

Representations to the MK City Plan 2050
Regulation 19 Consultation
Policy GS14 'Eastern Strategic City Extension'

**Response on behalf of Gallagher Developments
and Chicheley Farms Limited**

December 2025

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Other documents provided separately:

- Ecology prepared by RSK
- Agricultural Land Classification prepared by RSK
- Foul Drainage and Utilities prepared by RSK
- Acoustic (Noise) prepared by RSK
- Transport Strategy prepared by i-Transport
- Cultural Heritage and Archaeology prepared by RSK
- Geo-Investigation Phase 1 prepared by RSK
- Air Quality prepared by RSK
- Arboriculture prepared by RSK
- Preliminary Drainage Plan prepared by Allsop Avery
- Flood Risk prepared by RSK
- Viability Study Review (inc. appendices) prepared by Turner Morum

Client
Gallagher Developments

Our reference
01768

December 2025

1. Introduction and Background

- 1.1 This representation has been prepared by Turley on behalf of Gallagher Developments and Chicheley Farms Limited in response to the Council's consultation on the MK City Plan 2050 (Regulation 19).
- 1.2 Gallagher Developments have interests within the City Plan area to the east of Milton Keynes (hereby referred to as 'the Site') (please see Location Plan at **Appendix 1**) and are working on behalf of the Landowners (alongside Chicheley Farms Limited) to promote the Site for development (please see Masterplan in **Appendix 2**). A Vision Document prepared by Define is enclosed at **Appendix 3**.
- 1.3 The Site is included within the MK City Plan 2050 and forms the northernmost part of the proposed mixed-use allocation under Policy GS14 'Eastern Strategic City Extension' (north of North Crawley Road) ('ESCE').
- 1.4 The remainder of the proposed allocation is under the control of other landowners and development partners and does not therefore form part of the land holding promoted as part of this particular representation. Gallagher Developments support the wider allocation and direction for growth, as evidenced by the previous issue of the Strategic Framework Masterplan Document for the entire allocation, and separate representations to be provided by the consortium (comprising Gallagher Developments, Hallam Land and Berkeley Group).
- 1.5 This representation supports the emerging allocation of the Site specifically, as well as focusing on matters within the Regulation 19 consultation documentation that particularly affect the Site. It is accompanied by a suite of documentation, including a Vision Document, which provides detailed information on the Site.
- 1.6 Technical evidence is provided as part of this representation in support of the Site, to demonstrate that no significant environmental or technical constraints exist to impact on the delivery of the proposed scheme in a sustainable manner. The inclusion of the Site in the City Plan will provide a significant contribution to the supply of housing in the Plan period and beyond.
- 1.7 Gallagher Developments have undertaken successful and collaborative engagement with Milton Keynes City Council during their preparation of the MK City Plan 2050 and are keen to continue working with the authority to support the allocation and delivery of the Site.
- 1.8 Gallagher Developments are a master developer who have a proven track record of delivering sustainable development in Milton Keynes. Gallagher Developments obtain both deliverable planning consents and deliver strategic infrastructure on sites, such as swathes of public open space, schools, enhanced local centres, distributor roads and sustainable urban drainage systems (SUDs). Gallagher Developments' ability to act as a master developer promotes accelerated delivery as it enables a range of house builders to build and sell new homes simultaneously.

2. Eastern Strategic City Extension, Northern Parcel – Site and Proposals

- 2.1 This section of the written representations summarises the Site details, context and proposed development opportunity. Full details of these matters can be found in the separate accompanying Vision Document prepared by Define.

Site Details

- 2.2 The Site is located to the northeast of Milton Keynes, in close proximity to Newport Pagnell. The Site comprises the northernmost proportion of proposed allocation Site under **Policy GS14 Eastern Strategic Extension**. This covers an area of approximately 180ha and currently comprises a number of arable fields, two dwellings and agricultural buildings at Hill Farm (which are excluded from the promoted area), along with areas of woodland and Chicheley Brook.



Figure 1 – Site Location

- 2.3 The adopted Plan:MK Policies Map shows that the Site is currently within an area identified as Open Countryside, to the immediate north east of two existing Local Plan allocations. It also includes a couple of areas of Ancient Woodland centrally as well as Wildlife Corridors along the majority of site boundaries except for a northernmost portion along Chicheley Road. A Biological Notification Site is also situated to the south along the Chicheley Brook. A small portion of the Site to the south west is also within a Minerals Primary Focus Area.

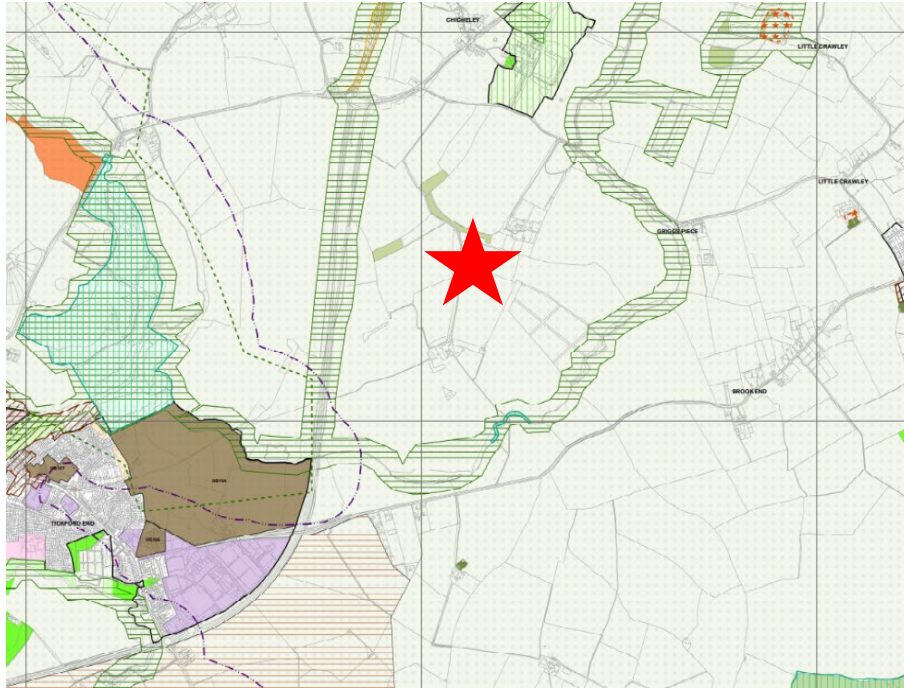


Figure 2 – Plan:MK Policies Map Extract (Site location indicated by star)

- 2.4 The emerging Policies Map published under the Regulation 19 consultation essentially identifies the same considerations, alongside the allocation area itself. Further comments on this map are provided later in these representations.

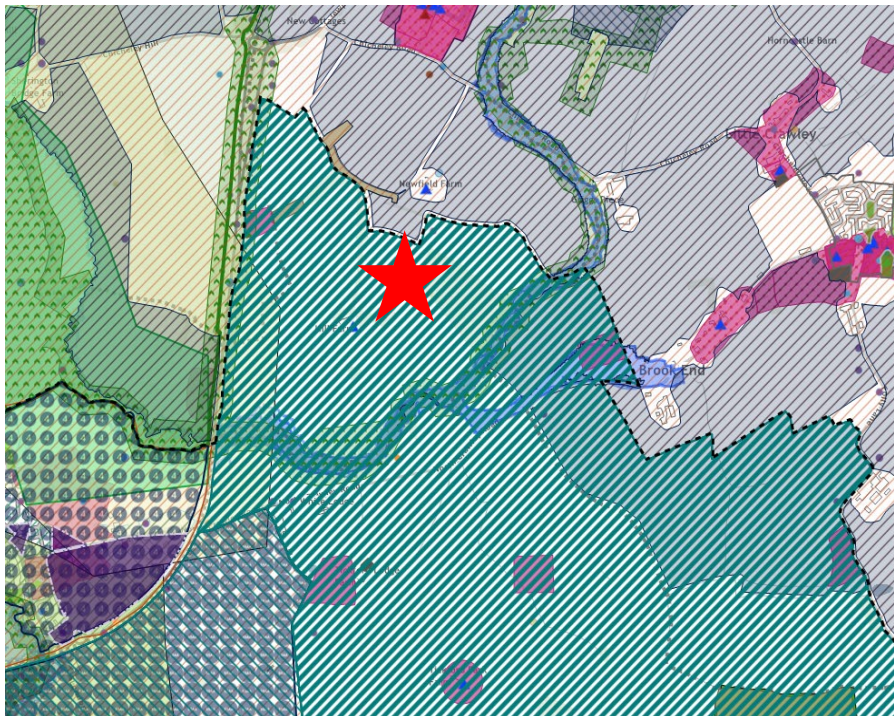


Figure 3 – Emerging MK City Plan 2050 Regulation 19 Policies Map

2.5 It is acknowledged that there are a small number of existing constraints both on Site and in the nearby context, and in summary, some key considerations of the Site are set out below:

- *Ecological designations are focused towards the Site boundaries;*
- *Trees and hedgerows are largely limited to the field boundaries, although there are areas of Ancient Woodland as well as other woodland area;*
- *An existing Bridleway traverses the Site from the north on Chicheley Road to the south on North Crawley Road (Chicheley BW 2). A footpath also runs from Hill Farm in a westerly direction past the A509 (Chicheley FP1);*
- *The majority of the Site is within Flood Zone 1, with small, localised areas around the Chicheley Brook being within Flood Zone 2 and 3. Minor areas of the Site are also at low to high risk of surface water flooding, again largely in proximity to the Chicheley Brook;*
- *Centrally located within the Site is the Grade II listed Hill Farmhouse, which will be screened appropriately and with existing vegetation retained where possible. The farmhouse and the adjacent agricultural buildings sit outside of the promoted area;*
- *Further to the north of the Site is the Grade II listed Newfield Farmhouse, as well as a number of listed buildings associated with Chicheley village and Chicheley Hall to the north, including the Grade I listed Hall itself and surrounding Grade II* Park and Garden; and*
- *The Site is outside of, but adjacent to, the North Crawley and Newport Pagnell Neighbourhood Development Plan (NDP) Areas. The former had its NDP made in February 2023 and the latter will take their NDP to referendum in October 2024.*

2.6 In terms of the Site planning history, understandably this largely relates to the northernmost part of the Site where there have been applications associated with Hill Farm and Newfield Farm. These applications have focused on works to the existing dwellings as well as agricultural related development.

Site Context

2.7 The Site is situated towards the northeast of Milton Keynes, a highly sustainable settlement with a host of diverse services, facilities and employment opportunities, as well as being located on a main trainline into London. Luton Airport is also located just 30 minutes south along the M1 providing flights to international destinations.

2.8 Milton Keynes benefits from an extensive public transport network which incorporates bus networks which connect the city centre to surrounding residential areas and neighbouring settlements and a railway station which provides connections to regional and national service centres including Birmingham, London and Liverpool. The draft City Plan identifies that integration of existing and new public transport services within new

development is key to providing affordable and accessible means of travel together with delivering a new Mass Rapid Transit System (MRT).

- 2.9 The Site is located adjacent to the A509 which provides a direct route into Milton Keynes and connects to Bedford to the east as well as numerous villages to the north.
- 2.10 Land to the west of the A509 at Tickford Fields Farm was allocated in Plan:MK under reference HS104 for 930 homes and this received planning permission in 2021 (ref. 20/00133/OUTEIS). It will deliver significant walking and cycling connectivity improvements in this area which are shown below in Figure 4. This includes an extension of the Redway network along North Crawley Road up to the A509. A Reserved Matters application is currently pending determination.
- 2.11 Pedestrian and cycle access will be provided from the development along North Crawley Road via an extension to the existing and planned Redway network. The route could either be provided within the existing highway verge along North Crawley Road or via land controlled by Milton Keynes Council which is also planned to be developed as part of the Eastern Strategic City Extension.

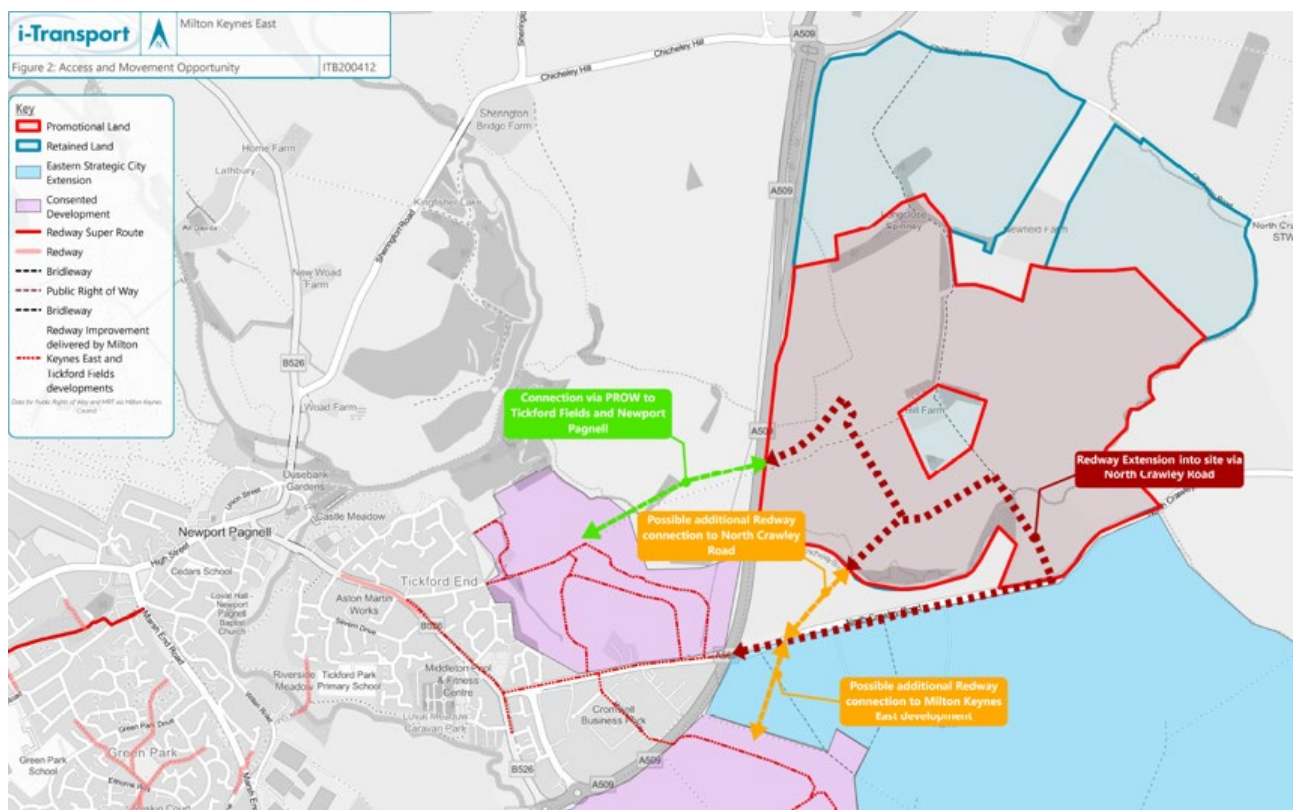


Figure 4 – Site Access and Movement Opportunities (taken from i-Transport Transport Strategy note)

- 2.12 The area in the surrounding context of the Site has been subject to recent developments and will be subject to further development moving forward, demonstrating that this area forms a clear direction of growth for Milton Keynes.

- 2.13 The Site is just to the north of the existing Milton Keynes East Strategic Site Allocation under Plan:MK Policy SD12, which includes 5,000 new homes and 105 ha of employment land, as well as other uses. This has since been subject to a number of applications including approval in 2022 of a mixed-use urban extension for the largest proportion of the allocation (ref. 21/00999/OUTEIS), as well as mixed use proposals for additional parcels within the wider allocation (ref. 21/03420/OUTEIS) in addition to B8 use adjacent to the M1 (ref. 21/02440/OUTEIS).
- 2.14 The Council have an adopted Milton Keynes East Strategic Urban Extension Development Framework Supplementary Planning Document which relates to the Policy SD12 site. The proposed allocation forms a natural extension to that established urban extension.

Proposed Development Opportunity

- 2.15 As explained above, the Site comprises the northernmost proportion of proposed allocation Site under **Policy GS14 Eastern Strategic Extension**.
- 2.16 The Site has the potential to deliver a sustainable and healthy, landscape-led development with high-quality homes, a mixed-use neighbourhood hub, and primary schools, supported by extensive open spaces with long distance views, green active travel, red route corridors and additional woodland blocks. New facilities for roadside uses could also be provided.
- 2.17 Coupled with infrastructure within the Site to prioritise active and sustainable travel, this will maximise opportunities for journeys to be undertaken by active modes and reduce the demand for people to travel away from the site. A masterplan and placemaking approach that includes a 20-minute neighbourhood concept to locate non-residential uses within comfortable distances to the residential element for active travel will be adopted.
- 2.18 In summary, the following is envisaged:
- *A broad mix of approximately c2,500 new homes including starter homes, affordable housing, apartments and family homes.*
 - *New on-site School provisions for a range of age groups.*
 - *Mixed use Neighbourhood Hub with community facilities such as crèche, café, home working facilities and mobility hub.*
 - *Significant green infrastructure provided on the Site will not only provide a meaningful amount of open space (with a number of key functions including habitat creation, drainage attenuation, recreational space & natural play areas) but also retain key assets including existing mature hedgerows and trees.*
 - *Vibrant, active travel green corridors that meander through the Site will enhance biodiversity, support local wildlife and offer a variety of uses from naturalistic play, grow zones and community gardens.*

- A variety of locally required sports facilities to serve the new neighbourhood and existing adjacent communities.
- New roadside facilities adjacent to the A509 with drive-through services and associated electric charging.

2.19 The Emerging Masterplan, extracted from the submitted Vision Document, is shown below:

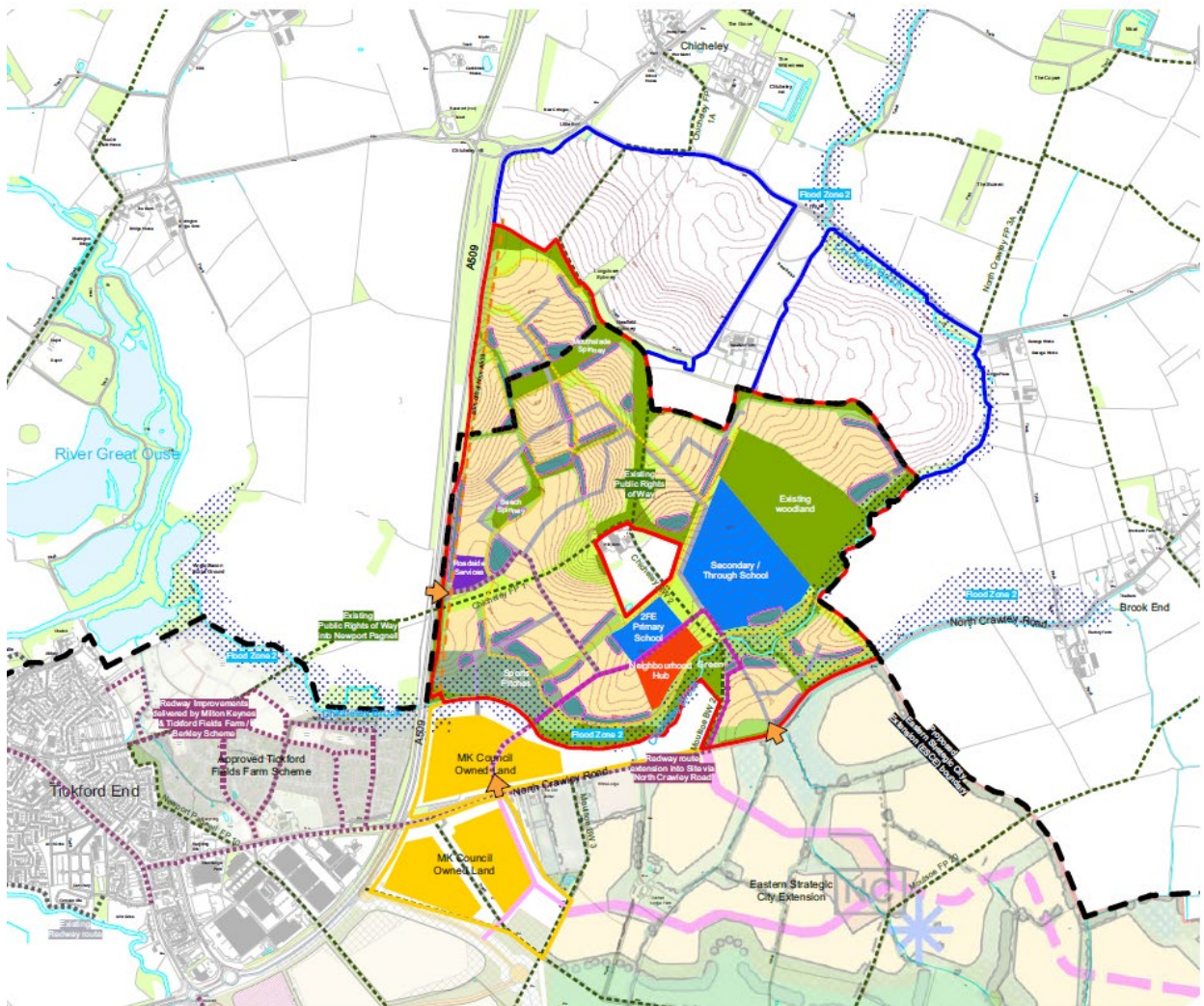


Figure 5 – Emerging masterplan (also provided separately)

2.20 The Council's attention is also directed to the Eastern Strategic City Extension Strategic Masterplan Framework which has previously been shared with the Council on behalf of the consortium of landowners and development partners who have interests within the wider allocation. This document sets out the spatial framework for the development, characteristics, how constraints and opportunities have influenced the emerging masterplan and how the allocation is anticipated to accommodate the scale of growth proposed. As such, the proposals for this portion of the allocation have been developed in the context of this wider framework.

3. Eastern Strategic City Extension, Northern Parcel - Site Assessment and Response to the Evidence Base

- 3.1 This section provides an assessment of the key considerations of the Site, taking into account the documentation within the Council's own evidence base, along with the separate environmental and technical assessments relating to the Site instructed by Gallagher Developments, and submitted alongside these representations.

Principle of the proposed development

- 3.2 The National Planning Policy Framework (NPPF) is clear that the supply of large numbers of new homes can often be best achieved through planning for larger scale development, such as extensions to existing towns and cities that help support strong, vibrant and healthy communities and by fostering well-designed places. The allocation of the Site therefore conforms with this, as does the Council's chosen strategy for growth, but it is important that the phased release of this site allows for multiple outlets in order to ensure consistent delivery over the plan period, and beyond.

Strategic Housing Land Availability Assessment (November 2025)

- 3.3 Under the Regulation 18 consultation, comments were provided by Gallagher on the July 2024 version of the Strategic Housing Land Availability Assessment (SHLAA). The Council have now published an updated version under the Regulation 19 consultation, date November 2025.
- 3.4 Within the Council's Strategic Housing Land Availability Assessment (July 2024) the portion of the Site proposed for allocation, as well as part of the proposed extension area to the north, were assessed under reference **110138** 'Land at Hill Farm (east of A509 and north of North Crawley Road)' with an area of 170.06 ha and a stated SHLAA capacity for 2,700 residential units.
- 3.5 The November 2025 version of this document appears to now give the Site reference **111981** 'Eastern Strategic City Extension – additional land at Chicheley Farms' with the same residential unit capacity.
- 3.6 The assessment of the Site within Appendix 5 of the 2025 document is essentially the same as the 2024 version, with further commentary in response to this provided below.

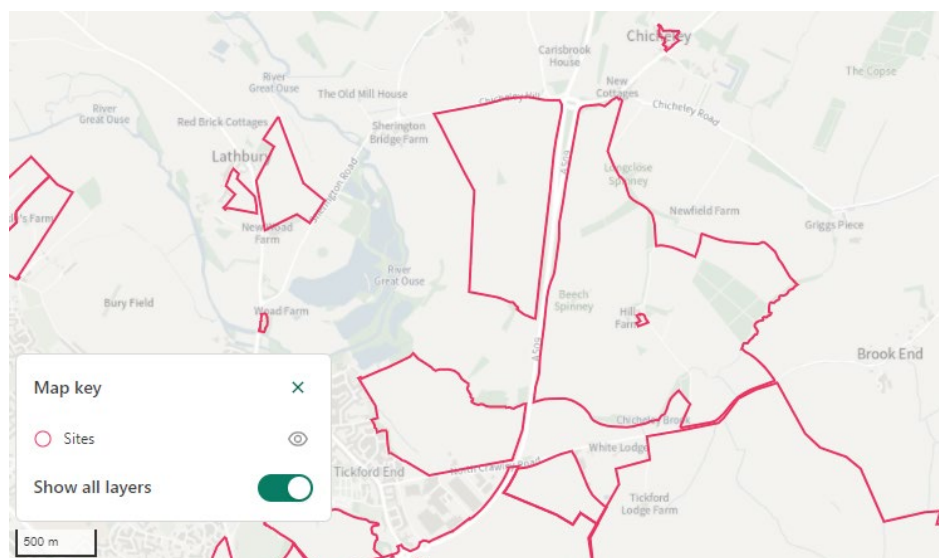


Figure 6 – MKCC SHLAA Mapping Extract

- 3.7 In respect of the Site, the Council stated that it was suitable although the area was slightly reduced due to some areas of flood risk; and that it would most likely have to come forward as part of a wider strategic extension to Milton Keynes. The Site was concluded to be available and in terms of achievability, stated that the Site is a greenfield site which, if it were to come forward, would need to be delivered as part of a strategic extension to Milton Keynes. This would incur a high level of costly infrastructure provision, particularly when forming part of a larger strategic scale site however, there are numerous examples of this being achievable in Milton Keynes and with delivery of the existing allocation at Milton Keynes East now underway there will be available infrastructure solutions to further facilitate this Site's delivery. The viability study also recognises this type of development as viable.
- 3.8 In the summary of constraints, the document states that 9% of the Site falls within Flood Zones 2 or 3 in relation to the Chicheley Brook which runs across the Site, and that there is also associated surface water flood risk and a wildlife corridor. There is a listed farm building within the Site, albeit this is not proposed as part of the developable area and further listed buildings to the north of the Site, including Chicheley Hall, which any development proposals would need to consider. Highways access is possible even if the Site were to come forward on its own, but Non-Motorised User (NMU) connections are not currently suitable and would need to be resolved.
- 3.9 The only original text in the 2025 version compared to the 2024 version is some supplementary text in the 'Overcoming Constraints' column which states that *"consideration would need to be given to phasing and sequencing of delivery of the site to ensure suitable roll out of strategic highways connections/links particularly with regards to pedestrian and cycle connections"*.
- 3.10 In overcoming constraints, it notes that consideration of flood risk, heritage, landscape and retention and improvement of the wildlife corridor should be key in forming any proposals for the site. Further commentary is provided within this report and supporting technical information to address the considerations raised by the Council relating to the Site.

