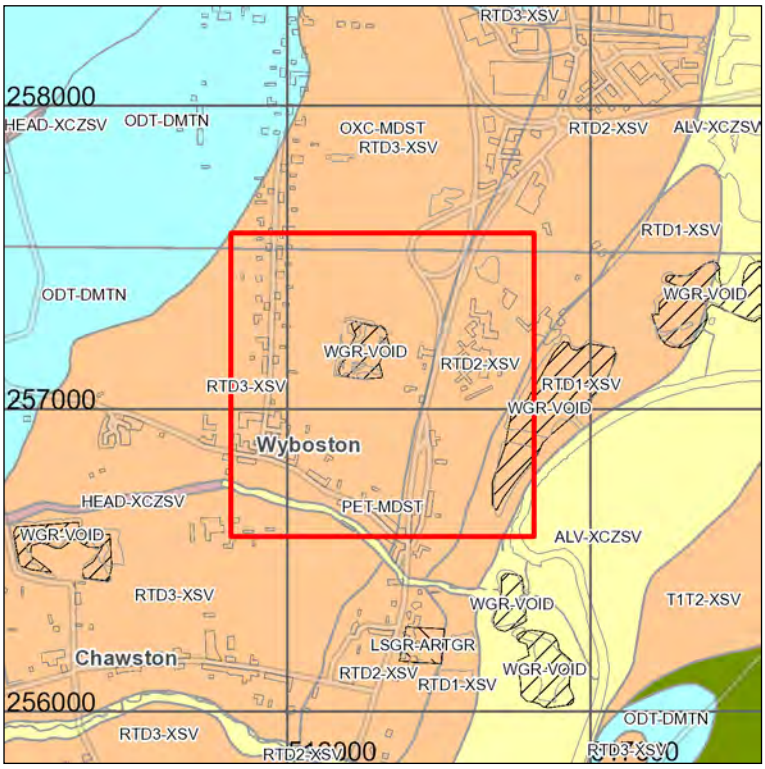
Combined 'Surface Geology' Map

This map shows all the geological themes from the previous four maps overlaid in order of age.



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Edinburgh Office
British Geological Survey
Lyell Centre
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Report issued by
BGS Enquiry Service

Appendix 5

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750

Report an issue with this borehole

LOG OF BOREHOLE Nº 1

GROUND LEVEL (115m) 64.08 AOD
DATE STARTED 21/4/1965.
DATE COMPLETED 30/4/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 35 ft. 9 ins.
611662 · 5775
TL 15NE 3A

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
RED BOULDER CLAY		TOPSOIL	0·15m		
		STIFF MOTTLED BROWN & GREY VERY SANDY SILTY CLAY WITH OCCASIONAL STONES & CHALK FRAGMENTS	6' 0 1·83m	60	▽
TERRACE GRAVEL		MEDIUM DENSE SANDY FINE & MEDIUM GRAVEL	3·35m	20	
		MEDIUM DENSE GREY SILT	12' 0 3·81m		▽
		STIFF GREY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES OCCASIONAL STONES			
		VERY SILTY	20' 0 6·10m	50	
		SANDY	22' 6 6·86m	50/5"	
		BOULDER	3·91m	30	NO PENETRATION
		GREY SANDY SILT WITH CHALK FRAGMENTS	37' 0 4·45m		
GLACIAL CHALKY BOULDER CLAY		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & OCCASIONAL STONES & FLINTS	33' 6 10·21m	28	
				19	
				97	
		BOULDER	50 15·09m	92	
				54	
			62 18·90m	43	
		+2.05			

REMARKS:

KEY:
- ▽ WATER STRUCK
- ▽ STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 4677 | LABORATORY Nº 2405 | SCALE: 1in. = 10ft.

SITE INVESTIGATION BY LE GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750

Report an issue with this borehole

LOG OF BOREHOLE Nº 1

GROUND LEVEL 164.08 A.O.D
DATE STARTED 21/4/1965
DATE COMPLETED 30/4/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 35 ft 9 ins.

TL 15 NE 3A

c 1662 · 5775

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
RED BOULDER CLAY		TOPSOIL	0·15m		
		STIFF MOTTLED BROWN & GREY VERY SANDY SILTY CLAY WITH OCCASIONAL STONES & CHALK FRAGMENTS	6' 0 1·83m	60	▽
TERRACE GRAVEL		MEDIUM DENSE SANDY FINE & MEDIUM GRAVEL	11' 0 3·35m	20	33-06
		MEDIUM DENSE GREY SILT	12' 6 3·81m		▽
GLACIAL CHALKY BOULDER CLAY		STIFF GREY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & OCCASIONAL STONES			
		VERY SILTY	20' 0 6·10m	50	
		SANDY	22' 6 6·86m	50/6"	
		BOULDER	31' 0 9·45m	30	NO PENETRATION
		GREY SANDY SILT WITH CHALK FRAGMENTS	33' 6 10·21m	28	12
		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & OCCASIONAL STONES & FLINTS		19	15
				97	
		BOULDER	49' 0 14·94m	92	
				54	
			52' 6 16·00m	43	
		+2.08			

REMARKS:

KEY:
- ▽ WATER STRUCK
- ▽ STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

SCALE: 1in. = 10 ft.