Sustainability Appraisal of the MK City Plan 2050 (November 2025)

3.11 The Sustainability Appraisal of the MK City Plan 2050 (November 2025) has been prepared to supersede the previously published MK City Plan 2050: Sustainability Appraisal Regulation 18 Consultation Version (July 2024).

3.12 The document sets out in paragraph 5.4.9 that:

‘with regards to ESCE (Eastern City Strategy Extension), in 2024 it was considered to be the strongest performing of the six shortlisted strategic greenfield site options and so was held constant across the RA growth scenarios (i.e. allocation was assumed under all scenarios), and this approach remains reasonable at the current time. Key points to note include: A) the site has been a focus of detailed work since 2024 including in respect of strategic infrastructure planning in collaboration with landowners and key partner organisations; B) ESCE is key for delivering employment land and providing for Gypsy and Traveller accommodation needs; and C) the site can deliver significant numbers of homes relatively early in the plan period.’

3.13 Across all 6 growth scenarios shown in table 5.1 of the same document, the ESCE Site will supply 7,750 homes between 2022-2050. Gallagher Developments are therefore supportive of the Council position that the ESCE will deliver development across all considered scenarios. The Council also set out that the preferred growth scenario is Scenario 5 which Gallagher Developments support this conclusion, with this scenario delivering the most significant positive effects, including 19% over the LHN.

3.14 Rather than the Site Assessment Matrix which was included in the 2024 version of the report, a series of narrative discussions are included in the 2025 document. A summary of the assessment made with respect to the Site is therefore set out below with commentary. For clarity, the representations made to the Regulation 18 consultation provide a full response to the Site Assessment Matrix of the Site therefore the Council are directed to these for further detail.

3.15 With respect to **Biodiversity** the narrative states that:

‘Focusing on ESCE – as the proposed strategic allocation that is less a focus of the appraisal in Part 1 because it is held constant across the scenarios appraised – there is a degree of concern around encroaching on ancient woodlands, and generally a landscape to the east of Milton Keynes associated with a notable density of woodland, including recognising the possibility of future expansion into Central Bedfordshire. However, not all of the woodland in this broad area is ancient woodland and none is locally designated as a Local Wildlife Site. It can also be noted that Moulsoe Old Wood is mainly replanted ancient woodland (which is not to suggest that it is not a significant and potentially sensitive ancient woodland). Moving forward, it will be important to consider alignment with the Bedfordshire Local Nature Recovery Strategy (LNRS), which identifies a high proportion of land east of Milton Keynes as a priority area.’

3.16 Gallagher Developments support these conclusions. Please see further commentary in the Natural Environment section of this report and within the accompanying Ecology Report prepared by RSK ADAS.

3.17 With respect to **Climate Change Adaptation** the narrative states that:

‘Focusing on ESCE – as the proposed strategic allocation that is less a focus of the appraisal in Part 1 because it is held constant across the scenarios appraised – there is an element of flood risk constraint, noting a network of tributaries of the River Ouzel that flow westwards through the site and then through the MK urban area. However, there will be excellent potential to mitigate risk through masterplanning and high quality sustainable drainage systems (albeit acknowledging there will be competing masterplanning and cost priorities). The scale of growth could suggest an opportunity to consider strategic flood storage and so a betterment to the flood risk situation.’

3.18 Gallagher Developments support these conclusions. Please see further commentary in the Flood Risk and Drainage section of this report and within the accompanying Preliminary Technical Appraisal prepared by RSK.

3.19 With respect to **Historic Environment** the narrative states that:

‘Focusing on ESCE – as the proposed strategic allocation that is less a focus of the appraisal in Part 1 because it is held constant across the scenarios appraised – there are historic environment constraints, including noting the possibility of future growth within Central Bedfordshire – but overall there is confidence in the ability to masterplan with a view to avoiding and minimising impacts. This is evident from the Historic England quote presented above in Section 6.9.’

3.20 Gallagher Developments support these conclusions. Please see further commentary in the Historic Environment section of this report and within the accompanying Cultural Heritage and Archaeology Technical Note prepared by Headland Archaeology, RSK.

3.21 With respect to **Landscape** the narrative states that:

‘Focusing on ESCE, whilst this direction for MK’s expansion gives rise to least concerns from a landscape perspective, there are nonetheless significant sensitivities, including relating to river/stream corridors, a network of ancient woodlands, historic settlements and generally a highly rural landscape. There will be excellent potential to avoid and mitigate concerns through masterplanning, and there will be major environmental planning opportunities to be realised (indeed there are likely cross-border / sub-regional scale opportunities to explore), but there are unavoidably some residual concerns. There is also a need to consider the extremities of the scheme from a perspective of avoiding sprawl, with a clear need for ongoing collaboration with Central Bedfordshire.’

3.22 Gallagher Developments support these conclusions. Please see further commentary in the Landscape and Design section of this report and within the accompanying Vision Document prepared by We are Define.

3.23 With respect to **Resources** the narrative states that:

‘Focusing on ESCE – as the proposed strategic allocation that is less a focus of the appraisal in Part 1 because it is held constant across the scenarios appraised – whilst unfortunately none of the land has been surveyed to confirm agricultural land quality, the low resolution / low accuracy nationally available dataset shows the land here to be mostly grade 3 quality, such that it may or may not be best and most versatile (BMV), which the NPPF defines as land that is grade 1, grade 2 or grade 3a quality. Either way, there is a degree of support for ESCE in the knowledge that neighbouring areas within the sub-region are associated with extensive grade 2 quality land, most notably large parts of Bedfordshire and Cambridgeshire but also parts of Oxfordshire. 9.12.3. A further consideration is that ESCE does not intersect a Minerals Safeguarding Area.’

3.24 Gallagher Developments support these conclusions. Please see further commentary in the Agricultural Land section of this report and within the accompanying Agricultural Land Classification report prepared by ADAS, RSK.

3.25 With respect to **Transport** the narrative states that:

‘ESCE – key requirements include:

– Provision of, or planning obligations to help fund the delivery of, Metro-related infrastructure within the site and to facilitate Metro connections to the site.

– Phased introduction of a comprehensive transport network that prioritises active travel and public transit modes including new and/or upgraded active travel and vehicular crossings of the M1.’

3.26 Gallagher Developments support these conclusions. Please see further commentary in the Highways and Access section of this report and within the accompanying Transport Strategy note prepared by i-Transport.

3.27 As such Gallagher Developments support the findings of the 2025 Sustainability Appraisal relating to the Site.

Milton Keynes City Council: Housing and Economic Development Needs Assessment Update (October 2025)

- 3.28 The Site and wider allocation will clearly deliver a significant number of homes, including affordable, beyond the plan-period. In the Milton Keynes City Council: Housing and Economic Development Needs Assessment Update (October 2025) the document is clear in recognising a backlog in affordable housing and the need for more homes in the immediate future. It states that that an estimated 5,704 households in Milton Keynes are currently living in unsuitable housing and are unable to afford their own housing (an increase from 3,927 in the 2024 version of the same report following the 2021 census).
- 3.29 Of these households, 2,148 currently occupy affordable housing that does not meet the households' current needs, mainly due to the number of bedrooms (an increase from 1,413 in the 2024 version of the same report). Providing suitable housing for these households will enable them to vacate their existing affordable housing, which can subsequently be allocated to another household in need of affordable housing.
- 3.30 It is therefore considered that the development of the Eastern Strategic City Extension will provide a significant supply of affordable housing to help address this backlog.

Milton Keynes Infrastructure Study & Strategy (October 2025) & Milton Keynes Infrastructure Delivery Plan (November 2025)

- 3.31 The Milton Keynes Infrastructure Study & Strategy (October 2025) aims to ensure that adequate infrastructure is provided to make the MK City Plan 2050's growth ambitions for Milton Keynes developable, sustainable and equitable, setting out projected infrastructure requirements.
- 3.32 The accompanying Milton Keynes Delivery Plan (November 2025) sets out that with respect to the North East Sub Area and Eastern Expansion, within which the Site is situated, the document lists a number of related infrastructure types across transport, education, health and social care, emergency services, Community Facilities, Green and Blue Infrastructure, Flood Risk and Water Management, Energy, Waste Management and Digital Infrastructure.
- 3.33 A number of these facilities form part of the proposals for the Site, and where necessary financial contributions can be agreed through S106 to support the delivery of the Site.

Retail and Commercial Leisure Study (2025 Update)

- 3.34 In the Regulation 18 representations, comments were provided on the Council's Retail and Commercial Leisure Study (March 2024). The 2025 update states that the document is to be read alongside the 2024 version.
- 3.35 Appendix I of that document indicated that the Site is within a 'food desert', which are defined as areas which are poorly served by supermarkets and where residents struggle to access healthy food at a good price. The report did not appear to explicitly consider the need / demand for roadside facilities, and it was considered that the inclusion of these along the A509 should be seen as a particular benefit of the proposals.

3.36 The 2025 update adds commentary in paragraph 3.24 that:

‘Where housing sites are particularly large, for example the Eastern Strategic City Extension, the number of new residents are likely to be able to support a level of floorspace beyond their day-to-day needs we consider here. Section 2 has already identified what floorspace capacity can be supported across the local authority to 2050 when all expenditure is taken into account (i.e. beyond just day-to-day needs). In cases of particularly large housing sites, it might be appropriate to direct an additional quantum of this floorspace capacity towards the new local centres. This could include, for example, allocating space for new foodstores.’

3.37 For the ESCE Figure 3.24.1 sets out the following estimated floorspace capacity at 2050:

- Convenience Floorspace = 1,035 sqm
- Comparison Floorspace = 1,063 sqm
- Food and Beverage Floorspace = 826 sqm
- Services Floorspace = 877 sqm

3.38 This amount to a total floorspace of 3,800 sqm across the allocation.

3.39 It is noted that Policy GS14 includes reference to retail and services provision ‘as appropriate’ under criterion C.9 and Gallagher Developments are supportive of this provision as part of the wider allocation to deliver a sustainable community.

Equalities Impact Assessment 2025 (September 2025)

3.40 The Equalities Impact Assessment 2025 (September 2025) examines how the policies in the MK City Plan 2050 may affect equality. With respect to Policy GS14 it notes that *‘it is expected to have predominantly positive or neutral impacts on individuals with protected characteristics. The inclusion of a diverse range of housing types, including affordable, older persons, and specialist needs housing, supports equality for disabled people, older residents, and low -income households’.*

Milton Keynes Whole Plan Viability Study Residential Update Note (October 2025)

3.41 The Planning Practice Guidance (Paragraph: 002 Reference ID: 10-002-20251216; 16 December 2025) seeks to ensure that viability should not compromise sustainable development but should be used to ensure that policies are realistic and that the total cumulative cost of all relevant policies will not undermine deliverability of the Plan.

3.42 To inform these representations, a **Viability Study Review** has been undertaken by Turner Morum in respect of the implications of the emerging evidence base on the Eastern Strategic City Extension allocation within the MK City Plan 2050.

3.43 At present it is assumed that the ESCE allocation falls within an areas identified as *“rural/high value / flanks location”* for the purposes of the Viability Assessment.

- 3.44 The Viability Study Review identifies a higher cost (£) per square metre from flatted accommodation (£5,000) compared to houses (£4,700), flagging a significant change in the value in flats from the 2024 Whole Plan Viability Study (£4,300 per sqm).
- 3.45 Further, in all areas other than “*rural/ high value / flank*” locations within the Plan area, the Whole Plan Viability Study assumed flats would achieve a higher cost per sqm. Turner and Morum’s own analysis does not show any justification to support the assumption that flats should have a higher value than houses.
- 3.46 With regard to infrastructure provision, it is noted that the 2024 Whole Plan Viability Study assumed an allowance of £25,000 per dwelling for strategic infrastructure and mitigation costs (including financial contributions to social infrastructure and services). For strategic development sites, including ESCE, there are likely to be additional on-site infrastructure costs incurred through the delivery of spine roads, services, utilities, landscaping that would be outside of standard S106 obligations and assumptions associated with above £25,000 figure.
- 3.47 It is important that these additional site-wide costs on strategic sites, as outlined and evidenced through the **Viability Study Review** are readily assessed and accounted for within the Whole Plan Viability Study. At present, it is not considered the work undertaken to date within the viability evidence goes far enough in estimating the likely and assumed costs of on-site strategic infrastructure and abnormal in addition to the base BCIS and externals allowance for development.
- 3.48 With regard to the provision and implementation of self and custom build costs, it is important to note that custom dwellings often comprise singular, detached dwellings on a large development plot and that bespoke dwellings are likely to incur significantly higher build costs when compared to ‘traditional’ market housing as a result of a number of factors, including the need to adhere to a local design code or align with other custom build schemes delivered in the area and wider building regulation requirements associated with bespoke designs. Whilst Gallagher Developments support the delivery self and custom build plots in principle, it is important to balance a blanket ‘5% provision’ within strategic developments where this can have significant implications on delivery timescales, and constraints when provided at scale.
- 3.49 On strategic sites, the significant blanket provision of self and custom build plots, through bespoke design and construction methods, would have a negative impact on viability when considered in tandem with the on-plot value of traditional market housing and construction.
- 3.50 Overall, it is important to consider the potential for market fluctuations and sensitivities of delivery strategic sites in delivering across the Plan Period, in particular with regard to ESCE and to ensure that the viability assumptions within Whole Plan Viability Study account for sufficient headroom to ensure deliverability is maintained in periods of market downturn, in accordance with the Planning Practice Guidance.

Landscape and design considerations

- 3.51 As demonstrated within the accompanying **Vision Document prepared by We are Define**, the emerging scheme is designed around a collection of public open spaces and green corridors. Significant green infrastructure will be provided on the Site to not only provide a meaningful amount of open space (with a number of key functions including habitat creation, drainage attenuation, recreational space & natural play areas) but also retain key assets including existing mature hedgerows and trees.
- 3.52 The Milton Keynes Landscape Character Assessment (May 2024) identifies the site as lying within the LCT5 'Clay Vales' landscape character type (LCT), which is described as being a large-scale, intensively farmed arable landscape.
- 3.53 The Site is not considered to be a valued landscape and much of the Site has a proximity and visual connection to the built-up areas of Milton Keynes and Newport Pagnell to its southwest. Although land beyond the allocation boundary, to the north of the ridgeline, is likely to be sensitive to development (because of its relationship with the rural countryside and the setting to Chicheley Hall and its registered park and garden) land to the south of this ridgeline has only a limited relationship with the wider landscape and would therefore be less sensitive to residential growth, in the context of the proposed allocation
- 3.54 The Site is located within the '5a Lower Ouzel Clay Vale' landscape character area (LCA), which is small in size and separated into two parts. The Site occupies much of the land within the northern part of this LCA and is dominated by intensive arable cropping, with large fields and gappy hedgerows.
- 3.55 The proximity to the city and the presence of the A509 and M1 reduce this LCA's sense of tranquillity. A Review of Local Landscape Designations, which was conducted by LUC on behalf of MKCC, considered LCA 5a (refer to Appendix B of the Landscape Technical Note) and concluded that it did not meet the criteria to be considered a valued landscape.
- 3.56 Mouthslade Spinney, Longclose Spinney and Newfield Spinney, located within the northwest part of the site, are designated as Ancient and Semi-Natural Woodland. These connect with other non-protected woodland areas, including a belt of trees leading to Hill Farm, and a large block of woodland located to the east of the site. There are also other smaller but notable tree belts following hedgerow boundaries.
- 3.57 Land to the west of the A509 (outside the Site) is identified as a Special Landscape Area, which is a non-statutory, locally designated area of special scenic value.
- 3.58 The Site does not include any buildings or development (although various buildings associated with Hill Farm sit centrally to it), which creates a sense of remoteness; particularly in locations further to the northeast and east.

Highways and access

- 3.59 As explained in the **Transport Strategy note prepared by i-Transport**, Milton Keynes benefits from an extensive public transport network which incorporates bus networks which connect the city centre to surrounding residential areas and neighbouring settlements and a railway station which provides connections to regional and national service centres including Birmingham, London and Liverpool. The draft City Plan identifies that integration of existing and new public transport services within new development is key to providing affordable and accessible means of travel together with delivering a MRT system.
- 3.60 Local to the Site, there are existing bus services which operate on the A509 and North Crawley Road, adjacent to the eastern and southern Site boundary. These services collectively route between Newport Pagnell High Street, central Milton Keynes, Bedford and Cranfield. The routes used by these existing bus services provide excellent opportunities to enhance and potentially divert existing services into and through the site to ensure longevity of these services while serving the needs of new residents at the Site.
- 3.61 To complement existing bus services, Milton Keynes Council aspire to deliver an MRT system across the city together with new 'Transport Hubs' to provide opportunities for shared mobility connectivity. Within the ESCE Site, the Local Plan envisages a transit-oriented development which centres high density development around the proposed MRT routes and neighbourhood and local centres. The proposed MRT network provides links to Newport Pagnell via Willen Road, Marsh End Road and Tickford Street which provides opportunities for extension into the ESCE site. Like the neighbouring Tickford Fields and Milton Keynes East sites, there is an opportunity to safeguard routes through the Site to enable the future delivery of MRT.
- 3.62 There is a network of Public Rights of Way across the site and within the vicinity of the Site. Pedestrian and cycle access will be provided from the development along North Crawley Road via an extension to the existing and planned Redway network. The route could either be provided within the existing highway verge along North Crawley Road or via some land controlled by Milton Keynes Council which is also planned to be developed as part of the Eastern Strategic City Extension.
- 3.63 The primary access to the site will be via a new 3-arm roundabout onto the A509 on the western boundary of the site. The roundabout is consistent with the existing (and planned) junctions along the A509 and has been designed to provide 3-lanes entering the roundabout and 3-lanes for circulatory traffic. Again, this is consistent with the existing and planned provision on the A509 and will provide adequate capacity to serve the development.
- 3.64 Secondary access is proposed onto North Crawley Road on the southern boundary. The roundabout provides 2-lane entries to provide sufficient capacity for the development and has also been designed so that a 4th arm could be added to provide connectivity into the Eastern Strategic City Extension located to the south of North Crawley Road in the future.

- 3.65 The Site will be designed to promote sustainable travel movements, through delivery of a hierarchy of connections that enable safe and convenient movement primarily for pedestrians and cyclists.
- 3.66 Regarding traffic mitigation, the Infrastructure Delivery Plan does identify that the need for road improvements (i.e. to increase vehicular capacity) should be considered in light of policies to encourage more sustainable travel behaviour, e.g. congestion versus influencing mode choice. This refers to a 'vision-led' transport strategy approach, as opposed to the traditional traffic-led 'predict and provide' approach which typically considered traffic scenarios only.
- 3.67 The Site provides significant opportunities for sustainable transport connectivity including:
- Delivery of a mixed-use scheme, reducing the need for people to leave the Site;
 - Opportunities to connect to the existing Redway cycle network within Newport Pagnell which connects to central Milton Keynes. This includes connecting to the proposed Redway infrastructure which is to be delivered by neighbouring consented strategic development Sites;
 - Opportunities to extend and enhance local bus services together into the Site with safeguarding for delivery of MRT together with provision of passenger infrastructure including high-quality bus stops and interchanges;
 - Opportunities to provide mobility hubs through the Site to promote and enable shared mobility and sustainable transport mode interchange including provision of hire bikes and e-scooter schemes; and
 - Retention and improvement of existing Public Right of Way routes within the Site and connectivity to the wider network, maximising access to and from the Site.

Flood risk and drainage

- 3.68 A **Preliminary Technical Appraisal prepared by RSK** is submitted with this representation. The mapping indicates that the levels on Site vary from approximately 93.5mAOD in the northwest corner of the site, down to approximately 57.5mAOD in the centre of the southern boundary, indicating a general northwest to south/southeast fall.
- 3.69 There are no main rivers within the Site boundary. The principal watercourse for the Site is the Chicheley Brook, which forms part of the Site's eastern and southern boundary, as it flows generally north to south, before turning west, crossing the A509 and discharging into the River Great Ouse.
- 3.70 At the time of writing, no site-specific intrusive ground investigations have been undertaken for the site to confirm the underlying geology, potential contamination, permeability, or groundwater levels on Site. The Site is not however located within any Groundwater Source Protection Zones.

- 3.71 Sewer records obtained from Anglian Water indicate a foul sewer located off the centre of the northern boundary that runs northwest to southeast, towards the Site. It then enters a pumping station on the northern side of Chicheley Road, near where the Chicheley Brook enters the site to the north. This foul sewer then becomes a rising main as it is pumped east along Chicheley Road to a sewage treatment works located near the northeastern corner of the Site.
- 3.72 It is understood that the majority of the existing Site (agricultural fields) drains naturally to the nearby watercourse (Chicheley Brook) following the natural topography of the Site, either via overland flow and the field drains observed on Site or through infiltration to ground.
- 3.73 The majority of the Site is located within Flood Zone 1, representing a 1 in 1000 year or less annual probability of flooding from fluvial and tidal sources.
- 3.74 There are some areas along the eastern and southern boundary, associated with the Chicheley Brook that are deemed to be within Flood Zone 3, which represents a 1 in 100 year or greater annual probability of flooding from fluvial sources. There are very limited areas of Flood Zone 2 within the Site boundary.
- 3.75 The initial conceptual masterplan illustrates that the potential residential areas are well away from the watercourses on Site and outside the areas considered to be Flood Zone 2 or 3. The residential units are therefore considered to be at very low risk from fluvial flooding.
- 3.76 The EA's surface water flood map shows the majority of the Site to be at 'very low' surface water flood risk i.e. a 0.1% or less annual probability of surface water flooding. There are some areas of 'high' risk surface water flooding (greater than 3.3% annual probability) along the eastern and southern boundaries where the Chicheley Brook and smaller tributaries are present.
- 3.77 Revised allowances for climate change will need to be included in any future drainage strategy for the Site.
- 3.78 The provision of a site-specific ground investigation would help identify any potential risk of groundwater flooding (from measured groundwater levels over a sustained period, to include winter months), although the proposed development does not currently include any known basement proposals.
- 3.79 The surface water drainage strategy will be designed in accordance with national and local policy and guidance, following best practice regarding Site drainage to ensure that any surface water runoff from the development is managed, ensuring flood risk is not increased elsewhere. A **Preliminary Drainage Plan has been prepared by Allsop Avery** and accompanies this representation.

Natural environment

- 3.80 The **Ecology Report prepared by RSK ADAS** demonstrates that the Site is comprised largely of multiple areas of cropland, with priority native hedgerows along the field and Site boundaries. There were also multiple areas of woodland, some of which were deciduous and ancient woodlands, designated as habitats of principal importance. There was also a small brook present on site referred to as Chicheley Brook. Habitats on site were deemed suitable for birds, Badger, bats, Hazel Dormouse, Otters, Water Voles, reptiles, amphibians, White-clawed Crayfish, and other aquatic fauna invertebrates.
- 3.81 It is anticipated that none of the non-statutory sites local to or on the Site will be affected due to the distance from the site and the working areas and are not anticipated to remove any connecting wildlife corridors. The Local Authority should be consulted on works either within a designated site or within immediate proximity. To mitigate the effects of proposed works on priority woodlands and hedgerows on site, the construction phase should implement precautionary working methods/ a management plan.
- 3.82 The developable areas will retain all priority woodlands and the watercourse is not anticipated to be directly affected by proposals and should be protected from any pollution and erosion with the retention and creation of buffer strips. Some hedgerows will be lost as a result of the current proposed designs.
- 3.83 Further surveys are ongoing to determine the presence/absence of protected habitats and species and ascertain any mitigation, if appropriate.
- 3.84 An **Arboricultural Constraints Report prepared by RSK ADAS** included a tree survey which identified a total of 287 features which have the potential to be impacted by the proposals, comprising 182 individual specimens, 73 groups of trees, 25 hedgerows and seven woodlands. Of the 287 features identified, 36 were awarded a high-quality A grade status, 131 were awarded a moderate quality B grade status, 112 were awarded a low quality C grade status and eight were assessed to be unsuitable for retention, U grade status.
- 3.85 As it is unknown at this stage if tree removal will be required to facilitate the proposals, the reports recommends that trees should be retained where possible, particularly category A and category B specimens, and trees that form part of the ancient woodlands. Retention and integration of those trees of sufficient quality on the site is also likely to provide greater unseen benefits in the urban environment, over potential younger replacement planting, such as absorption of pollutants, urban cooling and improving air quality.
- 3.86 Through the design process an Arboricultural Impact Assessment will assess the emerging design impact on the tree stock on site. Once a layout is finalised which is acceptable from an arboricultural viewpoint, it is recommended that an Arboricultural Planning Statement is produced which will contain all the information required to support a full planning application. An Arboricultural Method Statement head of terms will be included in the APS, but a more detailed AMS may be requested as part of the conditions of planning approval.

Historic environment

- 3.87 The **Cultural Heritage and Archaeology Technical Note prepared by Headland Archaeology, RSK** demonstrates that there are no designated heritage assets within the Site (no scheduled monuments, listed buildings, registered parks and gardens, registered battlefields or world heritage sites).
- 3.88 The Site will envelop the Grade II listed Newlands Farmhouse and Hill Farmhouse. The remaining listed buildings in the study area (2km from the site) are primarily centred within the villages Newport Pagnell, Sherington, Chicheley and North Crawley to the west, north and east of the site.
- 3.89 The nearest record scheduled monuments are:
- Moated site at Old Moat Farm approx. 980m to the east of the redline boundary;
 - Bowl Barrow at Junction of Crofts End and Bedford Road approx. 920m to the north west; and
 - Moated site known as Caves Manor immediately east of the Manor House approx. 960m to the north west of the Site.
- 3.90 Sherington Conservation area is approximately 935m north west of the Site.
- 3.91 No direct physical impacts on any designated heritage assets are anticipated however there is the potential for impacts upon the settings and significance of designated heritage assets outside of the Site boundary as a result of visual and other sensory changes. It is considered that the five designated heritage assets most likely to experience changes to their setting are:
- *Grade I Listed Chicheley Hall*
 - *Grade II* Chicheley Hall Registered Park and Garden*
 - *Grade I church of St Lawrence*
 - *Grade II Hill Farmhouse*
 - *Grade II Newlands Farmhouse*
- 3.92 Further heritage work (including archaeological DBA and HIA) will be needed to support a planning application. This will establish an understanding of the location, date, and importance of archaeological remains within the site, assisting in the design process, and establishing the likely development impacts on these remains.
- 3.93 It is likely that any development in the northwestern corner of the site would be visible in designed views from the Grade I listed Chicheley Hall and Grade II* Chicheley Hall Registered Park and Garden and would have a likely adverse impact on their setting and significance without mitigation.

- 3.94 Primary mitigation measures for built heritage assets will comprise design responses to the possible effects identified in the iterative design process. These mitigation measures will seek to avoid significant adverse effects through careful planning, siting, access, layout and scale of buildings and landscaping in consultation with Milton Keynes Council.
- 3.95 The **Cultural Heritage and Archaeology Technical Note prepared by RSK** identifies that the Site has potential for survival of archaeological remains. The wider area around the Site contains numerous examples of archaeological remains, therefore there is potential for previously unknown archaeological remains. Whilst there is a likelihood of archaeological remains, the Technical Note concludes that there is no evidence of remains being of such importance that the impact on them would warrant refusal of a planning application to develop the Site.
- 3.96 It is therefore considered that any potential archaeological impact can be suitably assessed and mitigated during the detailed design phase, through the careful design and layout of development and precautionary measures during construction phases if appropriate. Any forthcoming application will be supported by an Archaeological Desk Based Assessment and can include results of geophysical surveys, and, where appropriate, trial trenching evaluation in accordance with a Written Scheme of Investigation. This will assist in determining the location, date, and importance of archaeological remains, if any, within the Site and inform the wider design and layout of proposals to suitably mitigate any perceived impact.

Noise

- 3.97 The **Acoustics Technical Note prepared by RSK** notes that based on the location of the Site, it is likely that the existing noise environment would be dominated by vehicular traffic along the A509 with noise propagating from the west. The noise environment is also likely to be affected by road traffic from the north along Chicheley Hill Roundabout/A422 Newport Road and Chicheley Road, and from vehicular traffic along North Crawley Road from the south. Consequently, the lowest noise levels are expected along the eastern portion of the site due to the increased distance attenuation to the above sources.
- 3.98 Other sources identified in the vicinity of the site area include warehousing and farming activities associated with Hill Farm (centre of the southern half of the Site) and Newfield Farm (centre of the northern half of the Site). These are likely to be less significant in the context of the prevailing noise environment across the wider Site.
- 3.99 The western and northern portions of the Site are likely to be subject to the highest noise levels due to their proximity to the busiest surrounding road links. Noise levels from vehicular traffic along the A509 to the west are expected to propagate to a further distance and dominate the noise environment within the central portion of the site. This is due to the increased traffic movements and speed from this road link with respect to other surrounding minor roads. Indicative daytime noise levels would likely be in the order of 60 – 65 dB LAeq,16hr, with night-time noise levels between 55 – 60 dB LAeq,8hr. Understandably, dwellings positioned at further distance from the boundary line or behind those most exposed buildings to the road would benefit from additional noise reductions.

- 3.100 The centre and eastern portions of the Site would likely be subject to lower noise levels due the increased attenuation expected from the surrounding roads.
- 3.101 Consideration should be given by the developer to the management of noise through a hierarchy of potential mitigation measures which may include:
- *Maximising the separation distance between source and receiver;*
 - *Incorporate noise barriers (where applicable) to screen the development site (or individual plots) from significant sources of noise;*
 - *Use existing features to reduce noise propagation across the site;*
 - *Orientate the buildings in a manner which reduces the noise levels within habitable rooms (particularly bedrooms); and*
 - *Building envelope design to mitigate the noise to acceptable levels, whilst providing adequate ventilation.*
- 3.102 The development should incorporate the principles of good acoustic design, including the orientation of buildings, appropriate positioning of outdoor amenity areas and suitable façade treatments. Façade treatments to future plots would include appropriate glazing and acoustically treated ventilators and where necessary (subject to the predicted noise levels), additional forms of comfort cooling should the risk of overheating be deemed as high (in line with Approved Document O 'Overheating').
- 3.103 External noise levels at proposed educational areas are likely to be below the upper limit for formal and informal outdoor teaching, and recreational spaces. The proposals also allocate space for new sports pitches within the site's south-west portion. Appropriate buffer zones would be explored to minimise impacts on nearby homes.

Air Quality

- 3.104 The **Air Quality Technical Note prepared by RSK** notes that MKCC currently has one declared Air Quality Management Area (AQMA), Olney AQMA, for the exceedance of annual mean NO₂ objective. Lydney AQMA is located approximately 5.5km to the north of the Site, therefore the Site is not located within or adjacent to an AQMA.
- 3.105 The Site is not therefore within an existing AQMA and is at a suburban outskirts semi-rural location, where air quality is generally likely to be good.
- 3.106 The proposed development Site is located in an area where the main source of air pollution is likely to be road traffic exhaust emissions. The site is bounded by A509 to the east and the Chicheley Road to the North and N Crawley Road to the south. Therefore, traffic exhaust emissions from these roads may have a potential impact on the future site users.
- 3.107 During the operational phase, air quality impacts are likely to be associated with traffic emissions as a result of any changes in traffic flows or flow composition the strategic allocation may bring.

- 3.108 Detailed information regarding traffic generation from the developable area is not available at this stage. Given the scale of the development, it is considered likely that a detailed operational phase modelling will be required.
- 3.109 Air quality at the proposed development site is likely to be good, however the site is bounded on two sides by roads with a significant traffic flow and the potential for these to affect air quality at nearby parts of the site and therefore expose future residents to poor air quality should be assessed. It is likely that the outcome of the assessment would be that residential uses should be set back from these roads to some extent, constraining development in areas close to these roads.
- 3.110 It is anticipated that subject to future assessment, air quality is unlikely to be a significant constraint for the development.

Utilities

- 3.111 A **Foul Drainage and Utilities Report has been prepared by LDE RSK**. It notes that a connection to the existing public foul sewer may be possible subject to the size and capacity of the sewer. A Pre-development Enquiry should be submitted to Anglian Water to confirm existing network capacity, any reinforcement requirements and to determine the proposed point of connection to discharge the proposed foul flows from the development.
- 3.112 Based on the existing Site topography, two adoptable pumping stations are likely to be required in the south and in the east of the site in order to connect the onsite foul drainage to the nearby existing foul sewer network or existing network located further afield.
- 3.113 Existing overhead 11kV pole mounted HV cables will be diverted and grounded as part of the development proposals. Records indicate presence of a High Pressure gas main crossing the site in a northwest to southeast direction. The high-pressure gas main has two standoff requirements set by Cadent Gas, these are:
- *6m wide easement*
 - *28.9m Building Proximity Distance (BPD)*
- 3.114 In line with Building Regulations Part L, Future Homes Standards and construction of the proposed development post 2025 gas will not be used for heating properties.
- 3.115 Consideration should be given to the constraints of the two existing water mains within the north and south of the Site, these will either need to be accommodated within the proposed development layout or diverted.
- 3.116 Connections from the existing water main crossing the site should be possible, subject to capacity and correspondence with Anglian Water. There is also an existing High Pressure Gas Main and Chalk Slurry Pipeline that cross through the site.

Agricultural Land

- 3.117 An **Agricultural Land Classification report has been prepared by ADAS RSK**. The survey has identified land with non-calcareous or calcareous medium clay loam, heavy clay loam and clay textured topsoils over slowly permeable non-calcareous or calcareous clay subsoils. These soils form agricultural land of Grade 2 (8.1 ha, 4 %), Subgrade 3a (73.1 ha, 33 %) and Subgrade 3b (127.0 ha, 58 %) quality. There were 11 ha of non-agricultural land within the survey area that were not surveyed. The principal limitation to the agricultural use of the land is soil wetness.

Ground Conditions

- 3.118 A **Phase 1 Desk Study has been prepared by RSK** and sets out that potential sources of contamination at the Site are considered to be limited to discrete deposits of made ground associated with potentially infilled former ponds and channels/drainage ditches, and herbicides and pesticides associated with agricultural use. In addition, potential offsite sources of contamination have been identified as the storage of chemicals and potentially fuels at Hill Farm which is located at the centre of the Site although outside the red line boundary, as well as fabrications premises at the adjacent Newfield Farm, and sewage sludge from the nearby North Crawley Sewage Treatment works.
- 3.119 Further work is therefore recommended through Site investigation and/ or mitigation. Nonetheless the note concludes that subject to the findings of appropriate investigation and assessment, as well as adoption of any mitigation measures considered necessary, the Site is suitable for the proposed development.

Summary

- 3.120 As set out, Gallagher Developments support the proposed allocation of the Site under Policy GS14 and as evidenced by this assessment and the documentation submitted as part of this representation, significant endeavours have been made to support the Site and work towards a future planning application for the northernmost parcel.
- 3.121 There are no constraints that cannot be dealt with through design development and the provision of additional information as part of a planning application. Should the Council feel that any further detail is necessary as part of the preparation of the emerging plan, Gallagher Developments and Chicheley Farms Limited would be very happy to provide this.

4. Representations to Policy GS14 Eastern Strategic City Extension

- 4.1 The MK City Plan 2050 includes draft wording of Policy GS14 which allocates the Site for development. As referenced, Gallagher Developments are in support of the proposed allocation as well as the extension to the City Boundary on the Policies Map to incorporate the Site.
- 4.2 Gallagher Developments note that the Council have made some revisions to the policy wording since the Regulation 18 consultation. In the wording under section B, we note that the policy text has been amended to now remove the requirement for a Supplementary Planning Document, which is supported. Gallagher Developments were concerned that the preparation of a separate subsequent document could cause delay to the delivery of the Site due to the associated timescales and are therefore pleased to see this has been removed. Gallagher Development previously set out a preference for a concept Framework Masterplan being produced (which has been shared with the Council separately under the consortium) and a Design Code to be provided and submitted as part of the planning application. This will ensure a robust phased framework for the delivery of the site, without any unnecessary delay.
- 4.3 Gallagher Developments do however have a number of specific detailed comments and suggestions on the policy wording itself, and as such must reluctantly object to the public wording as drafted. These are set out below with a subsequent tracked change version of the policy provided for ease. Gallagher Developments would be very happy to engage with the Council as well as the other landowners and development partners involved in the allocation moving forward.
- 4.4 Our specific comments on the policy, drawing from the technical work undertaken, are as follows:
- There should be recognition in the policy that given the scale of development under the proposed allocation there is unlikely to be a single planning application submitted for the entire allocation, and therefore multiple Design Codes / submissions should be allowed for on a phased basis. As such, we suggest that consideration be given to a phased delivery of the wider allocation, allowing individual parcels (albeit of scale) to come forward, whilst having due regard to the comprehensive masterplanning of the wider site and providing necessary supporting infrastructure alongside development; and
 - There are some parts of the scheme/internal road network where segregated MRT routes could be provided but are unlikely to be necessary – i.e. where they don't provide any journey time benefit. It would be beneficial to have some wording around of flexibility in parking provision across the scheme, particularly in/around denser parcels adjacent to mobility hubs/MRT/local centres etc, accepting that some units could be car free.

- 4.5 Consequently, a suggested tracked change version of the draft policy is provided below with some further suggestions:

Policy GS14 Eastern Strategic City Extension

A. The Eastern Strategic City Extension is allocated for a new mixed-use, residential-led, strategic development to the north and east of the city.

B. Development proposals within the Eastern Strategic City Extension should be in accordance with a **site based area** Framework Masterplan and ~~site-based area~~ Design Codes **(to be agreed as part of the planning applications for the site)** that are consistent with the criteria below and wider plan policies and approved by the Council prior to planning permission being granted. **It is recognised that more than one application is likely to come forward for the Eastern Strategic Extension and that development will be phased.**

C. Development proposals within the Eastern Strategic City Extension will be required to meet the following criteria:

1. Delivery of around 16,000 homes, with around 7,750 homes within the plan period, through a comprehensive, **phased and** masterplanned approach providing a range of house size, type and tenure, including affordable, older persons and specific and specialist needs housing;
2. Provision of land and **/or** planning obligation funding for a minimum of two separate sites ~~to accommodate 31 pitches~~ for Gypsies and Travellers to be delivered by 2035 in accordance with Policy HQH6 **as identified in the Framework Masterplan;**
3. Around 40 hectares of land for employment use primarily in the form of small to medium scale business premises to support SMEs and startups associated with research and development and professional services, and a limited element of warehousing and distribution to be located adjacent to similar uses within the Milton Keynes East Strategic Urban Extension;
4. Higher densities of housing to support public transit around local and/or district centres and interchange hubs associated with new Metro routes within the site;
5. Provision of, or planning obligations to help fund the delivery of, Metro related infrastructure within the site and to facilitate Metro connections to the site;
6. Appropriate buffers, setbacks and landscaping to successfully protect the character, heritage assets and sense of place of Moulsoe village as a distinct rural settlement;
7. Provision of early years, primary and secondary education facilities including SEND provision, appropriate to the scale and nature of the development proposal, **to be delivered on a phased basis;**

8. Provision of primary healthcare facilities within the site and contributions to wider health and social care infrastructure appropriate to the scale and nature of the development proposal;

9. Provision of centres for retail and services as appropriate to the scale and nature of development proposals and which do not undermine the vitality and viability of Newport Pagnell District Centre and planned centres within the Milton Keynes East Strategic Urban Extension;

10. Centres should provide a range of community facilities, including convenience and service retail units, commensurate with their proposed role within the wider Strategic City Extension and which are consistent with Policies GS4 and GS5;

11. Provision for sports and leisure in accordance with the Infrastructure Delivery Plan and the Council's latest sports, playing pitch and leisure strategies;

12. **Phased** provision of green and blue infrastructure and open space, in line with an approved Strategic Green and Blue Infrastructure and Open Space Strategy for the Strategic City Extension in accordance with the Infrastructure Delivery Plan, the Council's Nature, Green and Blue Infrastructure Strategy, and open space standards;

13. Provision of an integrated network of low- and zero-carbon energy infrastructure from building scale to neighbourhood or district scale;

14. The phased introduction of a comprehensive transport network that prioritises active travel and public transit modes consistent with the movement hierarchy set out in Policy GS4, and specifically to include:

a. Segregated routes for active travel and provision of interchange hubs that integrate well with Milton Keynes East, Moulsoe village, the proposed network and routes for the Metro and public transport, and the wider network of public rights of way beyond the Eastern Strategic City Extension;

b. Dedicated routes and infrastructure for the Metro system, with segregated Metro routes and/or lanes provided wherever **necessary, in agreement with the Council possible**.

c. New routes and/or upgrades to the existing local and strategic highway network to accommodate strategic movement of general traffic associated with the Eastern Strategic City Extension, including cross-boundary routes as necessary;

d. New and/or upgraded active travel and vehicular crossings of the M1 to ensure appropriate connectivity with land west of the M1 and the Eastern Strategic City Extension, connecting into and improving where necessary existing routes and the wider network;

e. Infrastructure and traffic management measures to direct trips originating within and beyond the Eastern Strategic City Extension away from Moulsoe

village while retaining appropriate vehicular access to Moulsoe village for residents, businesses, community groups and visitors;

f. Futureproofing and safeguarding of routes and land to enable future connections east beyond the Strategic City Extension; and

15. Parking provision should be applied flexibly across the Strategic Extension, reflecting the varying accessibility characteristics of different development parcels. In higher-density areas, particularly those located adjacent to mobility hubs, MRT routes and local centres, reduced parking levels will be supported. Proposals for car-free or low-car housing may also be acceptable where high-quality public transport and active travel connections are provided.

16. ~~15.~~ Be informed by appropriate surveys and assessments of built heritage and ecology with appropriate mitigation of impact; and

17. ~~16.~~ Pre-determination archaeological evaluation has been undertaken and provided in support of development proposals.

5. Representations to MK City Plan 2050 Policies

- 5.1 Within this section, comments are provided by Gallagher Developments to other policies within the MK City Plan 2050.
- 5.2 For the avoidance of doubt, some policies within the MK City Plan 2050 are not referenced in this statement as Gallagher Developments do not wish to make any representations on them at this time. Although some general comments are made with the intention of assisting the authority, the majority are made in the interests of the Site, with input provided from specialist consultants in the project team.
- 5.3 To highlight, Gallagher Developments are supportive of the ambition and objectives of the MK City Plan 2050, particularly the drive towards ambitious growth to support prosperity, quality of life and wellbeing.

Policy GS1 Our spatial strategy

- 5.4 Gallagher Developments support the spatial strategy for growth but suggest that the policy wording itself could be amended to better reflect the chosen growth strategy which includes greenfield development, which would not appear to evidently fall into either of the tiers stated under the policy.
- 5.5 It is suggested this could be captured by reference within Tier 1, for example, ‘...the city of Milton Keynes *Strategic Site Allocations and the Strategic City Extensions*, as shown on the Policies Map...’.

Policy GS2 Strategy for homes

- 5.6 Gallagher Developments support the chosen growth strategy set out within Policy GS2.

Policy GS3 Strategy for economic prosperity

- 5.7 Gallagher Developments support the ambitions of this policy to support economic prosperity in Milton Keynes and the range of sectors that provide jobs within the city, ensuring a highly sustainable settlement with ready access between jobs and homes.

Policy GS4 Strategy for People Friendly and Healthy Places

- 5.8 Gallagher Developments support the inclusion of this policy to promote good physical and mental health and would highlight that the proposals for the Site will include an array of supporting essential infrastructure.

Policy GS5 Our Retail Hierarchy

- 5.9 Gallagher Developments support the in-principle favour towards Local Centres to provide convenience shopping to allow ready access by non-car modes, and this provision will be delivered on the Site.

Policy GS10 Movement and Access

- 5.10 In principle, Gallagher Developments support this policy and refer to the Vision Document which includes redways in line with the policy requirements.
- 5.11 Minor suggestions are made including to point A. which should reference vision-led scenario testing relating to mitigation as per NPPF paragraph 115 D. With respect to B.8. it is suggested that the wording should explicitly reference flexibility in applying parking standards e.g. proposals for car-free or low-car housing may also be acceptable where high-quality public transport and active travel connections are provided.

Infrastructure first

INF1 Infrastructure first principles

- 5.12 It is suggested under point B. of this policy additional wording could be added for clarity to state that where appropriate infrastructure may also be secured by planning condition.
- 5.13 There is also a typographical error in this policy with the duplication on D. so the second should be updated to state E.

INF2 Infrastructure planning and delivery principles for strategic allocations

- 5.14 Gallagher Developments support the addition of this policy under the Regulation 19 plan in providing a mechanism to coordinate infrastructure delivery across multiple sites in a fair way. Gallagher Developments would however be interested to learn more about the framework and how this is being compiled.

People friendly and healthy places

Policy PFHP1 Delivering Healthier Places

- 5.15 Gallagher Developments support the Council approach to delivering healthier places but would suggest that the Council ensure that clear justification is provided to demonstrate how the thresholds for a Health Impact Assessment have been determined e.g. why has 50 homes been chosen as appropriate as the trigger requirement. In addition, other uses included within the policy just reference the use e.g. provision of education, but it is unclear if this relates to all scales of education use.

Policy PFHP3 New Local Centres

- 5.16 Gallagher Developments support this policy approach and in line with A. 2. the Site intends to deliver a Local Centre as part of this strategic allocation and will cater for the needs of the new development.
- 5.17 Gallagher Developments would suggest that the wording in D. is amended to state '*...indicated within Framework Masterplans approved by the Council, or where appropriate agreed as part of planning applications.*' which will enable greater flexibility.

Policy PFHP4 Delivering a healthier food environment

- 5.18 Gallagher Developments support the Council's approach to support a healthier food environment and highlight that the Site will include provision of allotments and would be happy to explore the other suggestions under C. of the policy, as appropriate for the Site.
- 5.19 It is suggested that wording under D should be reviewed as this is a little unclear. Currently this reads as though all major developments must provide on-site allotments, which would appear a low threshold given the NPPF definition of major as well as impracticalities in certain locations of the City. The second part of this point then references community orchards which would appear not to have any threshold.

Policy PFHP5 Designing People-Friendly Places

- 5.20 Gallagher Developments do not wish to make any comments on this policy other than to support its urban design principles and highlight that these are already being considered as part of the development of the Site proposals.

Policy PFHP6 Designing healthy streets

- 5.21 Again, Gallagher Developments support the design principles set out in the policy but suggest that there should be an element of flexibility in the requirements similar to PFHP5 so as to not be unnecessarily onerous. The wording could be amended to state *'Development proposals will be permitted where they meet the following principles wherever possible and relevant to the development...'*

Policy PFHP7 Well-designed buildings and spaces

- 5.22 Gallagher Developments support the proposed approach to well-designed buildings and would only query the reference under 8. as to whether the Council are intimating that any important views will be formally identified as these are not presently on the Policies Map.

PFHP8 Tall buildings outside Central Milton Keynes

- 5.23 This policy sets out support for tall building in 'highly sustainable locations'. It is however queried whether this is the correct test for acceptability of tall buildings. Whilst sustainable locations are more likely to be the types of locations where a denser development will be acceptable, it is suggested that this wording could be removed with the key test being the context and appropriateness of the location in character and design terms, as set out under 1. -6. of the policy.

A new MK Design Code

- 5.24 Although not a policy provision, the document sets out that the Council intend to prepare Design Codes to help with the implementation of policies. With respect to Policy GS14, Gallagher Developments are keen to discuss this with the Council further.

High quality homes

Policy HQH1 Healthy Homes

- 5.25 It is noted that the text under E. has been updated following Gallagher Developments previous Regulation 18 comments setting out further guidance on self-build/custom homes. Whilst this guidance is helpful, it is considered that the policy wording should allow for greater flexibility. The policy states that schemes of 100 dwellings or more must provide at least 5% as serviced plots for custom builders. However, for the Strategic Extensions a 5% could be a very significant number, taking GS14 5% of 7,750 would be 388 homes (rounded up from 387.5). For such sites a more proportionate approach should be taken.
- 5.26 This could either be addressed by adding flexibility to the requirement e.g. 'Development proposals involving 100 dwellings or more, excluding flatted units, **should aim to** provide at least 5% of the total dwelling plots as serviced dwelling plots for sale to custom builders' or through amendment to the following sentence '*Any provision will take account of the viability and feasibility of provision, taking into account the form of the development and characteristics of the site, particularly in the case of the Strategic Extensions.*'

Policy HQH2 Affordable Homes

- 5.27 It is noted that this policy sets a requirement for 40% affordable housing to be delivered at the ESCE. Whilst the provision of affordable housing within the allocation is supported by Gallaghers, there needs to be sufficient justification for applying a specific policy, including tenure split, to strategic sites. We note that the 40% requirement is over and above the requirement identified in the Housing and Economic Development Needs Assessment (HEDNA, Figure 16, Page 70 : October 2025). It is also a significant increase on the proportion sought by the current Plan:MK (31%). Therefore, setting a requirement above this need would appear not to be justified by evidence. In addition, clarification needs to be given on how this should be considered against other site-specific infrastructure requirements to ensure it does not undermine deliverability of the strategic allocation.
- 5.28 Furthermore, Policy HQH2 sets out an overly prescriptive approach to tenure split which is likely to impact delivery and is not justified by the provided evidence base. Limb 2 in particular (via the use of "*must*") does not allow for appropriate flexibility, particularly where planning for large scale strategic allocations with underpinning infrastructure needs.
- 5.29 The tenure requirements in HQH2 are not considered justified by the HEDNA update, with the requirements inconsistent with Figure 16 (embedded below). Whilst it is noted that these figures are rounded, they would only apply in a situation where 36% affordable housing is provided (please see earlier point on this) and is another reason why prescriptive figures are inappropriate.

Figure 16: Mix of market and affordable housing need in Milton Keynes 2022-2050 by tenure and size (Source: ORS Housing Model. Note: Figures may not sum due to rounding)

Total Dwellings 2022-2050	Market Housing	Social Rent	Affordable Rent	Affordable Home Ownership	TOTAL
1 bedroom	1,550	2,651	383	590	5,175
2 bedrooms	4,541	3,695	1,200	1,028	10,464
3 bedrooms	16,393	4,251	1,589	717	22,950
4+ bedrooms	8,954	1,490	466	-	10,910
TOTAL DWELLINGS	31,438	12,087	3,638	2,336	49,499
Percentage of dwellings	64%	24%	7%	5%	100%

- 5.30 The Milton Keynes Whole Plan Viability Study (in paragraph 5.39) says that “It is important to note that, at the time of the 2024 WPVA, the Council did not require this mix on each and every site, rather it seeks to balance the housing market over the plan-period. The specific nature of development sites was taken into account in the modelling. This approach flexible (sic) is taken forward”.
- 5.31 It is therefore requested that Policy HQH2 is amended to reflect the target tenures as a key starting point, subject to site-specific considerations and evidence of need at the point of the submission of a planning application.