ORDER Nº 5577 LABORATORY Nº 2405

SITE INVESTIGATION BY I.F. GRAND & CO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750
Report an issue with this borehole

LOG OF BOREHOLE Nº 2

GROUND LEVEL (19.46m) 63.8 A.O.D. TYPE OF BORING SHELL & AUGER
DATE STARTED 1/5/1965 DIA. OF BORING 7¼ ins.
DATE COMPLETED 7/5/1965 BOREHOLE LINED TO 29 ft. 0 ins.
C 1662.5775 TL 15 NE/38

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
RED BOULDER CLAY		TOPSOIL	1' 0.30m		
		BROWN VERY SANDY SILTY CLAY WITH OCCASIONAL STONES & CHALK FRAGMENTS	6' 1.83m	50	
TERRACE GRAVEL		MEDIUM DENSE SANDY FINE AND MEDIUM GRAVEL	11' 3.35m	30	+ 62 ft
		MEDIUM DENSE GREY SILT	13' 3.96m	11 8	
BOULDER CLAY		STIFF GREY VERY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & OCCASSIONAL STONES		39	
		MORE SILTY	22' 6" 6.86m	208	
		BOULDER	27' 3" 8.31m	175 9 / 147 12	
		DENSE GREY SANDY SILT WITH CHALK FRAGMENTS	29' 6" 9.09m	50/6	
CHALKY GLACIAL		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & OCCASIONAL STONES	32' 0" 9.75m	172/10	
				91	
				122	
				132	
				64	
				141	
			61' 5" 18.75m	133/6	
		+ 2.5ft			

REMARKS:

KEY:
- WATER STRUCK
- STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

SCALE: 1in. = 10 ft.

ORDER Nº 4677 LABORATORY Nº 2405

SITE INVESTIGATION BY I.F. GRAND & CO.

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750

Report an issue with this borehole

LOG OF BOREHOLE Nº 3

GROUND LEVEL (1948m) 63.93 A.O.D
DATE STARTED 8/5/1965
DATE COMPLETED 14/5/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 7½ ins.
BOREHOLE LINED TO 29 ft. ins.
c 1662 5775
TL 15NE/3c

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels	
		TOPSOIL	1' 0.30m			
RED CLAY		BROWN SANDY SILTY CLAY WITH OCCASIONAL STONES	2' 0.76m			
		YELLOW SAND WITH OCCASIONAL STONES	3' 1.14m			
		BROWN VERY SANDY SILTY CLAY WITH STONES & CHALK FRAGMENTS	6' 1.98m	50	▽	
TERRACE GRAVEL		SANDY FINE & MEDIUM GRAVEL	10' 3.20m	23		+53.65
CLAY		GREY SANDY SILTY CLAY WITH CHALK FRAGMENTS & STONES	15' 4.57m	50		
		HARD GREY VERY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & STONES & FLINTS.		190		
		DENSE GREY SILT	24' 7.32m	50		
BOULDER CLAY		VERY STIFF TO HARD GREY VERY SILTY CLAY WITH OCCASIONAL CHALK FRAGMENTS & PEBBLES & STONES	26' 8.08m	18/3		
				130/3		
				83	▽	
				69		
CHALKY GLACIAL				100/2"		
			62' 19.05m			
		+1.43				

REMARKS:

KEY:
- ▽ WATER STRUCK
- ▽ STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 4677 | LABORATORY Nº 2405

SCALE: 1in. = 10ft.

SITE INVESTIGATION BY I.F. GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750
Report an issue with this borehole

LOG OF BOREHOLE Nº 4

GROUND LEVEL (1969m) 64.63 A.O.D. TYPE OF BORING SHELL & AUGER
DATE STARTED 4/5/1965 DIA. OF BORING 6 ins.
DATE COMPLETED 17/5/1965 BOREHOLE LINED TO 32 ft. ins.

c 662.5775 TL 15NE/3D

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
		TOPSOIL	1' 0" 0.30m		
		FIRM BROWN VERY SANDY CLAY WITH STONES	2' 6" 0.76m		
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL	11' 6" 3.51m	194	▽ +53.13
GLACIAL BOULDER CLAY		STIFF GREY VERY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES AND OCCASIONAL STONES		293	
		GREY CLAYEY SILT WITH FINE AND MEDIUM GRAVEL AND CHALK FRAGMENTS BANDS OF STIFF GREY SILTY CLAY AND DENSE GREY CLAYEY SILT OCCASIONALLY SANDY AND WITH CHALK FRAGMENTS AND STONES	23' 0" 7.01m		
			33' 0" 10.06m	700	
		VERY STIFF TO HARD GREY SILTY CLAY WITH OCCASIONAL CHALK FRAGMENTS AND PEBBLES, AND STONES		36	
				121	
				175	
				15	
			60' 18.29m	39	
		+643			

REMARKS:

KEY:
- ▽ WATER STRUCK
- ▽ STANDING WATER LEVEL
- ▮ UNDISTURBED SAMPLE
- ↓ STANDARD PENETRATION
- (25) Nº OF BLOWS FOR 12" PEN
- ▯ SLIPPED CORE

SCALE 1in. = 10 ft.