Climate and environmental action

Policy CEA2 Green Roofs and Walls

- 5.32 Gallagher Developments note the positive changes that the Council have made to this policy since the Regulation 18 version. However, whilst it is appreciated that the policy wording does allow flexibility it is considered that the expectation of this policy remains unrealistic and unjustified. A more suitable wording would set out support for development that includes this provision, rather than stating that they should be required.

Policy CEA5 Water Efficiency

- 5.33 It is suggested that C.1. could be deleted as this is a rainwater harvesting measure that is captured under point C.4.
- 5.34 This policy proposes a requirement of 93 litres per person per day for water efficiency. This standard is inconsistent with national guidance in the Planning Practice Guidance (PPG), which identifies an optional tighter requirement of 110 litres per person per day, compared to the current Building Regulations standard of 125 litres per person per day. It is also noted that proposed amendments to the Building Regulations are currently subject to consultation and do not align with the emerging policy position. As set out in that consultation, MHCLG proposes to reduce the national standard to 105 litres per person per day, alongside an optional standard of 100 litres per person per day for water-stressed areas.
- 5.35 Given that the proposed policy requirement is inconsistent with both the current and anticipated future Building Regulations, it is recommended that the reference to 93 litres

per person per day is removed and replaced with a requirement to align with the Optional Technical Standard once adopted. This approach would not materially dilute the policy's ambition, would ensure consistency with national policy, and would not adversely affect delivery. It is also noted that the Whole Plan Viability Assessment (paragraph 5.56a) has costed the policy on the basis of a 100 litres per person per day standard.

Policy CEA7 Mitigating wider environmental pollution

- 5.36 Point C. refers to soil managed and it is suggested that the wording should be clarified that this relates to 'topsoil' in the last sentence, to differentiate from general soil materials.
- 5.37 Point K. relates to light pollution and would appear to suggest that a Lighting Assessment is required for any proposal for external lighting. This is not considered to be a proportionate or justified requirement.
- 5.38 Point M. briefly makes reference to nutrient neutrality although the Council are not understood to be an authority where Natural England have advised that protected sites are in unfavourable condition due to excess nutrients. As such the intention behind this inclusion is queried given the potential implications of such wording.

Policy CEA9 Biodiversity and Habitats Network

- 5.39 Under A. the policy sets out support for proposals that provide a higher than 10% net gain in biodiversity. However, the Environment Act 2021 refers to 10% which is considered to include this figure itself, rather than need to exceed this figure. The policy is therefore inconsistent with national requirements by suggesting that schemes will only be supported where they exceed 10% and should be amended to state '*Development proposals that provide 10% or higher net gain in biodiversity, and those that provide for long-term management and maintenance for more than 30 years, will be strongly supported...*'
- 5.40 Although the name does not imply it, the wording of the policy relates to biodiversity net gain specifically. The name of the policy should therefore clarify that this relates to biodiversity net gain specifically.

Policy CEA10 Protection and enhancement of environmental infrastructure network, Priority Species and Priority Habitats

- 5.41 Under G. of this policy wording, it infers that development will not be permitted where there will be a negative impact on protected species and priority habitats. It is considered that in the interest of allowing some flexibility and accordance with the NPPF, additional wording should be included to add '*...unless the impacts can be adequately mitigated or as a last resort compensated for*'.

Policy CEA11 Urban greening, trees and woodland

- 5.42 Whilst in principle Gallagher Developments support the aspirations of this policy, it is felt that further clarification and guidance is necessary around the requirement under A. of green cover and under D. of a 19% tree canopy cover and as such object to the drafting in the current form. These are onerous requirements that will impact on development densities and at this time do not appear evidence based and justified. For example, the requirements exceed those in the London Plan (2021) as a comparison and could also conflict with biodiversity net gain in terms of scoring when taking into account urban greening and woodland creation.
- 5.43 There also appears to be some inconsistency and varying triggers for requirements in the policy wording which could lead to uncertainty and confusion, as well as an overly complicated policy to interpret. Flexibility and clarification are therefore required, particularly noting that other authorities, such as Wycombe District Council, adopted similar requirements in their local plans and they have had significant negative implications on deliverability and viability.

Policy CEA12 Conserving and Enhancing Landscape Character/Special Landscape Areas

- 5.44 This policy makes reference in B. to 'where a site-specific landscape and visual impact assessment is required' although the policy does not state a threshold. Presumably therefore the Council validation requirements will be clear on any other types and scales of development that will require such a document.
- 5.45 Part C. of the policy sets out where development affecting Special Landscape Areas will be permitted. It is considered that given allocations are proposed within these areas, Strategic City Extensions should be explicitly referenced within this policy to provide clarity along with the evidence base documentation which confirms that development can be acceptable in these areas.

Policy CEA14 Protecting and enhancing watercourses

- 5.46 Point A. under this policy reference the need for development proposals to be set back at a distance of at least 8 metres from any 'main river, at least 9 metres from all other ordinary watercourses'. The rationale for these distances does not appear to be evidenced and would appear disproportionate given the extent of works that could be defined as 'development'.

Economic and cultural prosperity

Policy ECP1 Protecting Employment Land and Buildings

- 5.47 This policy in principle resists the loss of any 'employment land and buildings' subject to criteria. It is considered that it would be appropriate to define the planning use classes that this relates to, given the extent of uses that could be considered to comprise employment land and buildings. The intention behind this is presumably with a focus on Class E g) i), ii) and iii) as well as B2 and B8.

6. Summary

- 6.1 These representations have been prepared by Turley on behalf of Gallagher Developments and Chicheley Farms Limited and are provided in response to the Council's consultation on the MK City Plan 2050 (Regulation 19) in support of the proposed allocation under Policy GS14 Eastern Strategic City Extension as well as providing overall comments on the consultation documentation.
- 6.2 The Site is considered to provide a fantastic opportunity to support the sustainable growth of eastern Milton Keynes, complimenting the direction of development and existing proposals in the locality.
- 6.3 As set out in our comments to Policy GS14 in section 4 of this document, we fully understand that the wider eastern expansion site needs to be masterplanned and planned for in a comprehensive manner in order to ensure that infrastructure is delivered in a timely manner and that the sustainability of the site is maximised. However, in order to ensure that there is early delivery of the site it is considered that it would be sensible to phase the site and make clear that sizeable areas – such as the element north of North Crawley Road – can be progressed independently, provided that they adhere to the wider vision for the allocation and support appropriately the timely delivery of infrastructure in this context.
- 6.4 The following benefits would result from the development of the Site:
- *Retention of woodland and hedgerows, and opportunities for woodland planting and biodiversity offsetting, delivering a 10% gain.*
 - *Multifunctional spaces for surface water attenuation features, ecology and habitat, together with opportunities for water quality improvement.*
 - *Delivery of circa 2,500 new high-quality dwellings (including affordable) all delivered up to 2050.*
 - *Flexibility in type and tenure of dwellings to meet the needs of the community.*
 - *New local spaces for recreation and healthy lifestyles.*
 - *Provision of sports facilities on-site linked by active travel corridors.*
 - *Prioritising sustainable transport modes and active travel.*
 - *Homes and Buildings built to Future Homes Standard, delivering a 75% reduction in carbon.*
 - *Positioning the building to maximise solar gain, use of sustainable building materials, minimising construction waste, use of energy and water efficient technologies.*
 - *Integrated pedestrian and cycleways connecting new development to existing and proposed activities including extension of the red route through the site.*

- *Funding and land for education facilities.*
- *New mobility hubs including e-bike/e-scooter hire and storage facilities along with EV charging points and real time passenger information boards.*

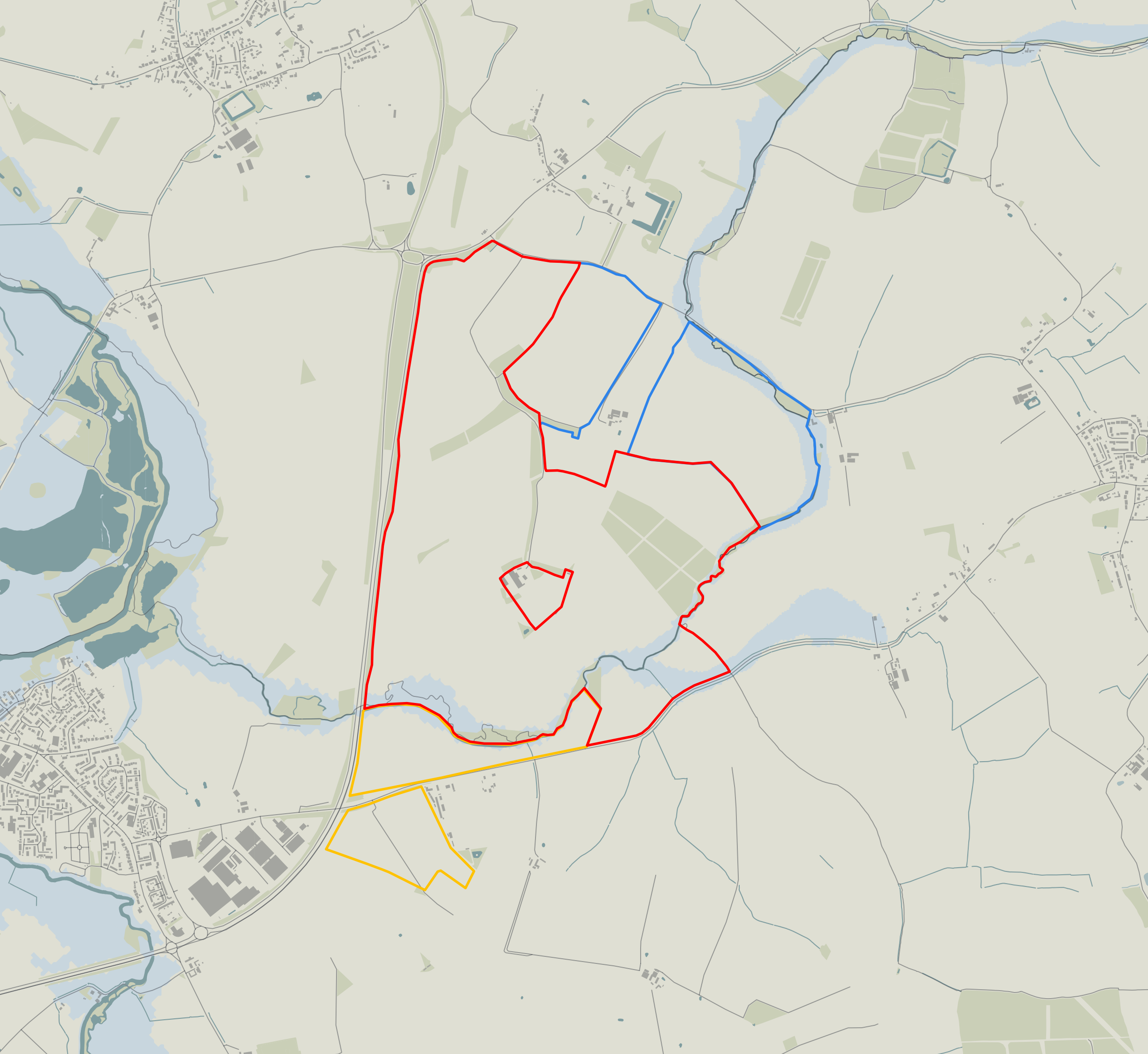
6.5 This representation confirms that in accordance with the NPPF the Site is deliverable, being suitable, available and achievable for allocation in the emerging City Plan. In summary:

- **Available** - Gallagher Developments control the Site and the land is immediately available for development, being actively promoted to the MK 2050 City Plan.
- **Suitable** - the Site is suitable for residential-led development because it:
 - *Is located in a sustainable location and in close proximity to existing and committed development with capacity for additional growth;*
 - *Can be developed immediately;*
 - *Has no identified environmental constraints that, subject to appropriate mitigation, would prevent or otherwise restrict development;*
 - *Will deliver high-quality market housing and much need affordable housing;*
 - *Offers the opportunity to provide a wide range of public benefits including supporting infrastructure, public open space, and net gains in biodiversity;*
 - *Will improve sustainable transport links and wider pedestrian and cycle connectivity; and*
 - *Is in an area identified as a preferred location for the future growth of Milton Keynes in the MK 2050 City Plan.*
- **Achievable** - the Site would make a significant contribution towards meeting the housing needs of Milton Keynes, alongside supporting strategic infrastructure including two new primary schools, public open spaces, community infrastructure, commercial development and supplemental planting that fosters healthy and vibrant communities.

6.6 Amendments are however required to a number of policies, and as such we have noted various objections and as appropriate, proposed amendments, to policies in these submissions.

6.7 Gallagher Developments would be very happy to discuss these representations further with the Council and provide any additional detail that may be helpful, as part of ongoing engagement.

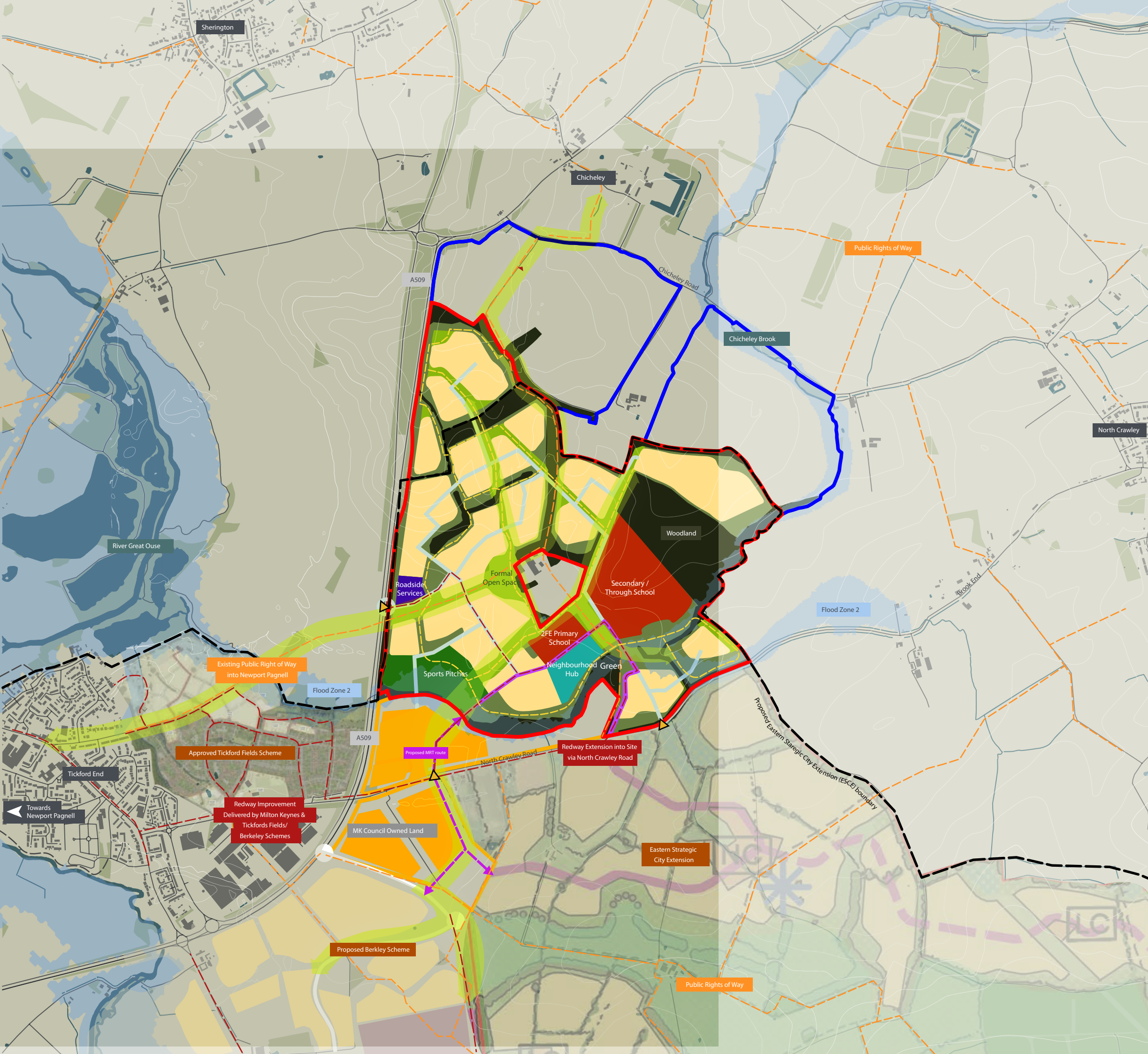
Appendix 1: Site Location Plan



Legend

- Site Red Line - c180ha
- Land Under the Same Control - 55ha
- MK Council Site Red Line - c36ha

Appendix 2: Masterplan



- Legend
- Site Red Line (159ha)
 - Land Under the Same Control
 - MK Council Site Red Line
 - Proposed Eastern Strategic City Expansion (ESCE) boundary
- Land Use
- Residential Development (56.02ha)
 - Education (13.5ha)
 - Mixed Use Neighbourhood Hub (2.6ha)
 - Roadside Services (1ha)
 - MK Council Owned Land
- Green Infrastructure
- Existing & Enhanced Woodland/Spinney/Tree Corridors
 - Green and Blue Infrastructure / Natural Corridors
 - Sports Pitches
 - Formal Open Space & Green Movement Corridor
- Movement
- Primary Movement Route
 - Site Access
 - Public Rights of Way
 - Redway route
 - Proposed Redway route extension into Site (and possible addition)
 - Proposed active travel (walking & cycling) route
 - Proposed MRT route on Site
 - Proposed MRT route through MK East and Wider ESCE allocation

Appendix 3: Vision Document

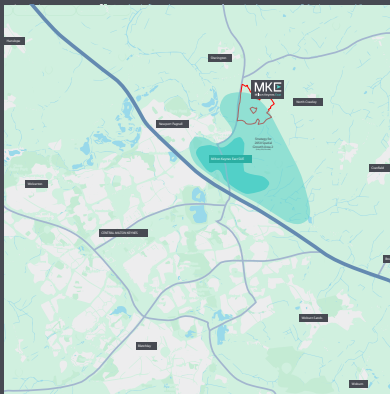
Milton Keynes

Eastern Strategic City Expansion

Chicheley Farm Vision Document December 2025



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03 Deliverable Scheme Benefits



04 Comprehensive Promotion

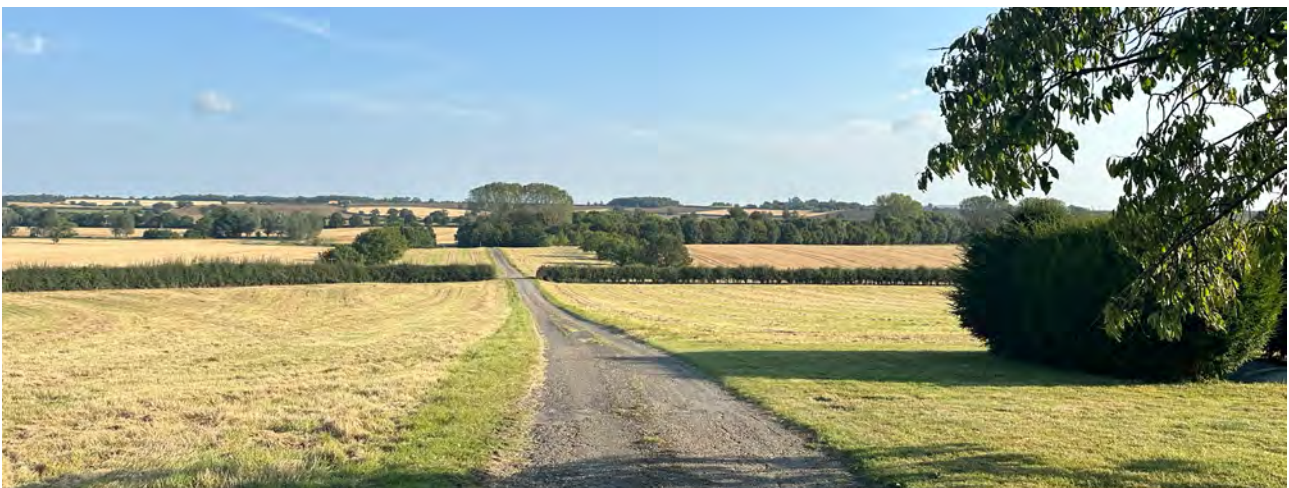


05 Gallagher Developments

01

The Location

Gallagher Developments are promoting the land edged in red on the plan opposite. This land will play a key role in delivering future expansion and growth, to complement existing allocations and consented proposals on the MK East and Tickford Fields sites to the north and east of Newport Pagnell. The site is suggested as the northernmost part of Spatial Growth Area 2.



The site has the potential to deliver a sustainable and healthy, landscape-led development with high-quality homes, a mixed use neighbourhood hub, and primary & secondary schools, supported by extensive open spaces with long distance views, green active travel, red route and MRT route corridors, and additional woodland blocks. New services & facilities for roadside use could also be provided.

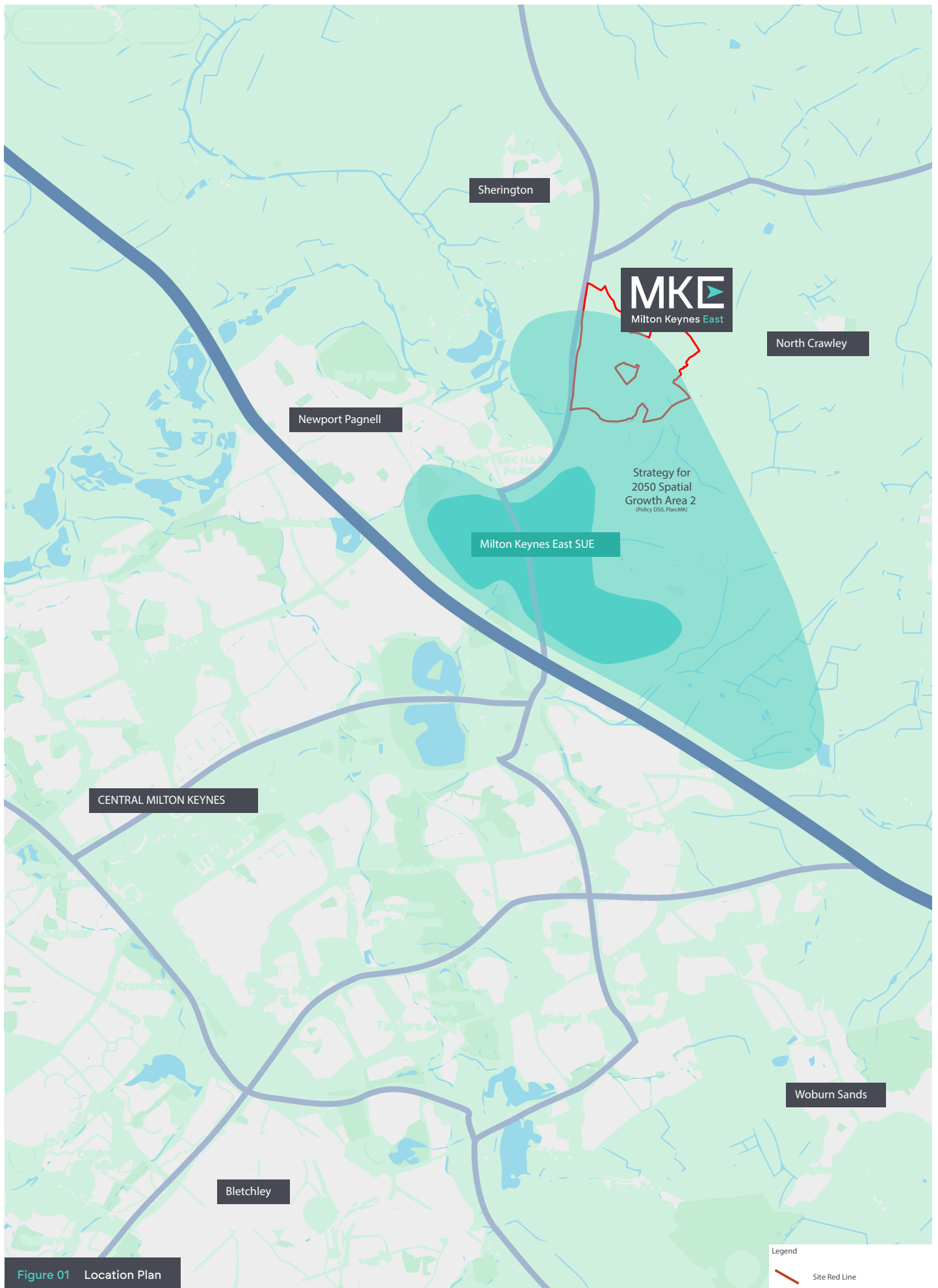


Figure 01 Location Plan

The Proposals

A broad mix of approximately c2,500 new homes including starter homes, affordable housing, apartments and family homes.



New on-site School provisions for a range of age groups.



Mixed use Neighbourhood Hub with community facilities such as crèche, café, home working facilities and mobility hub.



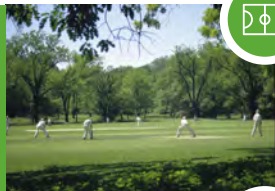
Significant green infrastructure provided on the Site will not only provide a meaningful amount of open space (with a number of key functions including habitat creation, drainage attenuation, recreational space & natural play areas) but also retain key assets including existing mature hedgerows and trees.



Vibrant, active travel green corridors that meander through the Site will enhance biodiversity, support local wildlife and offer a variety of uses from naturalistic play, grow zones and community gardens.