ORDER Nº 4577 LABORATORY Nº 2405

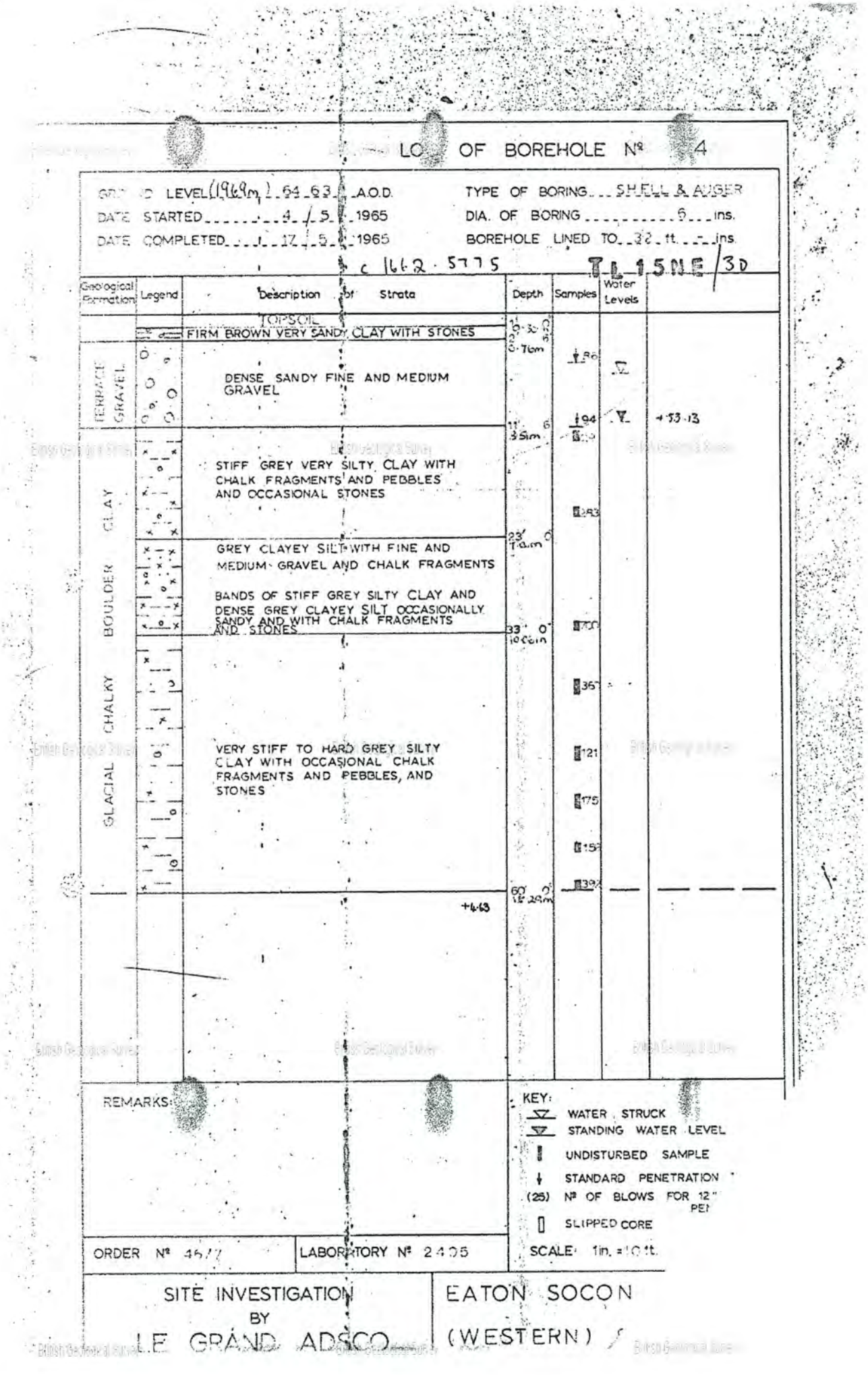
SITE INVESTIGATION BY LE GRAND ADSCO

EATON SOCON (WESTERN)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750
Report an issue with this borehole



LOG OF BOREHOLE Nº 4

GROUND LEVEL (1969m) 64.63 A.O.D. TYPE OF BORING SHELL & AUGER
DATE STARTED 4/5/1965 DIA. OF BORING 6 ins.
DATE COMPLETED 17/5/1965 BOREHOLE LINED TO 32 ft. ins.