A variety of locally required sports facilities to serve the new neighbourhood and existing adjacent communities.



New roadside facilities adjacent to the A509 with drive-through services and associated electric charging.



Figure 02 The Emerging Masterplan



03

Deliverable Scheme Benefits

The Milton Keynes Spatial Strategy to 2050 has recognised this area as a future development location.

The site is capable of helping to achieve the sustainable, healthy and green aspirations of the strategy.

Green & Blue City



Retention of woodland and hedgerows, and opportunities for woodland planting and bio-diversity offsetting, delivering a 10% gain.

Multifunctional spaces for surface water attenuation features, ecology and habitat, together with opportunities for water quality improvement.

Healthy, Inclusive Communities



Delivery of circa 2,500 new high-quality dwellings (including affordable) all delivered up to 2050.

Flexibility in type and tenure of dwellings to meet the needs of the community.

New local spaces for recreation and healthy lifestyles.

Provision of sports facilities on-site linked by active travel corridors.

Addressing Climate Change



Prioritising sustainable transport modes and active travel.

Homes and Buildings built to Future Homes Standard, delivering a 75–80% reduction in carbon.

Positioning buildings to maximise solar gain, use of sustainable building materials, minimising construction waste, use of energy and water efficient technologies.

Investment in Infrastructure



Integrated pedestrian and cycleways connecting new development to existing and proposed activities including extension of the red route through the site.

Funding and land for education facilities.

New mobility hubs including e-bike/e-scooter hire and storage facilities along with EV charging points and real time passenger information boards.

04

Comprehensive Promotion

Gallagher are master developers with extensive experience in securing deliverable planning consents including large scale schemes in Milton Keynes and Bedfordshire. Our developments deliver sustainable communities that benefit new and existing residents.

Milton Keynes East provides an opportunity to work cohesively to deliver key infrastructure and economic, social and environmental benefits by delivering development that complements and supports the adjoining, approved MK East and Tickford Fields schemes.

We want to ensure that future development delivers the appropriate infrastructure to sustain growth in this location whilst meeting environmental aspirations.

We are committed to working together to deliver significant benefits and embrace the opportunity to enhance the local area.

This document has been created to facilitate conversations between Gallagher and Milton Keynes City Council as well as other key stakeholders including adjoining landowners and developers.

We place great importance on joint working and collaboration, which will be vital to bringing this scheme forward. We welcome the chance to engage with stakeholders at the earliest opportunity when planning for the growth of communities.



Gallagher promoted and delivered the Western Expansion Area in Milton Keynes, which when complete will be home to over 6,500 homes, 45 acres of commercial land and significant community benefits, including 4 primary schools, a secondary school, retail, open spaces, cycle routes and public transport. The site delivered 'oven-ready' development parcels provided to the market in order to attract a variety of house builders from SMEs to national operators.





05

Gallagher Developments

We'd like to come and talk to you to share our emerging ideas and to hear your views.

Gallagher Developments have extensive experience working with local authorities, stakeholders and local communities to deliver high-quality places.

This document sets out our emerging vision based on our understanding of the key issues, based on our detailed technical assessment of the site and our placemaking experience. We will be engaging effectively from an early stage to help shape our proposals further, in order to ensure that the benefits delivered from the development of the site are maximised.

This is why you have a copy of this document – to help us shape a new place that can respond to local issues, opportunities, and fulfil stakeholders ambitions.

We look forward to meeting you and discussing further.

GALLAGHER
DEVELOPMENTS

Define.





Ashflame Properties Limited and Chicheley Farms Limited

Milton Keynes East City Expansion

Air Quality Technical Note

Project No: 445944-01 (02)

NOVEMBER 2025

RSK GENERAL NOTES

Project No.: 445944-01(02)

Title: Milton Keynes East City Expansion, Air Quality Technical Note

Client: Ashflame Properties Limited and Chicheley Farms Limited

Date: 7th November 2025

Office: Hemel Hempstead

Status: Final

Author	Niranjchan Ramanathan Air Quality Consultant	Reviewer	Robert Clark Senior Air Quality Consultant
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Signature

Date: 7th November 2025

Date: 7th November 2025

RSK Environment Ltd (RSK) has prepared this report for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and RSK. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

No part of this report may be copied or duplicated without the express permission of RSK and the party for whom it was prepared.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Group plc.

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1 INTRODUCTION

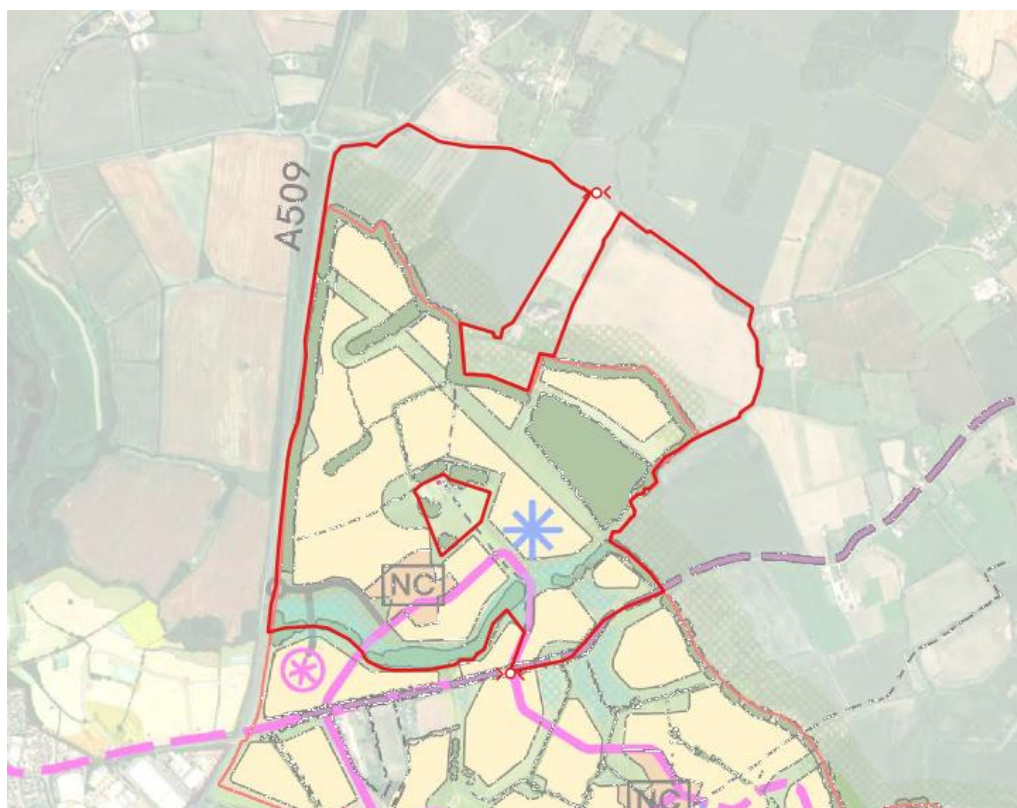
1.1 Background

RSK Environment Ltd (RSK) has been instructed by Ashflame Properties Limited and Chicheley Farms Limited to support the promotion and subsequent application for planning consent, which is included within the emerging Local Plan, a Air Quality Technical Note is requested. We understand that Ashflame Properties Limited and Chicheley Farms Limited is intending to promote a site located to east of the city of Milton Keynes, close to the town of Newport Pagnall to provide for Mixed Use, Residential Led Development for around 3000 dwellings

The site is located within the jurisdiction of Milton Keynes City Council (MKCC) and is approximately centred at 490215, 244814. The site is surrounded by undeveloped land, the A509 to the west, Chicheley Road to the north, N Crawley Road to the south, there are also residential areas to the west past the A509.

MKCC currently has one declared Air Quality Management Area (AQMA), Olney AQMA, for the exceedance of annual mean NO₂ objective. Lydney AQMA is located approximately 5.5km to the north of the site, therefore the site is not located within or close to an AQMA.

Figure 1: Site Boundary



This report presents a review of air quality legislation and guidance relevant to land use planning, existing/baseline air quality conditions, and potential air quality impacts during the construction and occupation phases of the development, and the potential for these to constrain the development.

1.2 Instructions

The project was carried out to an agreed brief as set out in RSK proposal letter reference T445944-01 dated 16th August 2024.

1.3 Approach & Scope

The approach taken may be summarised as follows:

- Review of baseline air quality characterisation based on existing, published information
- Review of proposed development and information which may be available regarding other potential nearby developments, where required;
- Identification of potentially sensitive receptors;
- Identification of likely significant effects;
- Identification of key air quality constraints, such as the presence of Air Quality Management Areas; and
- Determination of scope of the assessment required to support planning application.

2 LEGISLATION, PLANNING POLICY & GUIDANCE

2.1 Key Legislation

2.1.1 Air Quality Strategy

UK air quality policy is published under the umbrella of the Environment Act 1995, Part IV and specifically Section 80, the National Air Quality Strategy. The latest *Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working Together for Clean Air*, published in July 2007 sets air quality standards and objectives for ten key air pollutants to be achieved between 2003 and 2020.

The Clean Air Strategy 2019 supersedes the policies outlined in the 2007 strategy. This latest strategy aims to have a more joined-up approach, outlining actions the Government plans to take to reduce emissions from transport, homes, agriculture and industry. However, the air quality objectives remain as previously detailed within the 2007 strategy.

2.1.2 Air Quality Standards

The air quality standards (AQSs) in the United Kingdom are derived from EC directives and are adopted into English law via the Air Quality (England) Regulations 2000 and Air Quality (England) Regulations 2002. The Air Quality Limit Values Regulations 2003 and subsequent amendments implement the Air Quality Framework Directive into English Law. Directive 2008/50/EC was translated into UK law in 2010 via the Air Quality Standards Regulations 2010.

The relevant¹ standards for England and Wales to protect human health are summarised in Table 2.1.

Table 2.1: Air Quality Standards (AQS) Relevant to the Proposed Development

Substance	Averaging period	Exceedances allowed per year	Ground level concentration limit ($\mu\text{g}/\text{m}^3$)
Nitrogen dioxide (NO_2)	1 calendar year	N/A	40
	1 hour	18	200
Fine particles (PM_{10})	1 calendar year	N/A	40
	24 hours	35	50
Fine particles ($\text{PM}_{2.5}$)	1 year	-	20
		-	12 (by 2028)
		-	10 (by 2040)

¹ Relevance, in this case, is defined by the scope of the assessment.

2.1.3 The Environment Act

The set AQSs are to be used in the review and assessment of air quality by local authorities under Section 82 of the Environment Act (1995). If exceedances are measured or predicted through the review and assessment process, the local authority must declare an Air Quality Management Area (AQMA) under Section 83 of the Act, and produce an Air Quality Action Plan (AQAP) to outline how air quality is to be improved.

2.1.4 The Environment Act, 2021

The Environment Act (2021) amends the Environment Act (1995) to reinforce the local air quality management (LAQM) framework, in order to encourage cooperation at the local level and broaden the range of organisations that play a role in improving local air quality. Part 1 of The Environment Act requires targets to be set for fine particulate matter PM_{2.5}, and these were introduced in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023, as follows:

- PM_{2.5} concentration interim target, annual mean of 12µg/m³ by 2028;
- PM_{2.5} exposure reduction interim target of 22% reduction compared to 2018 by 2028;
- PM_{2.5} concentration binding target of annual mean of 10µg/m³ by 2040;
- PM_{2.5} exposure reduction binding target of 35% reduction compared to 2018 by 2040.

2.2 Planning Policy

The land use planning process is a key means of improving air quality, particularly in the long term, through the strategic location and design of new developments. Any air quality concern that relates to land use and its development can, depending on the details of the proposed development, be a material consideration in the determination of planning applications.

2.2.1 National Planning Policy Framework

In December 2023 the revised National Planning Policy Framework (NPPF) was published, superseding the previous NPPF with immediate effect. The NPPF includes a presumption in favour of sustainable development.

Section 15 of the NPPF deals with Conserving and Enhancing the Natural Environment, and states that the intention is that the planning system should prevent '*preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.*'

With specific regard to air quality, the NPPF states that:

‘Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan

2.2.2 Local Planning Policy

The Milton Keynes Local Plan (Plan:MK 2016-2031) provides the overall spatial vision and framework for the future development for the area. Policy NE9, Environmental Pollution, reads as follows:

“Air Quality

- “D Prevailing air quality and potential impacts upon air quality arising from airborne emissions, dust and odour associated with the construction and operation of a proposal (including vehicular traffic) will be considered when determining planning applications. Proposals that would result in or be subject to unacceptable risk to human health and the natural environment from air pollution, or would prejudice compliance with national air quality objectives, will be refused.*
- E An Air Quality Assessment that demonstrates how prevailing air quality and potential impacts upon air quality have been considered, and how air quality will be kept to an acceptable standard through avoidance and mitigation, will be required for major and minor development proposals if any of the following apply:*
 - 1) The development is likely, due to the nature of the proposal, and through in-combination effects, to give rise to significant air pollution;*
 - 2) The site is within an Air Quality Management Area;*
 - 3) The site is within 50 metres of a major road or heavily trafficked route;*
 - 4) The site is within proximity to a source of air pollution which could present a significant risk to human health; and/or*
 - 5) The type of development would mean its occupiers would be particularly sensitive to air pollution, such as schools, health care establishments or housing for older people.*
- F The potential impact of proposals upon odour levels, or their sensitivity to prevailing sources and levels of odour, should be considered and addressed. Where appropriate, the Council will require an Odour Impact Assessment to be provided, including an Odour Management Plan where necessary.”*

2.3 Best Practice Guidance

2.3.1 Guidance on the Assessment of Dust from Demolition and Construction

The Institute of Air Quality Management (IAQM) published a guidance document, (January 2024 v2.2) on the assessment of construction phase impacts (herein the 'IAQM construction dust guidance'). The guidance was produced to provide advice to developers, consultants and environmental health officers on how to assess the impacts arising from construction activities. The emphasis of the methodology is on classifying sites according to the risk of impacts (in terms of dust disamenity, PM₁₀ and impacts upon sensitive ecological receptors) and to identify mitigation measure appropriate to the level of risk identified.

2.3.2 Local Air Quality Management Technical Guidance

The Department for Environment, Food and Rural Affairs (Defra) has published technical guidance for use by all UK local authorities in their air quality review and assessment work. This guidance, referred to in this document as LAQM TG16, has been used where appropriate. LAQM TG16 has been updated recently by Defra, adopting a new streamlined approach with a greater focus on local measures and public reporting.

2.3.3 Land-Use Planning & Development Control: Planning for Air Quality

Environmental Protection UK's (EPUK) and the IAQM jointly published a revised version of the guidance note 'Land-Use Planning & Development Control: Planning for Air Quality' in 2017 (herein the 'EPUK-IAQM guidance') to facilitate consideration of air quality within local development control processes. It provides a framework for air quality considerations, promoting a consistent approach to the treatment of air quality issues within development control decisions.

The guidance includes methods for undertaken an air quality assessment and an approach for assessing the significance of effects. The guidance note is widely accepted as an appropriate reference method for this purpose.

3 BASELINE CHARACTERISATION

Existing or baseline air quality refers to the concentrations of relevant substances that are already present in ambient air. These substances are emitted by various sources, including road traffic, industrial, domestic, agricultural and natural sources.

3.1 Emissions Sources and Key Air Pollutants

The proposed development site is located in an area where the main source of air pollution is likely to be road traffic exhaust emissions. The site is bounded by A509 to the east and the Chicheley Road to the North and N Crawley Road to the south. Therefore, traffic exhaust emissions from these roads may have a potential impact on the future site users.

3.2 Presence of AQMAs

Where these standards are not predicted to be met, local authorities must declare an air quality management area (AQMA) and prepare an action plan, which outlines measures to improve the air quality within the designated AQMA.

MKCC currently has one declared Air Quality Management Area (AQMA), Olney AQMA, for the exceedance of annual mean NO₂ objective. Lydney AQMA is located approximately 5.5km to the north of the site, therefore the site is not located within or adjacent to an AQMA.

3.3 Local Authority Air Quality Monitoring Data

A review of the MKC's 2023 Air Quality Annual Status Report (ASR) indicates that in 2022 there were three automatic monitoring stations and a network of 37 NO₂ diffusion tube locations within the council.

The closest automatic monitor (ID: Roadbox) is 4.2km from the proposed development and is unlikely to be representative of the conditions at the site. However, there are two NO₂ diffusion tube monitoring locations within 3km of the proposed development. Table 3.1 below presents the data for the diffusion tubes within 3km of the proposed development site for the years between 2018 – 2022.

Diffusion tubes location (ID: I1, I2 & TT1, TT2) is likely to be the most representative of conditions at the proposed development due to its close proximity, however these tubes located in the busy residential area in the Newport Pagnell. Therefore, it is considered possible that NO₂ concentrations at the development site could be lower than the monitored NO₂ concentrations at (ID: I1, I2 & TT1, TT2). The data from these tubes show that there were no exceedances of the annual mean NO₂ AQS during 2018 – 2022.

Table 3.1: Annual Mean Measured NO₂ Concentrations within 3km of the Proposed Development Site (Diffusion Tube Monitoring Sites)

Site ID	Location	Site type	Approximate Distance from Site (km)	Annual Mean NO ₂ Concentrations (µg/m ³)				
				2018	2019	2020	2021	2022
I1, I2	63 High St, Newport Pagnell	Kerbside	2.8	26.7	24.6	23.6	23.6	20.2
TT1, TT2	Co-Op traffic sign, High St, NP (north side)	Roadside	2.8	26.8	25.3	22.9	25.7	18.9
NO ₂ Air Quality Standard (AQS)				40				

3.4 LAQM Background Data

In addition to the local monitoring data, estimated background air quality data available from the Local Air Quality Management (LAQM) website operated by Defra, may also be used to assess likely background air quality conditions at the proposed development site. This website provides estimated annual average background concentrations of NO₂, PM₁₀ and PM_{2.5} on a 1km² grid basis.

Table 3.2 reproduces the estimated annual average background concentrations for the grid square containing the proposed development site for years from 2024 to 2026. No exceedances of the NO₂, PM₁₀ or PM_{2.5} AQSs are predicted. As background concentrations are predicted to fall with time, background concentrations in future years would not be expected to exceed their respective annual mean standards after the proposed development opening year.

Table 3.2: Estimated Background Annual Average NO_x, NO₂, PM₁₀ and PM_{2.5} Concentrations at Proposed Development Site

Assessment Year	Estimated Annual Average Pollutant Concentrations Derived from the LAQM Support Website (µg/m ³)			
	Annual Average NO _x	Annual Average NO ₂	Annual Average PM ₁₀	Annual Average PM _{2.5}
2024	10.6	8.2	15.0	9.0
2025	10.2	7.9	14.8	8.9
2026	9.9	7.7	14.8	8.9
Air Quality Objective	30	40	40	20

Note: Presented concentrations for 1 x 1 km grid square centred on 490500, 244500; approximate centre of proposed development site is 490215, 244814.

4 IDENTIFICATION OF POTENTIAL IMPACTS ON LOCAL AIR QUALITY

4.1 The Site and Proposed Development

The site is surrounded by undeveloped land, the A509 to the west, Chicheley Road to the north, N Crawley Road to the south, there are also residential areas to the west past the A509.

The proposed development is at an early stage but is likely to be Mixed use, residential led development for around 3000 dwellings

4.2 Construction Phase

4.2.1 Fugitive Construction Dust and Particulate Matter

During construction phase, construction works for the proposed redevelopment have the potential to lead to the release of fugitive dust and particulate matter. Fugitive dust emissions arising from construction activities are likely to be variable in nature and will depend upon the type and extent of the activity, soil type and moisture, road surface conditions and weather conditions. Periods of dry weather combined with higher-than-average wind speeds have the potential to generate more dust.

Fugitive dust arising from construction is mainly of a particle size greater than the PM₁₀ fraction (which can potentially impact upon human health), however it is noted that construction activities may contribute to local PM₁₀ concentrations. Appropriate dust control measures can be highly effective for controlling emissions from potentially dust generating activities identified above, and adverse effects can be greatly reduced or eliminated.

The residential dwellings in Newport Pagnell which is 1 km from the proposed development would be considered sensitive receptors to both dust soiling and potential health impacts from particulate matter. A qualitative assessment of construction phase impacts is recommended, and suitable mitigation measures should be determined as part of the assessment.

4.2.2 Exhaust Emissions from Plant and Vehicles

The operation of vehicles and equipment powered by internal combustion engines results in the emission of exhaust gases containing the pollutants NO_x, PM₁₀, volatile organic compounds, and carbon monoxide. The quantities emitted depend on factors such as engine type, service history, pattern of usage and fuel composition.

Based on the temporary nature of the construction activities, it is considered unlikely that vehicle movements associated with staff commutes to and from the site would have a significant impact on local air quality. The operation of site equipment and machinery will result in emissions to atmosphere of exhaust gases, but with suitable controls and site management such emissions are unlikely to be significant.

4.3 Operational Phase

4.3.1 Emissions to Air from Operational Phase

Table 4.1 presents the EPUK-IAQM 2017 guidance screening criteria for when an air quality assessment might be required. Should the criteria within Table 4.1 be exceeded then it is likely that a detailed assessment of operational phase impacts will be required.

Table 4.1: Air Quality Screening Criteria from EPUK-IAQM 2017 Guidance

The Development will	Indicative Criteria to Proceed to an Air Quality Assessment
Cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with relevant receptors.	A change of LDV flows of: - more than 100 AADT within or adjacent to an AQMA - more than 500 AADT elsewhere.
Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors.	A Change of HDV flows of: - more than 25 AADT within or adjacent to an AQMA - more than 100AADT elsewhere.
Realign roads, i.e. changing the proximity of receptors to traffic lanes.	Where the change is 5m or more and the road is within an AQMA
Introduce a new junction or remove an existing junction near to relevant receptors.	Applies to junctions that cause traffic to significantly change vehicle accelerate/decelerate, e.g. traffic lights, or roundabouts.
Introduce or change a bus station.	Where bus flows will change by: - more than 25 AADT within or adjacent to an AQMA - more than 100AADT elsewhere.
Have an underground car park with extraction system.	The ventilation extract for the car park will be within 20m of a relevant receptor. Coupled with the car park having more than 100 movements per day (total in and out).

Have one or more substantial combustion processes, where there is a risk of impacts at relevant receptors.	Typically, any combustion plant where the single or combined NO_x emission rate is less than 5 mg/sec is unlikely to give rise to impacts, provided that the emissions are released from a vent or stack in a location and at a height that provides adequate dispersion. - In situations where the emissions are released close to buildings with relevant receptors, or where the dispersion of the plume may be adversely affected by the size and/or height of adjacent buildings (including situations where the stack height is lower than the receptor) then consideration will need to be given to potential impacts at much lower emission rates. Conversely, where existing nitrogen dioxide concentrations are low, and where the dispersion conditions are favourable, a much higher emission rate may be acceptable.
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During the operational phase, air quality impacts are likely to be associated with traffic emissions as a result of any changes in traffic flows or flow composition the redevelopment may bring.

Detailed information regarding traffic generation from the redevelopment is not available at this stage. Given the scale of the development, it is considered likely that a detailed operational phase dispersion modelling assessment will be required.

Air quality at the proposed development site is likely to be good, however the site is bounded on two sides by roads with a significant traffic flow and the potential for these to affect air quality at nearby parts of the site and therefore expose future residents to poor air quality should be assessed. It is likely that the outcome of the assessment would be that residential uses should be set back from these roads to some extent, constraining development in areas close to these roads.

The Natural England MAGIC Maps website indicates that there are no Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, National Nature Reserves or Local Nature Reserves within or close to the site boundary.

Subject to consultation and traffic data, potential impacts of nitrogen oxides and ammonia on these receptors may need to be assessed.

The proposed development may have a cumulative impact with those of other developments in the area, which may include commercial/logistics development to the north of the site and further residential development to the west. The developments to be included in any cumulative assessment should be agreed with MKC.

It is believed that there is a small sewage treatment facility east of the site, roughly 150 metres from the site boundary and there is potential for odour from this to affect amenity at the some parts of the proposed development. There are no screening criteria for determining the appropriate buffer zone to the nearest sewage plant, but we will consult with the sewage works operator and council to agree likely risk level of site and if required to undertake an odour risk assessment following the *Guidance on the assessment of odour for planning, July 2018*.

4.3.2 Emissions to Air from Operational Phase Energy Plant

At the time of writing, it is not known whether any significant combustion sources such as combined heat and power (CHP) plant or large boilers are proposed as part of the scheme. Should any such sources be proposed, further assessment of potential air quality impacts may be required.

5 SUMMARY & CONCLUSIONS

This report presents an initial review of potential air quality impacts and constraints in relation to a proposed residential led development at East city Expansion at Milton Keynes to provide mixed Use, residential led development for around 3000 dwellings

The site is not within an existing Air Quality Management Area (AQMA) and is at a suburban outskirts semi-rural location, where air quality is generally likely to be good.

The site is bounded by A509 to the east and the Chicheley Road to the North and N Crawley Road to the south. Any future air quality assessment should determine an appropriate distance to set back properties from the roads to prevent exposure of future residents to poor air quality.

The preparation of the site and construction of the proposed development may have the potential to lead to emissions of fugitive dust which may affect air quality and amenity at existing commercial properties and the residential development at Newport Pagnell. Any future air quality assessment should include an assessment of construction phase impacts on these receptors and recommend mitigation measures to minimise these.

During the occupation phase, the principal air quality impacts are likely to be building emissions from space and or water heating plant and exhaust emissions from any increase in vehicular traffic associated with the development on local roads. The impact of these emissions on air quality at receptors including existing commercial and residential properties and ecological receptors should be assessed in any future air quality assessment.

Because of the scale of the development, a quantitative dispersion modelling air quality impact assessment is likely to be required in support of any application for planning consent. Policy, guidance and air quality information may change with time therefore this assessment should be prepared in further consultation with the local authority, but the following elements are likely to be required:

- Assessment of impact of existing road traffic emissions on air quality at the site and therefore appropriate 'set back' distances for the proposed properties;
- Impact of increased road traffic emissions associated with the development on air quality at existing residential, commercial and ecological receptors;
- Assessment of construction phase emissions & mitigation.
- Consideration of potential cumulative impacts with other developments.

It is anticipated that subject to future assessment, air quality is unlikely to be a significant constraint for the development.



Milton Keynes Eastern Strategic City Extension

Agricultural Land Classification

October 2025

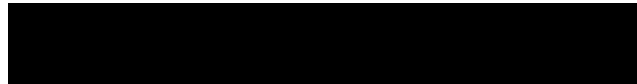
ADAS GENERAL NOTES

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Author	Sarah Lee BSc, MSc, M.I. Soil Sci	Technical reviewer	John Grylls MSc, M.I. Soil Sci, C Sci
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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK ADAS Ltd.



EXECUTIVE SUMMARY

ADAS have been instructed by Ashflame Properties Limited and Chicheley Farms Limited to undertake an Agricultural Land Classification survey of 219 ha at Chicheley Road, Newport Pagnell, MK16 9JB (herein referred to as 'the site').

The survey has identified land with non-calcareous or calcareous medium clay loam, heavy clay loam and clay textured topsoils over slowly permeable non-calcareous or calcareous clay subsoils. These soils form agricultural land of Grade 2 (8.1 ha, 4 %), Subgrade 3a (73.1 ha, 33 %) and Subgrade 3b (127.0 ha, 58 %) quality. There were 11 ha of non-agricultural land within the survey area that were not surveyed.

The principal limitation to the agricultural use of the land is soil wetness.

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1 INTRODUCTION

ADAS have been instructed by Ashflame Properties Limited and Chicheley Farms Limited to undertake an Agricultural Land Classification (ALC) survey. This report provides information on the soils and agricultural land quality of 219 ha of land at Chicheley Road, Newport Pagnell, MK16 9JB. The report is based on a survey of the land undertaken in August and September 2025.

1.1 Site Environment

The site is located south of Chicheley Road and east of the A509 and north of North Crawley Road. The site slopes from 95 m in the north to 58 m in the south.

Along Chicheley Brook, areas of the site are in Flood Zone 3 meaning the annual probability of river or sea flooding is 1% or more. The rest of the site is in Flood Zone 1 meaning the annual probability of river or sea flooding is less than 0.1%.

1.2 Agricultural Use

The site is under use in an arable rotation and at the time of the survey it was stubble following a cereal crop.

1.3 Published Information

1.3.1 Geology

1:50,000 scale BGS information¹ records two bedrock geological units for the site. Peterborough Member underlies the majority of the site. Stewartby Member underlies the centre of the site. Both geological units represent mudstone geological units and are sedimentary bedrocks formed between 166.1 and 163.5 million years ago during the Jurassic period.

Four superficial deposits are recorded for the site. In large sections in the northwest and southeast of the site Oadby Member, a sedimentary superficial deposit formed between 480 and 423 thousand years ago during the Quaternary period is present. Along Chicheley Brook, superficial deposits of Alluvium, formed between 11.8 thousand years ago and the present during the Quaternary period, are found. Head, a sedimentary superficial deposit of gravel, sand, silt and clay, formed between 2.588 million years ago and the present during the Quaternary period is found in the south of the site, with a small section present in the north of the site. Small pockets of Mid Pleistocene Glaciofluvial Deposits of sand and gravel, formed between 860 and 116 thousand years ago during the Quaternary period, are found in the centre of the site.

¹ British Geological Survey, 2019. *Geology of Britain viewer*. Online resource: <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

1.3.2 Soils

Three soil associations have been mapped on the 1:250,000 scale National Soils Map (Sheet 6 South East England²) for the site. The mapping records the site as belonging to the following soil associations:

- **Hanslope Association** - Slowly permeable calcareous clayey soils. Some slowly permeable non-calcareous clayey soils. Slight risk of water erosion.
- **Evesham 2 Association** - Slowly permeable calcareous clayey soils. Some slowly permeable seasonally waterlogged non-calcareous clayey and fine loamy or fine silty over clayey soils.
- **Bishampton 2 Association** - Deep fine loamy and fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.

1.3.3 Previous Agricultural Land Classification

The Natural England Regional Agricultural Land Classification Map³ shows the survey area as being provisionally mapped as Grade 3 with an area of Grade 4 in the south of the site.

At the north and south of the proposed development site some detailed Post-1988 Agricultural Land Classification is publicly available for areas of land to the west this site across the A509 road. This showed the land surveyed to be a mix of Grade 2 and Subgrades 3a and 3b quality⁴.



Figure 1 - Post-1988 ALC Mapping

² Soils and their use in South East England (Berkshire, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey, West Sussex) South East England: 1:250,000 scale
<https://www.landis.org.uk/publications/downloads/publicationslist.pdf>

³ Natural England, 2023. Regional Agricultural Land Classification Map. Online resource:
<https://publications.naturalengland.org.uk/publication/144017?category=5954148537204736>

⁴ Natural England, 2016. Agricultural Land Classification detailed Post 1988 ALC survey. Online resource:
<https://publications.naturalengland.org.uk/category/6249382855835648>

2 METHODOLOGY

A detailed soil survey was carried out in August and September 2025. The survey was based on observations at intersects of a 100 m grid, giving a sampling density of at least one observation per hectare. During the survey soils were examined via a combination of auger borings and soil description pits to a maximum depth of 1.2 m. A map showing the location of each observation point is attached to this report as Appendix 1 and a log of the details of each observation point is attached to this report as Appendix 3.

Five soil description pits were dug at this site. The soil pits were assessed following the methodology detailed in The Soil Survey Field Handbook⁵. A soil sample representative of the top 25cm was taken from each soil description pit. These samples were submitted to NRM laboratories for particle size distribution analysis by the pipette methodology and calcium carbonate analysis to confirm site findings. The results of this analysis are given in Section 3 and in Appendix 4.

⁵ Soil Survey Field Handbook, Hodgson, J.M. (1974)

3 SOILS

3.1 Soil Types

Three soil types are found across the survey area. Soil types were distinguished by topsoil texture and whether or not soils were calcareous.

3.1.1 Soil Type 1 – Non-calcareous heavy textured topsoil

This soil type was found most abundantly at the site, representing most of the east of the site. This soil type consisted of soils with non-calcareous heavy clay loam and clay topsoil textures over non-calcareous or calcareous clay subsoil. Two soil profile pits were dug in this soil type.

Example profiles are described below from the pits at observation points 153 (Pit 1) and 160 (Pit 3).

Pit 1 @ 489800, 244300

0-24 cm	Brown (10YR 4/3) heavy clay loam; 1% subrounded hardstones; non-calcareous; unmottled; strongly developed very coarse angular blocky breaking to coarse subangular blocky structure; extremely firm; dry; non-plastic; common fine fibrous roots; <0.5% biopores >0.5mm diameter; clear smooth boundary to:
24-120 cm	Light yellowish brown (10YR 6/4) clay; 1% subrounded hardstones; slightly calcareous; common distinct fine 10YR 6/8 mottles; massive structure; firm; moist; moderately plastic; no visible roots; <0.5% biopores >0.5mm diameter.

Pit 3 @ 490500, 244300

0-30 cm	Brown (10YR 4/3) clay; 1% small subrounded hardstones; non-calcareous; unmottled; moderately developed medium subangular blocky breaking to fine granular structure; firm; moist; slightly plastic; no visible roots; <0.5% biopores >0.5mm diameter; clear smooth boundary to:
30-120 cm	Light yellowish brown (10YR 6/4) clay; 1% medium subrounded hardstones; non-calcareous; common distinct fine mottles; massive structure; firm; moist; moderately plastic; no visible roots; <0.5% biopores >0.5mm diameter; clear smooth boundary to:

These soil profiles are in a location with 119 Field Capacity Days (FCDs) which with gleying commencing within 40cm of the soil surface and a slowly permeable layer commencing between 35-60cm from the soil surface places the profiles into Wetness Class (WC) III (imperfectly drained). In a location with 119 FCDs, WC III and non-calcareous heavy clay loam or clay top 25cm limits the profiles to Subgrade 3b because of a wetness limitation.



Photograph 1: Pit 1 Soil Profile



Photograph 2: Pit 3 Soil Profile

3.1.2 Soil Type 2 – Calcareous heavy textured topsoil and subsoil

This soil type was found across most of the site, representing most of the northwest of the site. This soil type consisted of soils with calcareous heavy clay loam and clay topsoil textures over calcareous clay subsoil. Two soil profile pits were dug in this soil type.

Example profiles are described below from the pits at observation points 111 (Pit 2) and 200 (Pit 5).

Pit 2 @ 490800, 244700

0-24 cm	Brown (10YR 4/3) clay; 1% small subrounded hardstones; slightly calcareous; unmottled; moderately developed coarse subangular blocky breaking to medium granular structure; firm; slightly moist; slightly plastic; few medium fleshy roots; <0.5% biopores >0.5mm diameter; clear smooth boundary to:
24-50 cm	Light yellowish brown (10YR 6/4) clay; 1% small subrounded hardstones; calcareous; unmottled; massive structure; firm; moist; moderately plastic; no visible roots; <0.5% biopores >0.5mm diameter; clear smooth boundary to:
50-120 cm	Light yellowish brown (10YR 6/4) clay; 3% very small subrounded limestones; calcareous; common distinct fine mottles; massive structure; firm; moist; moderately plastic; no visible roots; <0.5% biopores >0.5mm diameter.

Pit 5 @ 489600, 243900

0-22 cm	Brown (10YR 4/3) clay; 1% small subrounded hardstones; slightly calcareous; unmottled; moderately developed coarse subangular blocky structure; very firm; dry; non-plastic; few fine fibrous roots; <0.5% biopores >0.5mm diameter; clear smooth boundary to:
22-120 cm	Light yellowish brown (10YR 6/4) clay; 1% large hardstones; slightly calcareous; common distinct fine 10YR 6/8 mottles; massive structure; extremely firm; moist; moderately plastic; no visible roots; <0.5% biopores >0.5mm diameter.

These soil profiles are in a location with 119 Field Capacity Days (FCDs) which with gleying commencing within 40cm of the soil surface and a slowly permeable layer commencing between 35-60cm from the soil surface places the profiles into Wetness Class (WC) III (imperfectly drained). In a location with 119 FCDs, WC III, calcareous heavy clay loam or clay top 25cm and calcareous clay below 25cm limits the profiles to Subgrade 3a because of a wetness limitation.



Photograph 3: Pit 2 Soil Profile



Photograph 4: Pit 5 Soil Profile

3.1.3 Soil Type 3 – Medium textured topsoil

This soil type was found in the centre and northwest of the site. This soil type consisted of soils with calcareous and non-calcareous medium clay loam and sandy clay loam topsoil textures over mostly clay subsoil texture.

An example profile is described below from the pit at observation point 176 (Pit 4).

Pit 4 @ 489800, 244100

- | | |
|-----------|---|
| 0-30 cm | Brown (10YR 4/3) sandy clay loam; 1% small subrounded hardstones; non-calcareous; unmottled; moderately developed medium subangular blocky breaking to fine granular structure; friable; dry; non-plastic; few medium fleshy roots; <0.5% biopores >0.5mm diameter; clear smooth boundary to: |
| 30-120 cm | Light yellowish brown (10YR 6/4) sandy clay; 1% medium subrounded hardstones; non-calcareous; many distinct fine 10YR 6/8 mottles; massive structure; firm; moist; moderately plastic; no visible roots; <0.5% biopores >0.5mm diameter. |

This soil profile is in a location with 119 Field Capacity Days (FCDs) which with gleying commencing within 40cm of the soil surface and a slowly permeable layer commencing between 35-60cm from the soil surface places the profiles into Wetness Class (WC) III (imperfectly drained). In a location with 119 FCDs, WC III and non-calcareous medium clay loam or sandy clay loam top 25cm limits the profiles to Subgrade 3a because of a wetness limitation. In the centre of the site, a small area of this soil type was found with calcareous topsoils, which in a location with 119 FCDs, WC III and calcareous medium clay loam or sandy clay loam top 25cm limits the profiles to Grade 2 because of a wetness limitation.



Photograph 5: Pit 4 Soil Profile

3.2 Laboratory Analysis

A sample representative of the top 25 cm of the soil profile was taken from each pit. The soil was submitted to NRM Laboratories for particle size distribution (PSD) analysis by the pipette methodology and calcium carbonate (CaCO_3) analysis. The laboratory report is given in Appendix 4, the laboratory textures are given in the table below.

Table 3.2: Soil analysis results

Observation	PSD Analysis	CaCO_3 Analysis (%)
Pit 1	Heavy clay loam	<1
Pit 2	Clay	3.0
Pit 3	Clay	<1
Pit 4	Sandy clay loam	<1
Pit 5	Clay	1.7

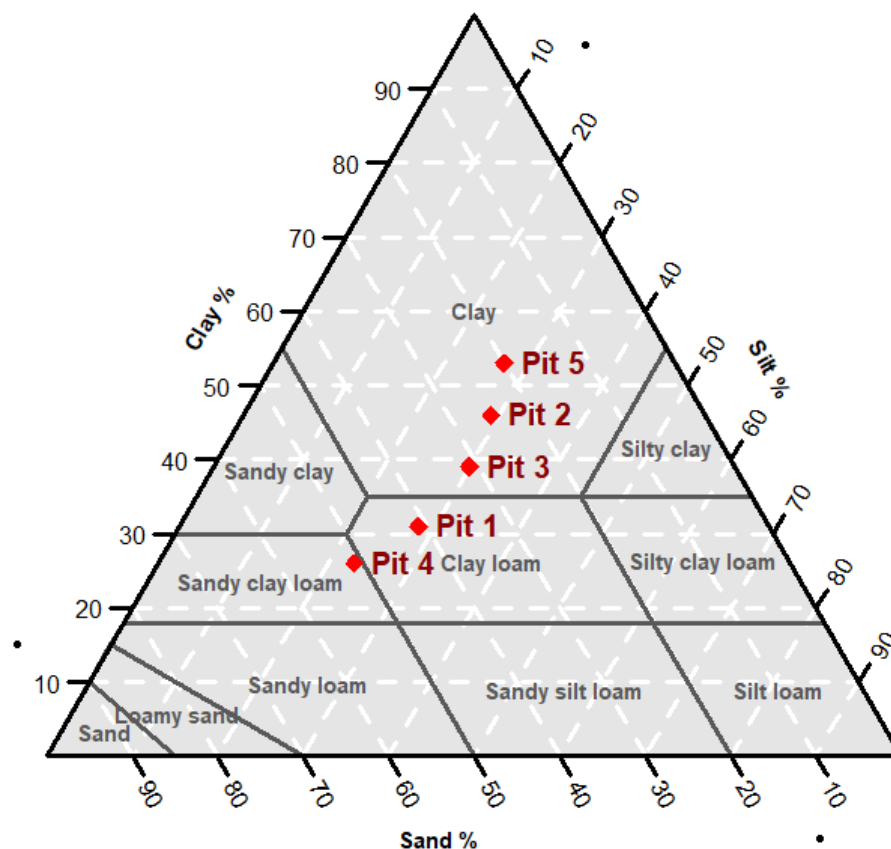


Figure 2 – Soil texture results as assessed from texture triangle using Soil Survey of England and Wales texture class intervals

4 AGRICULTURAL LAND CLASSIFICATION

The Agricultural Land Classification (ALC) system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use for food production. The limitations can operate in one or more of four principal ways; they may affect the range of crops which can be grown, the level of crop yield, the consistency of crop yield, and the cost of obtaining a crop.

The classification system gives considerable weight to flexibility of cropping, whether actual or potential, however the ability of some land to produce consistently high yields of a narrower range of crops is also taken into account.

The Agricultural Land Classification (ALC) system classifies land into five grades numbered 1 to 5, with grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced by the then Ministry of Agriculture, Fisheries and Food (MAFF) in the 1960s and revised in 1988. A description of the grades used in the ALC system is attached to this report as Appendix 5.

4.1 Climate

The agricultural climate is an important factor in assessing the agricultural quality of land, and the agricultural climate of this site has been calculated using the Climatological Data for Agricultural Land Classification⁶. Due to the differences in elevation at this site, climate data from two representative points has been taken. The relevant site data for elevations of 80 m AOD and 60 m AOD are given below.

Table 4.1: Agro-climatic variables

	SP 903 448	SP 901 439
Altitude(m)	80	60
Average Annual Rainfall (AAR)	605 mm	603 mm
January-June Accumulated Temperature (AT0)	1396 day °C	1419 day °C
Field Capacity Days (FCD)	119	119
Field Capacity Period	Early December – Early April	Early December – Early April
Moisture Deficit Wheat (MDW)	112 mm	114 mm
Moisture Deficit Potatoes (MWP)	105 mm	108 mm
Climate (upper grade limit)	1	1

The site has no climate limitation.

⁶ Meteorological Office, (1989). *Climatological Data for Agricultural Land Classification*.

4.2 Results

The results of the soil survey described in Section 3 were used in conjunction with the agro-climatic data above to classify the land according to the revised guidelines for Agricultural Land Classification issued in 1988 by the Ministry of Agriculture, Fisheries and Food (now Defra)⁷.

This report has identified agricultural land of Grade 2, Subgrade 3a and Subgrade 3b quality. The principal limitation to agricultural use of the land is soil wetness.

Grade 1

No land of this quality has been mapped.

Grade 2

There are 8.1 ha of Grade 2 land within the survey area. This land is formed of calcareous medium clay loam or sandy clay topsoils over mainly calcareous clay subsoils. These soils had gleying commencing within 40cm of the soil surface, in an area with 119 FCDs, this places the profiles into WC II or III (moderately well drained or imperfectly drained) depending on whether a slowly permeable layer was present. In a location with 119 FCDs, WC II and medium clay loam top 25cm or WC III with calcareous medium clay loam top 25 cm and calcareous subsoil limits the profiles to Grade 2.

The principal limitation to the agricultural use of the land is soil wetness.

Subgrade 3a

There are 73.1 ha of Subgrade 3a land within the survey area. This land is formed of medium clay loam or calcareous heavy clay loam topsoils over clay (calcareous clay when topsoil calcareous heavy clay loam) subsoil. As the site has 119 FCDs, gleying commencing within 40cm of the soil surface and slowly permeable layers commencing within 35-60cm of the soil surface this places the profiles into WC III (imperfectly drained). In a location with 119 FCDs, WC III and non-calcareous medium clay loam or calcareous heavy clay loam or clay top 25cm (with calcareous clay below) limits the profiles to Subgrade 3a.

The principal limitation to the agricultural use of the land is soil wetness.

Subgrade 3b

There are 127.0 ha of Subgrade 3b land within the survey area. This land is formed of heavy clay loam to clay textured topsoil over clay subsoil. As the site has 119 FCDs, gleying commencing within 40cm of the soil surface and slowly permeable layers commencing within 35-60cm of the soil surface, this places the profiles into WC III (imperfectly drained). In a location with 119 FCDs, WC III and non-calcareous heavy clay loam or clay top 25cm limits the profiles to Subgrade 3b.

The principal limitation to the agricultural use of the land is soil wetness.

Grade 4

No land of this quality has been mapped.

⁷ MAFF, (1988). *Agricultural Land Classification for England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land*.

Grade 5

No land of this quality has been mapped.

Non-agricultural

There are 11.1 ha of non-agricultural land within the survey area. Most of this land is formed of woodland or farm buildings.

Urban

No land of this description has been mapped.

Not Surveyed

All land was surveyed.

4.3 Summary of grade areas

Where isolated one or two observation locations were surrounded by land of a different grade these observation locations were mapped in with the grade of the surrounding land. These were observation locations 3, 10, 73, 119 & 121, graded as Subgrade 3b, which were mapped in with surrounding Subgrade 3a land and observation locations 135, 178 & 179, graded as Subgrade 3a, which were mapped in with surrounding Subgrade 3b land. The boundaries between the different grades of land are shown in Appendix 2. The area occupied by each grade is shown below.

Table 4.3: Grade areas

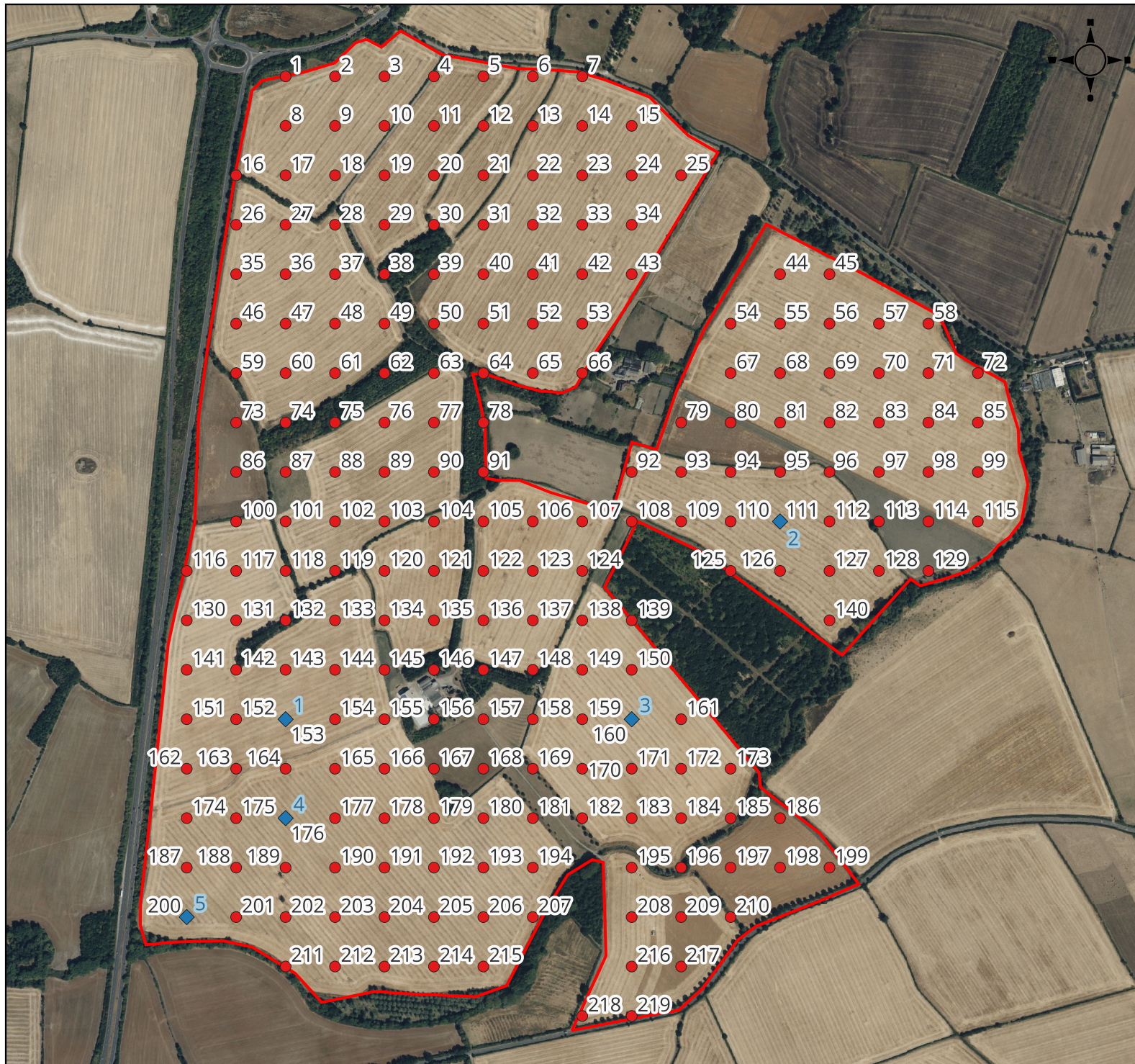
Grade / subgrade	Area (ha)	Area (%)
Grade 1	-	-
Grade 2	8.06	4 %
Subgrade 3a	73.14	33 %
Subgrade 3b	127.02	58 %
Grade 4	-	-
Grade 5	-	-
Non-agricultural	11.09	5 %
Urban	-	-
Not Surveyed	-	-
Total	219.31	100 %

5 CONCLUSION

The survey has identified soil with non-calcareous or calcareous medium clay loam, heavy clay loam and clay textured topsoils over slowly permeable non-calcareous or calcareous clay subsoils. These soils form agricultural land of Grade 2 (8.1 ha, 4 %), Subgrade 3a (73.1 ha, 33 %) and Subgrade 3b (127.0 ha, 58 %) quality. There were 11 ha of non-agricultural land within the survey area that were not surveyed.

The principal limitation to the agricultural use of the land is soil wetness.