c 662.5775 TL 15 NE/3D

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels	
		TOPSOIL	1' 0" 0.30m			
		FIRM BROWN VERY SANDY CLAY WITH STONES	2' 6" 0.76m			
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL	11' 6" 3.51m	1 80	▽	
GLACIAL BOULDER CLAY		STIFF GREY VERY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES AND OCCASIONAL STONES	23' 0" 7.01m	1 94	▽	+53.13
		GREY CLAYEY SILT WITH FINE AND MEDIUM GRAVEL AND CHALK FRAGMENTS BANDS OF STIFF GREY SILTY CLAY AND DENSE GREY CLAYEY SILT OCCASIONALLY SANDY AND WITH CHALK FRAGMENTS AND STONES	33' 0" 10.06m	1 93 1 100		
		VERY STIFF TO HARD GREY SILTY CLAY WITH OCCASIONAL CHALK FRAGMENTS AND PEBBLES, AND STONES		1 36 1 121 1 175 1 159		
		+463	60' 2" 18.29m	1 39		

REMARKS:

KEY:
- ▽ WATER STRUCK
- ▽ STANDING WATER LEVEL
- ▮ UNDISTURBED SAMPLE
- ↓ STANDARD PENETRATION
- (25) Nº OF BLOWS FOR 12" PEN
- ▯ SLIPPED CORE

SCALE: 1in. = 10 ft.

ORDER Nº 4677 LABORATORY Nº 2405

SITE INVESTIGATION BY LE GRAND ADSCO

EATON SOCON (WESTERN)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750
Report an issue with this borehole

LOG OF BOREHOLE Nº 5

GROUND LEVEL 118m. 65.00 A.O.D
DATE STARTED 18/5/1965
DATE COMPLETED 25/5/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 33 ft. ins
c 1662 5775
TL 15NE/3E

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels	
		TOPSOIL	0.30 0'			
		BROWN VERY SANDY CLAY WITH GRAVEL	3' 0.91m			
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL		41	▽	
GLACIAL CHALKY BOULDER CLAY		STIFF GREY SANDY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES AND OCCASIONAL STONES	11' 3.35m 0'	141	12"	+64
			16 0' 4.88m	178		
				198		
				126		
		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES AND OCCASIONAL STONES		309		
				131	▽	
				162		
			60' 18.29m 0'	168	12"	
		+5.0				

REMARKS:

KEY:
- ▽ WATER STRUCK
- ▽ STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 4077 LABORATORY Nº 2405

SCALE 1in. = 10 ft.

SITE INVESTIGATION BY LE GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750

Report an issue with this borehole

LOG OF BOREHOLE Nº 6

GROUND [illegible]1974m 64.78 A.O.D
DATE STARTED 15/5/1965
DATE COMPLETED 20/5/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 7¼ ins.
BOREHOLE LINED TO 39 ft. ins.

C 1662 · 5775 TL 15 NE/3F

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
		TOPSOIL	0 0		
		BROWN VERY SANDY CLAY WITH GRAVEL	3' 0 0.91m		
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL		47	▽
GLACIAL CHALKY BOULDER CLAY		MEDIUM DENSE GREY SILTY FINE SAND WITH OCCASIONAL CHALK FRAGMENTS	10' 0 3.05m	32	
			13' 0 3.96m	31	
		VERY STIFF GREY VERY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES, POCKETS OF SILT, AND OCCASIONAL STONES		91	▽
		SANDY -	6.86m 22' 6"	105	
		DENSE GREY CLAYEY SILT WITH CHALK FRAGMENTS AND PEBBLES, AND OCCASIONAL STONES	24' 0 7.32m	150/3"	
		VERY STIFF GREY SILTY CLAY, WITH CHALK FRAGMENTS AND PEBBLES	30' 0 9.30m	180	
		DENSE GREY SANDY CLAYEY SILT WITH OCCASIONAL CHALK FRAGMENTS	35' 6 10.82m	150/12"	
		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES, AND OCCASIONAL STONES AND FLINTS	38' 0 11.58m	72	
				124/3"	
				67	
				77	
			61' 6 18.75m	122/3"	
			+6.3 ft		

REMARKS

KEY:
- ▽ WATER STRUCK
- ▽ STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 4677 | LABORATORY Nº 2405

SCALE: 1in. = 10ft.