APPENDIX 1 – OBSERVATION LOCATION MAP



Title

Appendix 1 - Observation Location Map

Project

MK Eastern Strategic City Extension

Key:

- Auger Boring
- ◆ Profile Pit

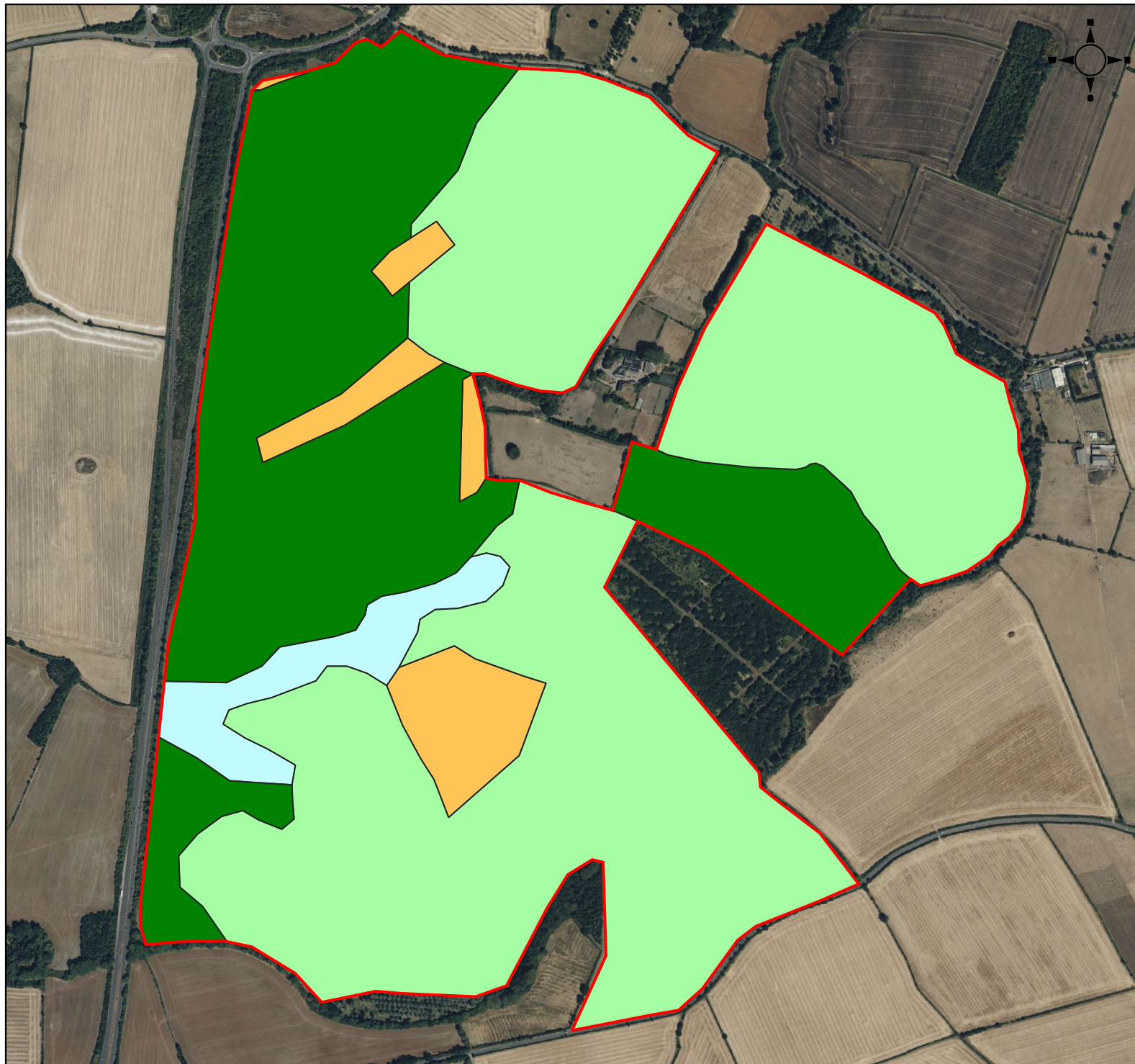
Date Drawn: 10 / 10 / 2025

Drawn by: Sarah Lee

Scale: 1 : 11000 at A4

© Imagery taken from Microsoft Virtual Earth (Bing). October 2025

APPENDIX 2 – AGRICULTURAL LAND CLASSIFICATION MAP



Title

Appendix 2 - Agricultural Land Classification Grades Map

Project

MK Eastern Strategic City
Extension

Key:

ALC Grades

-  1
-  2
-  3a
-  3b
-  4
-  5
-  Non agric
-  Urban

Date Drawn: 20 / 10 / 2025

Drawn by: Sarah Lee

Scale: 1 : 11000 at A4

© Imagery taken from Microsoft Virtual Earth (Bing). October 2025

APPENDIX 3 – ALC SURVEY DETAILS

Key to auger records:

Texture		Principal limitation(s) to Agriculture		Stone lithology	
C	clay	CL	climate	1	hard rocks or stones
ZC	silty clay	DE	depth	2	soft, medium or coarse-grained sandstones
SC	sandy clay	DR	droughtiness	3	soft 'weathered' igneous or metamorphic rocks or stones
ZCL	clay loam (H - heavy, M - medium)	ER	erosion	4	soft oolitic or dolomitic limestones
SCL	silty clay loam (H - heavy, M - medium)	FL	flooding	5	soft fine-grained sandstones
SZL	sandy silt loam (F - fine, M - medium, C - coarse)	GR	gradient	6	soft, argillaceous or silty rocks or stones
ZL	silty loam	MR	microrelief	7	chalk or chalk stones
SL	sandy loam (F - fine, M - medium, C - coarse)	ST	stoniness	8	gravel with non-porous stones
LS	sand (F - fine, M - medium, C - coarse)	TX	texture	9	gravel with porous stones
S	sand (F - fine, M - medium, C - coarse)	WE	wetness		
Org	organic				
Pty	peaty				
Pt	peat (S - sandy, L - loamy, H - humified, SF - semi-fibrous, F – fibrous)				
R	bedrock				

Droughtiness Calculation		CaCO ₃		Other abbreviations	
MDW	moisture deficit wheat [mm]	non	non-calcareous	SPL	slowly permeable layer
MDP	moisture deficit potatoes [mm]	v sl ca	very slightly calcareous	FMCs	ferri-manganiferous concretions
MBW	moisture balance wheat [mm]	sl ca	slightly calcareous		
MBP	moisture balance potatoes [mm]	ca	calcareous		
Grade W	droughtiness grade for wheat	v ca	very calcareous		
Grade P	droughtiness grade for potatoes				

Soil Profile											Agricultural Land Classification							
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'	Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)			
1	Unsurveyed, Non-agricultural land																	
Latitude:													Droughtiness Calculation					
Longitude:																		
2	0 - 34	C	10yr42 (dark greyish brown)	Few	None	No	-	calc	2	7	2-3°	III	3a	2	3a	WE		
Latitude: 52.1014533	34 - 100	C	10yr53 (brown)	Very many	Many	Yes	Yes	calc	2	7	Droughtiness Calculation							
Longitude: -0.6889067											MDW	MDP	MBW	MBP	Grade W	Grade P		
											114	108	13.0	-4.1	2	2		
3	0 - 30	C	10yr42 (dark greyish brown)	None	Few	No	-	v sl calc	2	1	2-3°	III	3b	2	3b	WE		
Latitude: 52.1014117	30 - 40	C	25y53 (light olive brown)	Very many	Many	Yes	Yes	non	3	1	Droughtiness Calculation							
Longitude: -0.6874033											MDW	MDP	MBW	MBP	Grade W	Grade P		
											114	108	9.0	-7.4	2	2		
4	0 - 30	HCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE		
Latitude: 52.10136487	30 - 65	C	10yr53 (brown)	Common	Common	Yes	Yes	sl calc	2	7	Droughtiness Calculation							
Longitude: -0.685962802											MDW	MDP	MBW	MBP	Grade W	Grade P		
											114	108	14.6	-2.5	2	2		
5	0 - 27	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	sl calc	1	1	0-1°	III	3a	2	3a	WE		
Latitude: 52.10140795	27 - 65	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	1	1	Droughtiness Calculation							
Longitude: -0.684535783											MDW	MDP	MBW	MBP	Grade W	Grade P		
											114	108	12.3	-4.5	2	2		
6	0 - 29	C	10yr42 (dark greyish brown)	Few	None	No	-	non	2		2-3°	III	3b	2	3b	WE		
Latitude: 52.1013917	29 - 100	C	25y53 (light olive brown)	Very many	Many	Yes	Yes	non	0		Droughtiness Calculation							
Longitude: -0.6831067											MDW	MDP	MBW	MBP	Grade W	Grade P		
											114	108	10.7	-6.3	2	2		
7	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE		
Latitude: 52.10137862	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation							
Longitude: -0.681649474											MDW	MDP	MBW	MBP	Grade W	Grade P		
											114	108	9.7	-6.9	2	2		

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
8	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	calc	3	7	2-3°	III	3a	2	3a	WE
Latitude: 52.1005533	30 - 100	C	25y53 (light olive brown)	Very many	Many	Yes	Yes	calc	7	7	Droughtiness Calculation					
Longitude: -0.690385											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.0	-6.5	2	2
9	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	calc	2	7	2-3°	III	3a	2	3a	WE
Latitude: 52.1005667	30 - 100	C	75yr53 (brown)	Very many	Many	Yes	Yes	v calc	10	7	Droughtiness Calculation					
Longitude: -0.6889867											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.0	-6.6	2	2
10	0 - 32	C	10yr42 (dark greyish brown)	Few	None	No	-	v sl calc	2	7	2-3°	III	3b	2	3b	WE
Latitude: 52.1005417	32 - 100	C	25y53 (light olive brown)	Very many	Many	Yes	Yes	calc	3	7	Droughtiness Calculation					
Longitude: -0.6874283											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.2	-5.0	2	2
11	0 - 30	HCL	10yr42 (dark greyish brown)	Few	None	No	-	sl calc	1	1	0-1°	III	3a	2	3a	WE
Latitude: 52.10052739	30 - 65	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	1	1	Droughtiness Calculation					
Longitude: -0.685998173											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.8	-3.0	2	2
12	0 - 28	C	10yr42 (dark greyish brown)	Few	None	No	-	non	3	1	2-3°	III	3b	2	3b	WE
Latitude: 52.1004617	28 - 35	C	25y53 (light olive brown)	Very many	Many	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.6845117											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	8.4	-8.2	2	2
13	0 - 30	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	1	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.100485	30 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	1	4	Droughtiness Calculation					
Longitude: -0.683043333											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.1	-2.8	2	2
14	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.10047069	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.681585437											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.7	-6.9	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
15	0 - 25	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.10043368	25 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680151377											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	7.7	-8.9	2	2
16	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
											MDW	MDP	MBW	MBP	Grade W	Grade P
Longitude:																
17	0 - 35	HCL	10yr43 (brown)	None	Few	No	-	calc	3	7	4-7°	III	3a	2	3a	WE
Latitude: 52.09968279	35 - 100	C	25y53 (light olive brown)	Common	Common	Yes	Yes	calc	4	7	Droughtiness Calculation					
Longitude: -0.690440125											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	16.5	-0.8	2	2
18	0 - 34	HCL	10yr43 (brown)	None	None	No	-	calc	2	7	4-7°	III	3a	2	3a	WE
Latitude: 52.09961109	34 - 100	C	25y53 (light olive brown)	Common	Common	Yes	Yes	calc	3	7	Droughtiness Calculation					
Longitude: -0.68895719											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	16.3	-0.9	2	2
19	0 - 28	HCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09959109	28 - 55	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	5	7	Droughtiness Calculation					
Longitude: -0.687516136											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.4	-3.9	2	2
20	0 - 25	HCL	10yr42 (dark greyish brown)	Common	Few	Yes	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09962018	25 - 75	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	2	7	Droughtiness Calculation					
Longitude: -0.686055338											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.2	-5.0	2	2
21	0 - 29	C	10yr42 (dark greyish brown)	Few	None	No	-	non	2	1	2-3°	III	3b	2	3b	WE
Latitude: 52.0995667	29 - 100	C	25y53 (light olive brown)	Very many	Many	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.6846067											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.3	-7.3	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
22	0 - 30	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	1	2-3°	III	3b	2	3b	Wetness
Latitude: 52.099575	30 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	1	1	Droughtiness Calculation					
Longitude: -0.6831											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.3	-3.5	2	2
23	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.09958971	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.681674452											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.7	-6.9	2	2
24	0 - 30	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	2	8	0-1°	III	3b	2	3b	WE
Latitude: 52.09956151	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	3	8	Droughtiness Calculation					
Longitude: -0.680240141											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.1	-4.3	2	2
25	0 - 30	HCL	10yr43 (brown)	None	None	No	-	non	4	1	0-1°	III	3b	2	3b	WE
Latitude: 52.09952986	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	4	1	Droughtiness Calculation					
Longitude: -0.678740367											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.2	-6.0	2	2
26	0 - 30	HCL	10yr42 (dark greyish brown)	Few	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09875764	30 - 45	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	1	7	Droughtiness Calculation					
Longitude: -0.691910181	45 - 70	C	10yr73 (very pale brown)	Common	None	Yes	Yes	calc	5	7	MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.6	-2.7	2	2
27	0 - 28	HCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09877662	28 - 55	C	10yr53 (brown)	Many	None	Yes	Yes	calc	5	7	Droughtiness Calculation					
Longitude: -0.690510822											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.4	-3.9	2	2
28	0 - 28	HCL	10yr42 (dark greyish brown)	None	None	No	-	calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09874821	28 - 75	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	5	7	Droughtiness Calculation					
Longitude: -0.688983304											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.4	-3.9	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
29	0 - 35	HCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.0987796	35 - 70	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.68756626											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	17.1	0.0	2	2
30	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
											MDW	MDP	MBW	MBP	Grade W	Grade P
Longitude:																
31	0 - 30	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	1	1	2-3°	III	3b	2	3b	Wetness
Latitude: 52.098655	30 - 100	C	10yr53 (brown)	Many	Common	Yes	Yes	v sl calc	1	1	Droughtiness Calculation					
Longitude: -0.683166667											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.8	-3.0	2	2
32	0 - 28	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09865167	28 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	3	4	Droughtiness Calculation					
Longitude: -0.683168333											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.8	-4.9	2	2
33	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.09870399	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.681685684											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.7	-6.9	2	2
34	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.09863862	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680137211											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.7	-6.9	2	2
35	0 - 28	HCL	10yr42 (dark greyish brown)	Few	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09786614	28 - 65	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	2	7	Droughtiness Calculation					
Longitude: -0.691925772											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.6	-3.5	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
36	0 - 30	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09786807	30 - 60	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.690459022											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.6	-2.5	2	2
37	0 - 32	HCL	10yr42 (dark greyish brown)	Few	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09782997	32 - 65	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.689028231											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	15.6	-1.5	2	2
38	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
											MDW	MDP	MBW	MBP	Grade W	Grade P
Longitude:																
39	0 - 30	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09781833	30 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	7	4	Droughtiness Calculation					
Longitude: -0.686043333											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.9	-5.4	2	2
40	0 - 28	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	1	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09778	28 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	1	4	Droughtiness Calculation					
Longitude: -0.684605											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.1	-3.8	2	2
41	0 - 32	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	1	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09780167	32 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	1	4	Droughtiness Calculation					
Longitude: -0.68327											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	15.1	-1.8	2	2
42	0 - 25	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.0976897	25 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.681700604											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	7.7	-8.9	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
43	0 - 29	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.09864721	29 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680139055											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.3	-7.3	2	2
44	0 - 31	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	0		2-3°	III	3b	2	3b	Wetness
Latitude: 52.0977	31 - 100	MZCL	10yr63 (pale brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.675816667											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	8.6	-2.4	2	2
45	0 - 27	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	0	1	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09767833	27 - 100	C	75yr53 (brown)	Many	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.674431667											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.0	-1.5	2	2
46	0 - 25	HCL	10yr42 (dark greyish brown)	Few	None	No	-	sl calc	2	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09698352	25 - 60	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	2	7	Droughtiness Calculation					
Longitude: -0.691960221											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.0	-5.2	2	2
47	0 - 35	HCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09695633	35 - 65	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.690514343											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	17.1	0.0	2	2
48	0 - 30	HCL	10yr42 (dark greyish brown)	None	Few	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.0969453	30 - 65	HCL	10yr53 (brown)	Many	Few	Yes	Yes	calc	5	7	Droughtiness Calculation					
Longitude: -0.689043738											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.6	-6.6	2	2
49	0 - 32	HCL	10yr42 (dark greyish brown)	None	Few	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09695276	32 - 55	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.687600123											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	15.6	-1.5	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
50	0 - 23	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.096915	23 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	3	4	Droughtiness Calculation					
Longitude: -0.686106667											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.3	-7.4	2	2
51	0 - 29	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09691333	29 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	3	4	Droughtiness Calculation					
Longitude: -0.684688333											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.3	-4.4	2	2
52	0 - 29	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09778	29 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	3	4	Droughtiness Calculation					
Longitude: -0.684605											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.3	-4.4	2	2
53	0 - 30	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	4-7°	III	3b	2	3b	Wetness
Latitude: 52.09678833	30 - 100	C	10yr63 (pale brown)	Very many	Common	Yes	Yes	v sl calc	3	4	Droughtiness Calculation					
Longitude: -0.681786667											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.8	-3.9	2	2
54	0 - 23	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09681714	23 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.677348128											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	8.8	-8.2	2	2
55	0 - 21	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09685049	21 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.675934233											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	8.1	-8.9	2	2
56	0 - 29	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	7	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09678167	29 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	non	2	7	Droughtiness Calculation					
Longitude: -0.674406667											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.1	-6.1	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
57	0 - 29	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	2	7	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09671667	29 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	3	7	Droughtiness Calculation					
Longitude: -0.672915											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.8	-0.3	2	2
58	0 - 26	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	1	1	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09673167	26 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.671546667											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.1	-2.5	2	2
59	0 - 30	HCL	10yr42 (dark greyish brown)	None	Few	No	-	sl calc	1	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09608109	30 - 75	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	1	1	Droughtiness Calculation					
Longitude: -0.691916719											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.8	-3.0	2	2
60	0 - 28	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	sl calc	1	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09608293	28 - 80	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	1	1	Droughtiness Calculation					
Longitude: -0.690534879											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.8	-4.0	2	2
61	0 - 25	HCL	10yr42 (dark greyish brown)	Common	Few	Yes	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09604215	25 - 70	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.689034853											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.2	-5.0	2	2
62	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
Longitude:											MDW	MDP	MBW	MBP	Grade W	Grade P
63	0 - 30	HCL	10yr43 (brown)	None	None	No	-	calc	2	7	4-7°	III	3a	2	3a	WE
Latitude: 52.09602723	30 - 100	C	25y53 (light olive brown)	Many	Many	Yes	Yes	calc	5	7	Droughtiness Calculation					
Longitude: -0.686187488											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.2	-3.1	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
64	0 - 25	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.0961	25 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	5	4	Droughtiness Calculation					
Longitude: -0.6847											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.3	-7.2	2	2
65	0 - 33	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09678833	33 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	v sl calc	3	4	Droughtiness Calculation					
Longitude: -0.681786667											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.3	-2.4	2	2
66	0 - 33	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	2	4	4-7°	III	3b	2	3b	Wetness
Latitude: 52.09600667	33 - 100	C	10yr63 (pale brown)	Very many	Many	Yes	Yes	v sl calc	2	4	Droughtiness Calculation					
Longitude: -0.681878333											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.7	-2.1	2	2
67	0 - 28	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09591932	28 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.677389471											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.8	-6.2	2	2
68	0 - 31	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.095934	31 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.675941426											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.9	-5.1	2	2
69	0 - 28	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09590579	28 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.674456736											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.8	-6.2	2	2
70	0 - 29	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09589174	29 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.672994749											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.1	-5.9	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
71	0 - 32	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09581948	32 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.671533633											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.3	-1.7	2	2
72	0 - 32	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	3	1	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09583	32 - 100	C	75yr53 (brown)	Many	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.670115											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.0	-0.5	2	2
73	0 - 35	HCL	10yr42 (dark greyish brown)	Few	Few	No	-	non	1	1	0-1°	III	3b	2	3b	WE
Latitude: 52.09517903	35 - 70	C	10yr53 (brown)	Common	Few	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.691999616											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	16.3	-0.5	2	2
74	0 - 20	HCL	10yr42 (dark greyish brown)	Common	Few	Yes	-	sl calc	1	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09517702	20 - 75	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	1	1	Droughtiness Calculation					
Longitude: -0.690530604											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	8.8	-7.9	2	2
75	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
Longitude:											MDW	MDP	MBW	MBP	Grade W	Grade P
76	0 - 29	HCL	10yr43 (brown)	None	None	No	-	v calc	2	7	4-7°	III	3a	2	3a	WE
Latitude: 52.09515014	29 - 100	C	25y53 (light olive brown)	Many	Many	Yes	Yes	v calc	4	7	Droughtiness Calculation					
Longitude: -0.687628741											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.8	-3.5	2	2
77	0 - 33	HCL	10yr43 (brown)	None	Few	No	-	calc	2	7	4-7°	III	3a	2	3a	WE
Latitude: 52.09513654	33 - 100	C	25y53 (light olive brown)	Many	Many	Yes	Yes	v calc	10	7	Droughtiness Calculation					
Longitude: -0.686128281											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	15.5	-2.1	2	2

[illegible]

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Total	Stones (%) Litho'	Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
85	0 - 30	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	2	7	2-3°	III	3b	2	3b	Wetness
Latitude: 52.09495333	30 - 100	C	10yr63 (pale brown)	Many	Common	Yes	Yes	non	2	7	Droughtiness Calculation					
Longitude: -0.67015											MDW	MDP	MBW	MBP	Grade W	Grade P
86	0 - 30	HCL	10yr42 (dark greyish brown)	Few	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09429214	30 - 80	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.692076562											MDW	MDP	MBW	MBP	Grade W	Grade P
87	0 - 25	HCL	10yr43 (brown)	None	None	No	-	sl calc	2	1	4-7°	III	3a	2	3a	WE
Latitude: 52.09430045	25 - 100	C	25y53 (light olive brown)	Common	Common	Yes	Yes	v calc	1	1	Droughtiness Calculation					
Longitude: -0.690554547											MDW	MDP	MBW	MBP	Grade W	Grade P
88	0 - 29	HCL	10yr43 (brown)	None	Few	No	-	v calc	2	7	4-7°	III	3a	2	3a	WE
Latitude: 52.09422755	29 - 100	C	25y53 (light olive brown)	Many	Many	Yes	Yes	v calc	3	7	Droughtiness Calculation					
Longitude: -0.689146476											MDW	MDP	MBW	MBP	Grade W	Grade P
89	Unsurveyed															
Latitude:											Droughtiness Calculation					
Longitude:											MDW	MDP	MBW	MBP	Grade W	Grade P
90	0 - 31	HCL	10yr43 (brown)	None	Few	No	-	calc	2	7	4-7°	III	3a	2	3a	WE
Latitude: 52.0942723	31 - 100	C	25y53 (light olive brown)	Many	Many	Yes	Yes	calc	3	7	Droughtiness Calculation					
Longitude: -0.686126857											MDW	MDP	MBW	MBP	Grade W	Grade P
91	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
Longitude:											MDW	MDP	MBW	MBP	Grade W	Grade P