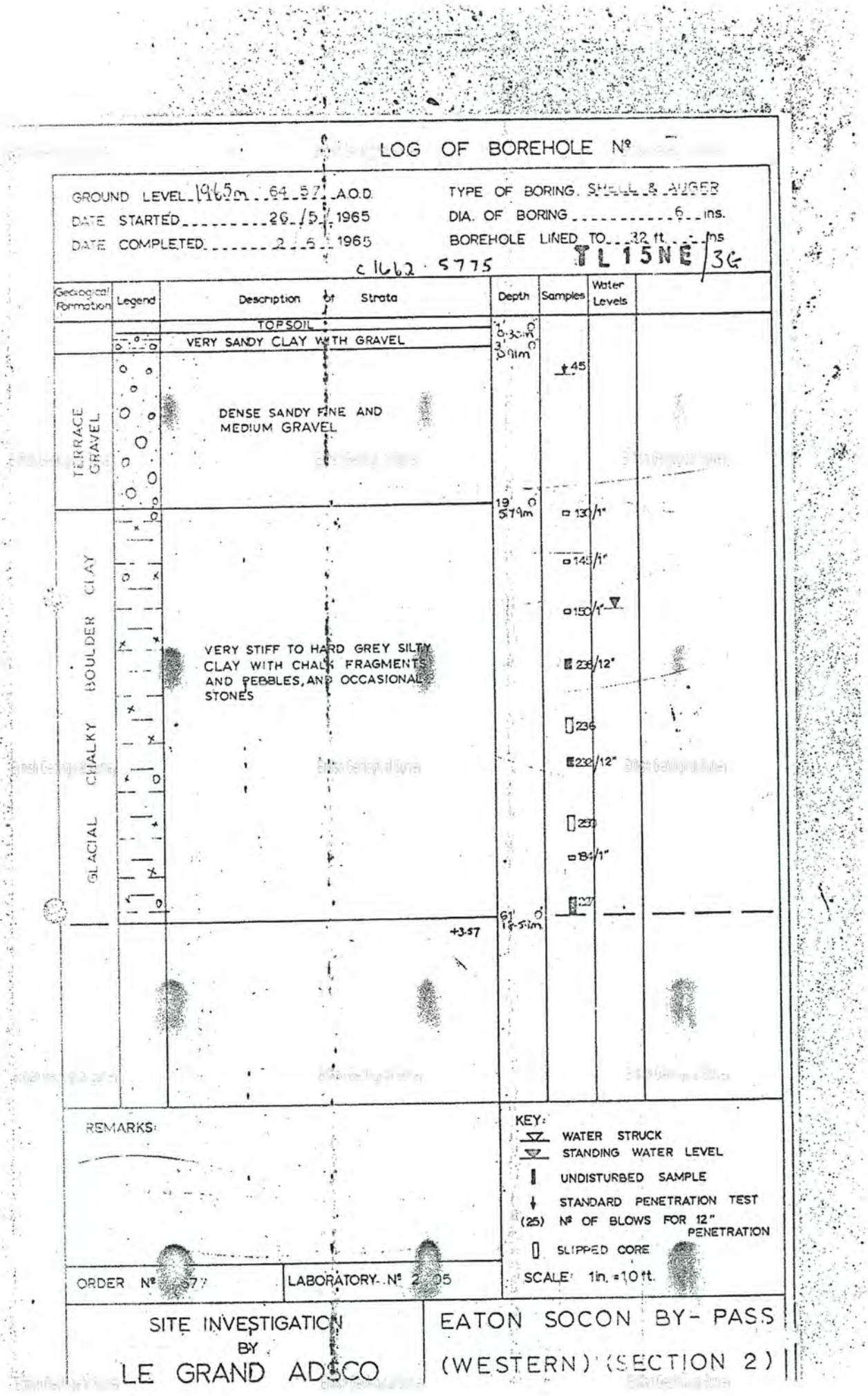
SITE INVESTIGATION BY J.E. GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750
Report an issue with this borehole



LOG OF BOREHOLE Nº

GROUND LEVEL 196.5m 64.57 A.O.D.
DATE STARTED 20/5/1965
DATE COMPLETED 2/6/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 32 ft. ins

c 1662 · 5775
TL 15NE/36

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
		TOPSOIL	0.30m 1' 0"		
		VERY SANDY CLAY WITH GRAVEL	0.91m 3' 0"		
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL		45	
GLACIAL CHALKY BOULDER CLAY		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES, AND OCCASIONAL STONES	19' 0" 5.79m	130/1" 145/1" 150/1" 236/12" 236 232/12" 230 184/1" 227	
		+3.57	61' 18.59m		

REMARKS:

KEY:
- WATER STRUCK
- STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 577 LABORATORY Nº 2705 SCALE: 1in. = 10 ft.

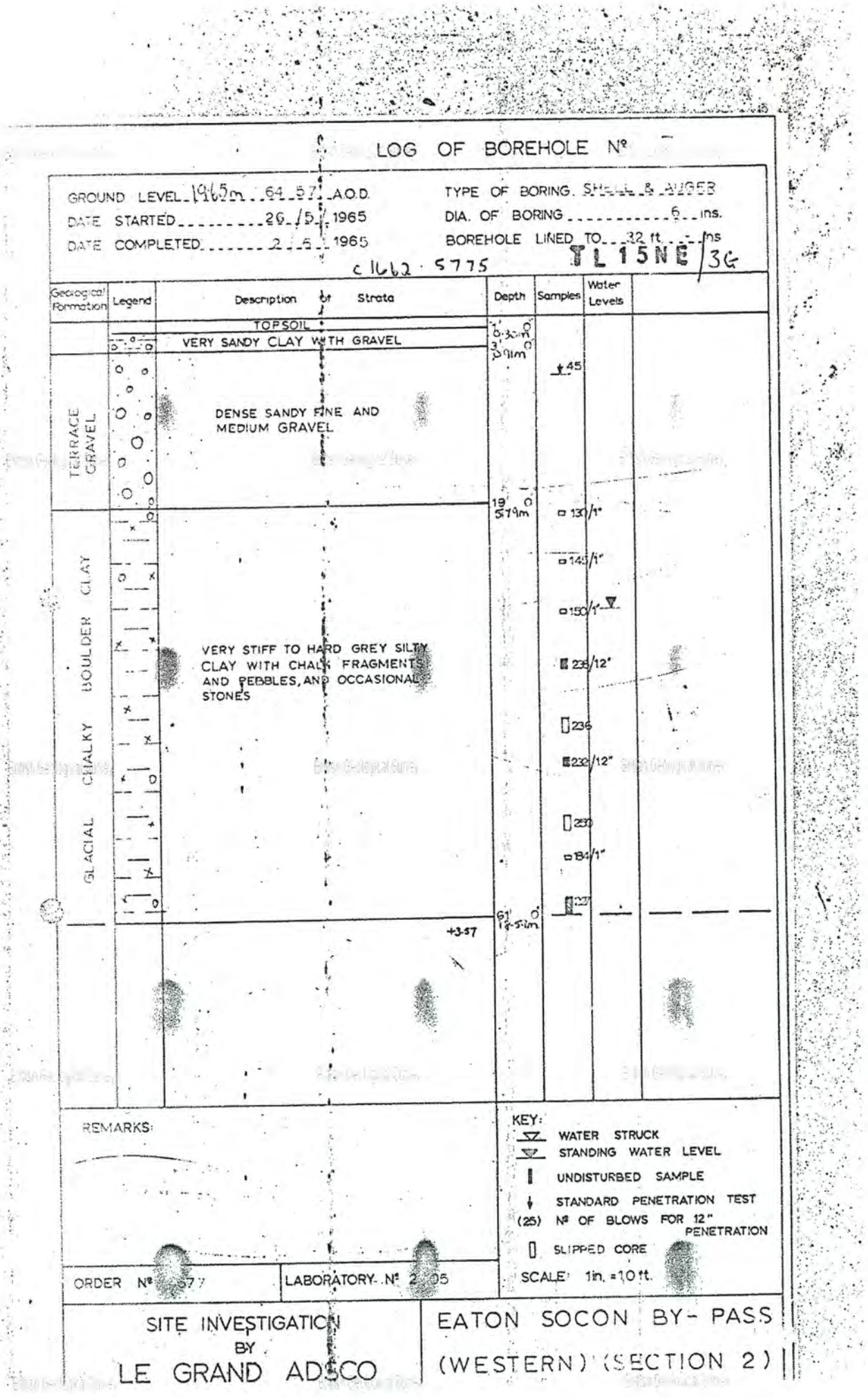
SITE INVESTIGATION BY LE GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750
Report an issue with this borehole



LOG OF BOREHOLE Nº

GROUND LEVEL 196.5m 64.57 A.O.D.
DATE STARTED 20/5/1965
DATE COMPLETED 2/6/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 32 ft ins
c 1662 5775
TL 15 NE/3G

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
		TOPSOIL	1' 0" 0.30m		
		VERY SANDY CLAY WITH GRAVEL	3' 0" 0.91m		
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL		45	
GLACIAL CHALKY BOULDER CLAY		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES, AND OCCASIONAL STONES	19' 0" 5.79m	130/1"	
				145/1"	
				150/1"	
				238/12"	
				236	
				232/12"	
				230	
				84/1"	
				227	
			61' 18.5m		
		+3.57			

REMARKS:

KEY:
- WATER STRUCK
- STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 577 LABORATORY Nº 2705
SCALE: 1in. = 10ft.

SITE INVESTIGATION BY LE GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750
Report an issue with this borehole

LOG OF BOREHOLE Nº 8

GROUND LEVEL (15.58m) 54.28 A.O.D
DATE STARTED 26/5/1965
DATE COMPLETED 29/5/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 45' 6 ins
C1662.5775 TL15NE/3H

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
		TOPSOIL	0·23m 9"		
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL		33/6"	
BOULDER CLAY		MEDIUM DENSE GREY CLAYEY SILT WITH OCCASIONAL STONES AND CHALK FRAGMENTS	9' 6" 2·90m	70	
		GREY SILTY FINE SAND WITH OCC. CHALK FRAGMENTS	4·42m 14' 6" 15' 0" 4·58m	87	▽
		BANDS OF VERY STIFF GREY SILTY CLAY AND DENSE CLAYEY SILT, OCCASIONALLY SANDY AND WITH CHALK FRAGMENTS AND STONES		90/2" 100/2"	
CHALKY GLACIAL		VERY STIFF TO HARD GREY SILTY CLAY WITH OCCASIONAL CHALK FRAGMENTS & PEBBLES, & STONES	33' 0" 10·06m	300/12" 67 128 80 55 100/12"	
			61' 6" 18·75m		

+2·78

REMARKS

KEY:
- WATER STRUCK
- STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 46 | LABORATORY Nº 2405 | SCALE 1in. = 10 ft

SITE INVESTIGATION BY LE GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) SECTION 2)

British Geological Survey

Version 2.0.6.3

BGS ID: 529312 : BGS Reference: TL15NE3/A-I
British National Grid (27700) : 516620,257750

Report an issue with this borehole

LOG OF BOREHOLE Nº 9

GROUND LEVEL 85.64 A.O.D.
DATE STARTED 20/5/1965
DATE COMPLETED 21/5/1965

TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 30 ft – ins

c 1662.5775 TL 15 NE/3 I

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels	
		TOPSOIL	1' 0" 0.30m			
TERRACE GRAVEL		DENSE SANDY FINE AND MEDIUM GRAVEL	11' 0" 3.35m	↓21/9" ↓24/9"	▽	+ 53.07
GLACIAL BOULDER CHALKY CLAY		DENSE GREY SANDY SILT WITH CHALK FRAGMENTS AND STONES	15' 6" 4.72m	12		
		VERY STIFF GREY SLIGHTLY SANDY SILTY CLAY WITH CHALK FRAGMENTS AND PEBBLES AND OCCASIONAL STONES	33' 0" 10.06m	157/12" 170/2" 180/9"		
		GREY CLAYEY SILT	35' 0" 10.67m	182/9"		
		VERY STIFF TO HARD GREY SILTY CLAY WITH OCCASIONAL CHALK FRAGMENTS AND PEBBLES AND STONES	40' 0" 12.19m	U 90/12"		
		+ 26.7				

REMARKS:

KEY:
- ▽ WATER STRUCK
- ▼ STANDING WATER LEVEL
- ▮ UNDISTURBED SAMPLE
- ↓ STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- ▯ SLIPPED CORE

ORDER Nº 11677 | LABORATORY Nº 2495 | SCALE 1in. = 10ft.

SOIL INVESTIGATION BY LE GRAND & CO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

LOG OF BOREHOLE No 10

GROUND LEVEL (OCAm) 65.79 A.O.D.
DATE STARTED 11/6/1965
DATE COMPLETED 14/6/1965
TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED, TO 22 ft. 5 ins.

GR 1659 5816 TL 15NE/4

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels	
		TOPSOIL	0.30m 1			
RED BOULDER CLAY		SOFT TO FIRM BROWN SILTY CLAY WITH CHALK FRAGMENTS & OCCASIONAL STONES	1.22m 4			
		SOFT BROWN VERY SANDY CLAY WITH STONES	1.68m 5½	1 85		
TERRACE GRAVEL		VERY DENSE SANDY FINE & MEDIUM GRAVEL				+53 29
GLACIAL CHALKY BOULDER CLAY		VERY DENSE GREY SANDY SILT WITH CHALK FRAGMENTS & STONES	3.81m 12	2 95		
		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & OCCASIONAL STONES	4.88m 16	3 120		
			9.30m 30	4 125		

REMARKS

3.0

KEY:
- WATER STRUCK
- STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

SCALE: 1in. = 10ft.

ORDER Nº 4677 | LABORATORY Nº 2405

SITE INVESTIGATION BY I.E. GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

LOG OF BOREHOLE Nº 11

GROUND LEVEL (17.98m) 59.00 A.O.D
DATE STARTED 15/6/1965
DATE COMPLETED 17/6/1965
GR 1651 5243

TYPE OF BORING SHELL & AUGER
DIA. OF BORING 6 ins.
BOREHOLE LINED TO 13 ft. ins.

TL 15NE/5

Geological Formation	Legend	Description of Strata	Depth	Samples	Water Levels
		TOPSOIL	1' 0 0.30m		
		FIRM YELLOWISH BROWN SANDY SILTY CLAY			
		STIFF BROWNISH GREY SILTY CLAY WITH CHALK FRAGMENTS & OCCASIONAL STONES	6' 0 1.83m	74	
CHALKY BOULDER CLAY GLACIAL		VERY STIFF TO HARD GREY SILTY CLAY WITH CHALK FRAGMENTS & PEBBLES & OCCASIONAL STONES	12' 6 3.81m	85	
				87	
				93	
				83	
				80	
				97	
			51' 0 15.54m	47	
		+8.0.			

REMARKS:

KEY:
- WATER STRUCK
- STANDING WATER LEVEL
- UNDISTURBED SAMPLE
- STANDARD PENETRATION TEST
- (25) Nº OF BLOWS FOR 12" PENETRATION
- SLIPPED CORE

ORDER Nº 46[illegible]

LABORATORY Nº 2405

SCALE: 1in. =10ft.

SITE INVESTIGATION BY GRAND ADSCO

EATON SOCON BY-PASS (WESTERN) (SECTION 2)

Appendix 6

Land at Wyboston – Inspection Photos


1


2

3


4


5


6

Land at Wyboston – Inspection Photos


7


8


9


10


11


12

Land at Wyboston – Inspection Photos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14


15


16


17


18

Land at Wyboston – Inspection Photos

19

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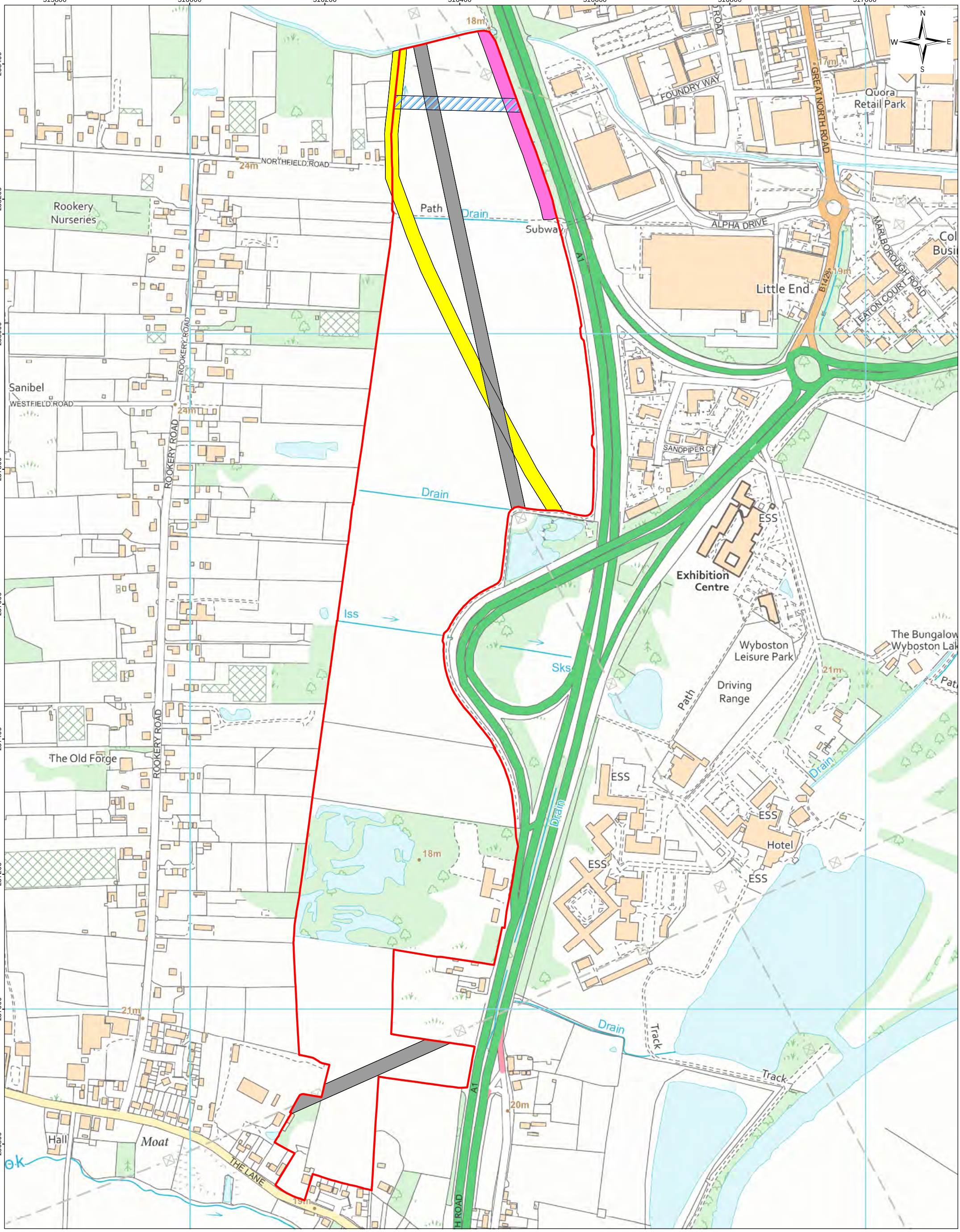
21

22

Appendix 7



OVERVIEW WINDOW	REVISION: A	FP: 129175
		
	SCHEME: SITE PLAN - UTILITIES	
	TITLE: Wyboston Mineral Resource Assessment	
0 100 200 Metres	SCALE: 1:5,000 @ A3 DATE: 13/04/2021	

LEGEND:

- Land of interest = 99.90 ac
- MoD pipeline
- Overhead electric lines
- Underground electric
- Water pipe

FISHER GERMAN

The Estates Office, Norman Court
Ashby de la Zouch,
Leicestershire, LE65 2UZ

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https://www.fishergerman.co.uk
ashby@fishergerman.co.uk

DRAWING REF:
WYBOSTON-2021-04-NI-SP
Wyboston Mineral
Resource Assessment - Utilities

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