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
92	0 - 27	C	10yr43 (brown)	None	None	No	-	sl calc	1		2-3°	III	3a	2	3a	WE
Latitude: 52.09414826	27 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	0		Droughtiness Calculation					
Longitude: -0.680358578											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.4	-6.6	2	2
93	0 - 32	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09417785	32 - 100	C	25y64 (light yellowish brown)	Few	Few	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.678926026											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.4	-6.1	2	2
94	0 - 39	C	10yr43 (brown)	None	None	No	-	sl calc	1		2-3°	III	3a	2	3a	WE
Latitude: 52.0941494	39 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	0		Droughtiness Calculation					
Longitude: -0.677465692											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	15.0	-2.0	2	2
95	0 - 29	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09412022	29 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.675982218											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.3	-7.3	2	2
96	0 - 40	C	10yr43 (brown)	None	None	No	-	sl calc	1		2-3°	III	3a	2	3a	WE
Latitude: 52.09410145	40 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	0		Droughtiness Calculation					
Longitude: -0.674632734											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	15.4	-1.6	2	2
97	0 - 34	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09407705	34 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.673072653											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.1	-3.9	2	2
98	0 - 27	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09406399	27 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.671615851											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.4	-3.6	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
99	0 - 31	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09404485	31 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.670163265											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.9	-2.1	2	2
100	0 - 30	HCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.09349284	30 - 80	C	10yr53 (brown)	Common	None	Yes	Yes	sl calc	1	7	Droughtiness Calculation					
Longitude: -0.692030126											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.7	-2.4	2	2
101	0 - 30	HCL	10yr43 (brown)	None	None	No	-	sl calc	2	1	4-7°	III	3a	2	3a	WE
Latitude: 52.09336529	30 - 100	C	25y53 (light olive brown)	Common	Common	Yes	Yes	sl calc	1	1	Droughtiness Calculation					
Longitude: -0.690571329											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.3	-3.5	2	2
102	0 - 29	HCL	10yr43 (brown)	None	None	No	-	sl calc	2	1	4-7°	III	3a	2	3a	WE
Latitude: 52.09334012	29 - 100	C	25y53 (light olive brown)	Many	Many	Yes	Yes	calc	1	1	Droughtiness Calculation					
Longitude: -0.689141026											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	12.8	-4.0	2	2
103	0 - 26	MCL	10yr43 (brown)	None	None	No	-	non	2	1	4-7°	III	3a	2	3a	WE
Latitude: 52.09331925	26 - 100	C	25y53 (light olive brown)	Common	Many	Yes	Yes	sl calc	1	1	Droughtiness Calculation					
Longitude: -0.687698085											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.4	-5.4	2	2
104	0 - 27	HCL	25y53 (light olive brown)	Few	Few	No	-	sl calc	5	7	4-7°	III	3a	2	3a	WE
Latitude: 52.09337333	27 - 70	C	25y42 (dark greyish brown)	Common	Few	Yes	Yes	v calc	7	7	Droughtiness Calculation					
Longitude: -0.68619											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.9	-5.5	2	2
105	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	4-7°	III	3a	2	3a	WE
Latitude: 52.09331049	30 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.684746336											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.7	-6.9	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
106	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.09327231	30 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.683305236											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.7	-6.9	2	2
107	0 - 29	HCL	10yr43 (brown)	None	None	No	-	non	3	7	2-3°	III	3b	2	3b	WE
Latitude: 52.09325085	29 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	2	7	Droughtiness Calculation					
Longitude: -0.681854831											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	13.7	-3.4	2	2
108	0 - 15	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	3a	3b	WE
Latitude: 52.09344938	15 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680242153											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	3.8	-12.8	3a	3a
109	0 - 29	C	10yr43 (brown)	None	None	No	-	sl calc	1		2-3°	III	3a	2	3a	WE
Latitude: 52.09325956	29 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	0		Droughtiness Calculation					
Longitude: -0.678967171											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.1	-5.9	2	2
110	0 - 28	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09322961	28 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.677470174											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	8.9	-7.7	2	2
111	0 - 27	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	2-3°	III	3a	2	3a	WE
Latitude: 52.09322273	27 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.676006023											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	8.5	-8.1	2	2
112	0 - 29	C	10yr43 (brown)	None	None	No	-	sl calc	1		2-3°	III	3a	2	3a	WE
Latitude: 52.09318416	29 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	0		Droughtiness Calculation					
Longitude: -0.674567324											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.1	-2.9	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
113	0 - 36	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09321288	36 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.673129354											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.8	-0.2	2	2
114	0 - 32	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09318948	32 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.671642157											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.3	-1.7	2	2
115	0 - 31	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09313917	31 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.670208631											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.9	-2.1	2	2
116	0 - 20	HCL	10yr42 (dark greyish brown)	Few	None	No	-	sl calc	1	7	0-1°	III	3a	3a	3a	WE
Latitude: 52.09247557	20 - 70	C	10yr53 (brown)	Many	Few	Yes	Yes	calc	1	7	Droughtiness Calculation					
Longitude: -0.693486566											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.8	-7.3	2	2
117	0 - 30	MCL	10yr42 (dark greyish brown)	None	None	No	-	non	1	7	4-7°	III	3a	3a	3a	WE
Latitude: 52.0924943	30 - 55	C	10yr53 (brown)	Common	Few	Yes	Yes	sl calc	1	7	Droughtiness Calculation					
Longitude: -0.692111095	55 - 80	C	10y51 (greenish grey)	Many	Few	Yes	Yes	sl calc	1	7	MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.7	-2.4	2	2
118	0 - 35	MCL	10yr42 (dark greyish brown)	None	None	No	-	non	1	1	0-1°	III	3a	3a	3a	WE
Latitude: 52.0925034	35 - 80	C	10yr53 (brown)	Many	Few	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.690640742											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	18.3	2.5	2	2
119	0 - 30	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	1	1	0-1°	III	3b	3a	3b	WE
Latitude: 52.09249179	30 - 70	C	10yr53 (brown)	Many	Few	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.689213555											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.8	0.0	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
120	0 - 30	MCL	10yr31 (very dark grey)	None	Few	No	-	non	2	1	2-3°	III	3a	2	3a	WE
Latitude: 52.09244247	30 - 100	C	10yr62 (light bronwish grey)	Common	Common	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.687708456											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.3	-0.5	2	2
121	0 - 20	HCL	10yr42 (dark greyish brown)	None	None	No	-	v sl calc	2	7	4-7°	III	3b	3a	3b	WE
Latitude: 52.09240333	20 - 44	HCL	10yr53 (brown)	Common	Common	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.686231667	44 - 80	C	10yr52 (greyish brown)	Many	Common	Yes	Yes	sl calc	1	7	MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	7.2	-9.9	2	2
122	0 - 25	MCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	0-1°	III	2	2	2	WE
Latitude: 52.09238278	25 - 100	C	25y53 (light olive brown)	Common	Common	Yes	Yes	calc	1	1	Droughtiness Calculation					
Longitude: -0.684836442											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.9	-5.9	2	2
123	0 - 31	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	2-3°	III	3b	2	3b	WE
Latitude: 52.09238014	31 - 60	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.683315294	60 - 100	C	10y62 (light greyish olive)	Common	Few	Yes	Yes	non	2	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.0	-6.5	2	2
124	0 - 43	C	10yr43 (brown)	None	None	No	-	non	3		2-3°	III	3b	2	3b	WE
Latitude: 52.09244362	43 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.681923048											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.8	-2.2	2	2
125	0 - 31	C	10yr43 (brown)	None	None	No	-	sl calc	1		2-3°	III	3a	2	3a	WE
Latitude: 52.0923808	31 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	0		Droughtiness Calculation					
Longitude: -0.677416146											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.9	-2.1	2	2
126	0 - 31	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09233911	31 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.676004346											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.0	-3.5	2	2

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Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
127	0 - 33	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	2-3°	III	3a	2	3a	WE
Latitude: 52.09229465	33 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.674524605											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.8	-2.7	2	2
128	0 - 28	C	10yr42 (dark greyish brown)	None	None	No	-	sl calc	2	1	0-1°	III	3a	2	3a	WE
Latitude: 52.09231451	28 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	sl calc	2	1	Droughtiness Calculation					
Longitude: -0.673133461											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	10.9	-4.7	2	2
129	0 - 30	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09230146	30 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.671636275											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.5	-2.5	2	2
130	0 - 30	MCL	10yr42 (dark greyish brown)	None	None	No	-	v sl calc	1	1	0-1°	III	3a	3a	3a	WE
Latitude: 52.0916057	30 - 70	C	10yr53 (brown)	Many	Few	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.6935817											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.8	0.0	2	2
131	0 - 25	MCL	10yr42 (dark greyish brown)	None	None	No	-	non	1	1	0-1°	III	3a	3a	3a	WE
Latitude: 52.09159321	25 - 75	C	10yr53 (brown)	Many	Few	Yes	Yes	sl calc	1	1	Droughtiness Calculation					
Longitude: -0.692161387											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.3	-2.5	2	2
132	0 - 35	MCL	10yr42 (dark greyish brown)	None	None	No	-	v sl calc	1	1	0-1°	III	3a	3a	3a	WE
Latitude: 52.09158713	35 - 65	C	10yr53 (brown)	Many	Few	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.690731183	65 - 80	C	5y52 (olive grey)	Many	Few	Yes	Yes	non	0		MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	18.6	2.5	2	2
133	0 - 32	MCL	10yr42 (dark greyish brown)	None	None	No	-	non	1	1	0-1°	III	3a	3a	3a	WE
Latitude: 52.09154732	32 - 65	C	10yr53 (brown)	Many	Few	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.68921959	65 - 80	C	5y52 (olive grey)	Many	Few	Yes	Yes	non	0		MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	17.1	1.1	2	2

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Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
134	0 - 33	MCL	10yr31 (very dark grey)	None	None	No	-	sl calc	2	1	2-3°	III	2	2	2	WE
Latitude: 52.09152774	33 - 63	HCL	10yr46 (dark yellowish brown)	Common	Common	Yes	Yes	non	1	1	Droughtiness Calculation					
Longitude: -0.687708249	63 - 100	C	25y53 (light olive brown)	Many	Many	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.0	-2.0	2	2
135	0 - 24	HCL	25y53 (light olive brown)	Few	Few	No	-	sl calc	2	7	2-3°	III	3a	2	3a	WE
Latitude: 52.09154	24 - 70	C	25y53 (light olive brown)	Common	Few	Yes	Yes	v calc	7	7	Droughtiness Calculation					
Longitude: -0.686275											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.1	-6.4	2	2
136	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	4-7°	III	3b	2	3b	WE
Latitude: 52.09153353	30 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.684824539											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	9.7	-6.9	2	2
137	0 - 33	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	4-7°	III	3b	2	3b	WE
Latitude: 52.09145516	33 - 60	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.68332728	60 - 100	C	10y62 (light greyish olive)	Common	Few	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.2	-5.6	2	2
138	0 - 28	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09147478	28 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.681876993											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.8	-6.2	2	2
139	0 - 27	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09142054	27 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.680496022											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	10.4	-6.6	2	2
140	0 - 35	C	10yr43 (brown)	None	None	No	-	sl calc	1		2-3°	III	3a	2	3a	WE
Latitude: 52.09141155	35 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	sl calc	0		Droughtiness Calculation					
Longitude: -0.674618084											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.4	-0.6	2	2

[illegible]

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
148	0 - 32	C	10yr43 (brown)	None	None	No	-	non	2		2-3°	III	3b	2	3b	WE
Latitude: 52.09067206	32 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.683437303											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.8	-5.2	2	2
149	0 - 31	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09062021	31 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.681897152											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	11.9	-5.1	2	2
150	0 - 29	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.09054765	29 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.680460559											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.1	-2.9	2	2
151	0 - 32	MCL	10yr42 (dark greyish brown)	None	None	No	-	sl calc	1		0-1°	II	2	2	2	WE
Latitude: 52.089835	32 - 85	SCL	10yr53 (brown)	Many	None	Yes	No	v sl calc	0		Droughtiness Calculation					
Longitude: -0.693625											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	42.1	9.1	1	2
152	0 - 33	HCL	10yr43 (brown)	None	Few	Yes	-	sl calc	2	7	4-7°	III	3a	2	3a	WE
Latitude: 52.08976667	33 - 60	C	10yr53 (brown)	Many	Few	Yes	Yes	v sl calc	1	7	Droughtiness Calculation					
Longitude: -0.692195											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	17.9	1.9	2	2
153	0 - 35	HCL	10yr43 (brown)	None	Few	No	-	non	2	7	0-1°	III	3b	2	3b	WE
Latitude: 52.08975833	35 - 70	C	25y53 (light olive brown)	Very many	Common	Yes	Yes	v sl calc	2	7	Droughtiness Calculation					
Longitude: -0.690711667											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	18.9	2.7	2	2
154	0 - 32	HCL	25y42 (dark greyish brown)	None	Few	Yes	-	non	2	7	4-7°	III	3b	2	3b	WE
Latitude: 52.08973833	32 - 60	C	25y53 (light olive brown)	Few	Common	Yes	Yes	calc	2	7	Droughtiness Calculation					
Longitude: -0.689266667											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	15.4	-1.7	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
155	0 - 29	HCL	10yr43 (brown)	None	None	No	-	non	2	7	2-3°	III	3b	2	3b	WE
Latitude: 52.08971311	29 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.687733285											MDW	MDP	MBW	MBP	Grade W	Grade P
											114	108	14.0	-3.1	2	2
156	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
											MDW	MDP	MBW	MBP	Grade W	Grade P
Longitude:																
157	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
											MDW	MDP	MBW	MBP	Grade W	Grade P
Longitude:																
158	Unsurveyed, Non-agricultural land															
Latitude:											Droughtiness Calculation					
											MDW	MDP	MBW	MBP	Grade W	Grade P
Longitude:																
159	0 - 27	C	10yr43 (brown)	None	None	No	-	non	2	1	4-7°	III	3b	2	3b	WE
Latitude: 52.08971486	27 - 100	C	10yr64 (light yellowish brown)	Few	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.681931525											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	10.5	-5.1	2	2
160	0 - 30	HCL	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08968934	30 - 100	C	10yr64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680567287											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.6	-1.0	2	2
161	0 - 32	C	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08963892	32 - 100	C	10yr64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.679049743											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.4	-3.1	2	2

Soil Profile											Agricultural Land Classification						
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)	
	Total	Litho'															
162	0 - 32	MCL	10yr42 (dark greyish brown)	None	None	No	-	v sl calc	1	7	4-7°	III	3a	2	3a	WE	
Latitude: 52.08888167	32 - 60	C	10yr64 (light yellowish brown)	Few	Few	Yes	Yes	v sl calc	2	7	Droughtiness Calculation						
Longitude: -0.693648333											MDW	MDP	MBW	MBP	Grade W	Grade P	
											112	105	17.6	1.5	2	2	
163	0 - 25	MCL	10yr33 (dark brown)	None	None	No	-	sl calc	2	1	0-1°	III	2	2	2	WE,DR	
Latitude: 52.08886856	25 - 50	SCL	10yr46 (dark yellowish brown)	Few	Few	Yes	No	sl calc	1	1	Droughtiness Calculation						
Longitude: -0.692145779	50 - 100	SC	10yr64 (light yellowish brown)	Many	Many	Yes	Yes	sl calc	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P	
											112	105	24.8	2.1	2	2	
164	0 - 30	MCL	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	II	2	2	2	WE	
Latitude: 52.08890304	30 - 50	HCL	10yr43 (brown)	Few	Few	No	No	non	2	1	Droughtiness Calculation						
Longitude: -0.690720705	50 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P	
											112	105	20.9	5.1	2	2	
165	0 - 30	C	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	3a	3b	WE	
Latitude: 52.08886121	30 - 70	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation						
Longitude: -0.689330986	70 - 100	C	10yr72 (light grey)	Common	Few	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P	
											112	105	12.0	-3.9	2	2	
166	0 - 33	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	4-7°	III	3b	2	3b	WE	
Latitude: 52.08885249	33 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation						
Longitude: -0.687815538											MDW	MDP	MBW	MBP	Grade W	Grade P	
											112	105	12.8	-2.7	2	2	
167	0 - 38	HCL	10yr43 (brown)	None	None	No	-	non	0	7	2-3°	III	3b	2	3b	WE	
Latitude: 52.08882596	38 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation						
Longitude: -0.686273837											MDW	MDP	MBW	MBP	Grade W	Grade P	
											112	105	21.0	4.9	2	2	
168	Unsurveyed, Non-agricultural land																
											Droughtiness Calculation						
											MDW	MDP	MBW	MBP	Grade W	Grade P	

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
169	0 - 31	MCL	10yr43 (brown)	None	None	No	-	non	0		0-1°	III	3a	2	3a	WE
Latitude: 52.08882624	31 - 65	HCL	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.684938165	65 - 100	C	25y64 (light yellowish brown)	Many	Many	Yes	Yes	non	0		MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.6	-1.9	2	2
170	0 - 30	C	10yr43 (brown)	None	None	No	-	non	2	1	4-7°	III	3b	2	3b	WE
Latitude: 52.08880865	30 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.682013417											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	11.7	-3.9	2	2
171	0 - 30	HCL	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08881054	30 - 100	C	10yr64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.68048615											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.6	-1.0	2	2
172	0 - 31	C	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08873762	31 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.67903541											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.0	-3.5	2	2
173	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	2-3°	III	3b	3b	3b	WE
Latitude: 52.08873121	30 - 50	C	10yr42 (dark greyish brown)	Few	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.677595148											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	-36.4	-29.4	3b	3a
174	0 - 30	MCL	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3a	2	3a	WE
Latitude: 52.08799523	30 - 100	C	10yr64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.69363853											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.6	-1.0	2	2
175	0 - 30	C	10yr43 (brown)	None	None	No	-	non	2	1	2-3°	III	3b	2	3b	WE
Latitude: 52.0879858	30 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.692243865											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	11.7	-3.9	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
176	0 - 30	SCL	10yr43 (brown)	None	None	No	-	non	2	1	2-3°	III	3a	2	3a	WE
Latitude: 52.08799674	30 - 100	SC	10yr64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.690772757											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	18.5	-3.9	2	2
177	0 - 30	HCL	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08797436	30 - 100	C	10yr64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.689338194											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.6	-1.0	2	2
178	0 - 30	MCL	10yr43 (brown)	None	None	No	-	non	2	1	4-7°	III	3a	2	3a	WE
Latitude: 52.08796418	30 - 100	C	10yr64 (light yellowish brown)	Few	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.68790162											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.6	-1.0	2	2
179	0 - 30	MCL	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3a	2	3a	WE
Latitude: 52.08793228	30 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.686462112											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.6	-1.0	2	2
180	0 - 32	C	10yr43 (brown)	None	None	No	-	non	2	1	2-3°	III	3b	2	3b	WE
Latitude: 52.0879265	32 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.684864521											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.4	-3.1	2	2
181	0 - 35	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08798484	35 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.68349978											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.6	-2.0	2	2
182	0 - 40	HCL	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08792089	40 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.682039317											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	21.3	5.3	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
183	0 - 36	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.0878638	36 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.680547213											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.8	-0.2	2	2
184	0 - 25	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.0878495	25 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.679095886											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	11.6	-4.4	2	2
185	0 - 25	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08784836	25 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.677669476											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	11.6	-4.4	2	2
186	0 - 29	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08782224	29 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.676142954											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.1	-2.9	2	2
187	0 - 34	HCL	10yr43 (brown)	None	None	No	-	non	1	7	2-3°	III	3b	2	3b	WE
Latitude: 52.08712292	34 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.693702064											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	18.7	2.6	2	2
188	0 - 28	C	10yr43 (brown)	None	None	No	-	non	1	7	0-1°	III	3b	2	3b	WE
Latitude: 52.08712007	28 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.692190875											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.9	-3.1	2	2
189	0 - 36	HCL	10yr43 (brown)	None	None	No	-	non	1	7	0-1°	III	3b	2	3b	WE
Latitude: 52.08710303	36 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.690730176											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	19.7	3.6	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
190	0 - 36	HCL	10yr43 (brown)	None	None	No	-	non	1	7	2-3°	III	3b	2	3b	WE
Latitude: 52.08705562	36 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.689301717											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	19.7	3.6	2	2
191	0 - 42	HCL	10yr43 (brown)	None	None	No	-	non	1	7	2-3°	III	3b	2	3b	WE
Latitude: 52.08706832	42 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.687790533											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	22.2	6.2	2	2
192	0 - 38	C	10yr43 (brown)	None	None	No	-	non	1	7	2-3°	III	3b	2	3b	WE
Latitude: 52.08706157	38 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.686369949											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	16.9	0.8	2	2
193	0 - 37	C	10yr43 (brown)	None	None	No	-	non	1	7	2-3°	III	3b	2	3b	WE
Latitude: 52.08702406	37 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.684900385											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	16.5	0.4	2	2
194	0 - 38	C	10yr43 (brown)	None	None	No	-	non	2	7	2-3°	III	3b	2	3b	WE
Latitude: 52.08703144	38 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	non	1	7	Droughtiness Calculation					
Longitude: -0.683526685											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	16.6	0.6	2	2
195	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08700483	30 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680582123											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	11.7	-3.9	2	2
196	0 - 45	HCL	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08676485	45 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.679020826											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	22.7	6.7	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
197	0 - 40	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08691134	40 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.677711857											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	17.4	1.4	2	2
198	0 - 31	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08694493	31 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.676172897											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.9	-2.1	2	2
199	0 - 35	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08695332	35 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.674820654											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.4	-0.6	2	2
200	0 - 29	C	10yr43 (brown)	None	None	No	-	sl calc	1	7	0-1°	III	3a	2	3a	WE
Latitude: 52.08625381	29 - 100	C	25y64 (light yellowish brown)	Many	Common	Yes	Yes	sl calc	1	7	Droughtiness Calculation					
Longitude: -0.693707182											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	13.3	-2.7	2	2
201	0 - 28	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08618156	28 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.692281302											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.8	-3.2	2	2
202	0 - 42	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08617925	42 - 100	C	10yr53 (brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.690816806											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	17.4	1.4	2	2
203	0 - 30	HCL	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08616924	30 - 70	C	75yr53 (brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.689376835	70 - 100	SC	10yr64 (light yellowish brown)	Many	Many	Yes	Yes	non	3	8	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	19.2	-1.0	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
									Total	Litho'						
204	0 - 33	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	2	8	0-1°	III	3b	2	3b	WE
Latitude: 52.08616467	33 - 60	C	75yr53 (brown)	Common	Common	Yes	Yes	non	2	8	Droughtiness Calculation					
Longitude: -0.687926011	60 - 108	SC	10yr64 (light yellowish brown)	Common	Common	Yes	Yes	non	3	8	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	21.7	0.5	2	2
205	0 - 30	C	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08615172	30 - 60	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.686436547	60 - 100	C	10y62 (light greyish olive)	Many	Many	Yes	Yes	non	3	8	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	11.4	-4.0	2	2
206	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08614711	30 - 65	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.685004247	65 - 100	C	10y62 (light greyish olive)	Many	Many	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.0	-3.9	2	2
207	0 - 30	C	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08605411	30 - 75	C	75yr53 (brown)	Common	Few	Yes	Yes	non	4	1	Droughtiness Calculation					
Longitude: -0.683570942											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	-20.1	-4.9	3b	2
208	0 - 29	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.086086	29 - 100	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680625793											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	11.3	-4.3	2	2
209	0 - 29	C	10yr43 (brown)	None	None	No	-	non	4	1	2-3°	III	3b	2	3b	WE
Latitude: 52.08605063	29 - 32	C	25y64 (light yellowish brown)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.679101544											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	10.3	-5.2	2	2
210	0 - 30	C	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08602628	30 - 60	C	10yr64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.677769324	60 - 100	C	10yr64 (light yellowish brown)	Many	Many	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.0	-3.8	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%) TotalLitho'		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
211	0 - 28	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08531224	28 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.690830133											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.8	-3.2	2	2
212	0 - 43	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08527886	43 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.689371671											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	17.4	1.4	2	2
213	0 - 32	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08527511	32 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.687935183											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.3	-1.7	2	2
214	0 - 39	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.08524313	39 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.686367887											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	17.0	1.0	2	2
215	0 - 38	C	10yr43 (brown)	None	None	No	-	non	1		2-3°	III	3b	2	3b	WE
Latitude: 52.0852334	38 - 100	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	0		Droughtiness Calculation					
Longitude: -0.684992764											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	16.6	0.6	2	2
216	0 - 39	C	5gy41 (dark greenish grey)	Few	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08517124	39 - 100	C	5gy41 (dark greenish grey)	Common	Few	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.680627301											MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	15.2	-0.4	2	2
217	0 - 30	C	10yr43 (brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08516689	30 - 60	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	2	1	Droughtiness Calculation					
Longitude: -0.679192571	60 - 100	C	10y62 (light greyish olive)	Common	Common	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	12.0	-3.8	2	2

Appendix 3: Auger Boring Log

Soil Profile											Agricultural Land Classification					
Auger	Depth (cm)	Texture	Primary Colour	Mottling	FMCs	Gleying	SPL	CaCO ₃	Stones (%)		Slope (°)	WE Class	WE Grade	DR Grade	Overall Grade	Limit(s)
218	0 - 30	HCL	10yr42 (dark greyish brown)	None	None	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08431625	30 - 55	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	4	1	Droughtiness Calculation					
Longitude: -0.682099499	55 - 100	C	10y61 (greenish grey)	Many	Many	Yes	Yes	non	2	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.0	-1.6	2	2
219	0 - 31	HCL	10yr43 (brown)	None	Few	No	-	non	2	1	0-1°	III	3b	2	3b	WE
Latitude: 52.08443288	31 - 60	C	25y64 (light yellowish brown)	Common	Common	Yes	Yes	non	4	1	Droughtiness Calculation					
Longitude: -0.680477936	60 - 100	C	10y62 (light greyish olive)	Common	Common	Yes	Yes	non	1	1	MDW	MDP	MBW	MBP	Grade W	Grade P
											112	105	14.9	-1.1	2	2

APPENDIX 4 – LABORATORY ANALYSIS

ANALYTICAL REPORT

Report Number	19483-25	K538	SARAH LEE	Client	MK EASTERN EXTENSION
Date Received	17-SEP-2025		RSK ADAS LTD		SOIL 10-09-2025
Date Reported	29-SEP-2025		4205 PARK APPROACH		
Project	1010648		LEEDS		
Reference	MK EASTERN EXTENSION		LS15 8GB		
Order Number					

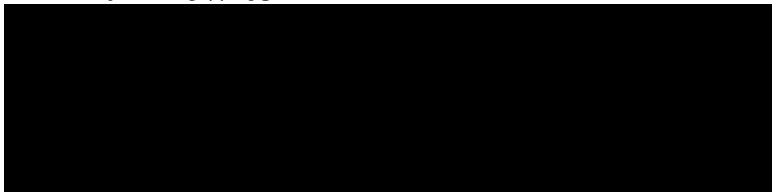
Laboratory Reference		SOIL765331	SOIL765332	SOIL765333	SOIL765334	SOIL765335					
Sample Reference		MK PIT 1 TOPSOIL	MK PIT 2 TOPSOIL	MK PIT 3 TOPSOIL	MK PIT 4 TOPSOIL	MK PIT 5 TOPSOIL					
Determinand	Unit	SOIL	SOIL	SOIL	SOIL	SOIL					
Sand 2.00-0.063mm	% w/w	41	25	31	51	20					
Silt 0.063-0.002mm	% w/w	28	29	30	23	27					
Clay <0.002mm	% w/w	31	46	39	26	53					
Neutralising Value as CaCO3 eq.	% w/w	<1	3.0	<1	<1	1.7					
Neutralising Value as CaO eq.	% w/w	<1	1.7	<1	<1	<1					
Textural Class **		HCL	C	C	SCL	C					

Notes

Analysis Notes	The sample submitted was of adequate size to complete all analysis requested. The results as reported relate only to the item(s) submitted for testing. The results are presented on a dry matter basis unless otherwise stipulated.
Document Control	This test report shall not be reproduced, except in full, without the written approval of the laboratory.

** Please see the attached document for the definition of textural classes.

Reported by *Ella Knowles*



ADAS (UK) Textural Class Abbreviations

The texture classes are denoted by the following abbreviations:

Class	Code
Sand	S
Loamy sand	LS
Sandy loam	SL
Sandy Silt loam	SZL
Silt loam	ZL
Sandy clay loam	SCL
Clay loam	CL
Silt clay loam	ZCL
Clay	C
Silty clay	ZC
Sandy clay	SC

For the *sand*, *loamy sand*, *sandy loam* and *sandy silt loam* classes the predominant size of sand fraction may be indicated by the use of prefixes, thus:

vf	Very Fine (more than 2/3's of sand less than 0.106 mm)
f	Fine (more than 2/3's of sand less than 0.212 mm)
c	Coarse (more than 1/3 of sand greater than 0.6 mm)
m	Medium (less than 2/3's fine sand and less than 1/3 coarse sand).

The subdivisions of *clay loam* and *silty clay loam* classes according to clay content are indicated as follows:

M	medium (less than 27% clay)
H	heavy (27-35% clay)

Organic soils i.e. those with an organic matter greater than 10% will be preceded with a letter O.

Peaty soils i.e. those with an organic matter greater than 20% will be preceded with a letter P.

APPENDIX 5 – DESCRIPTION OF ALC GRADES

The ALC grades and subgrades are described below in terms of the types of limitation which can occur, typical cropping range and the expected level and consistency of yield. The *'best and most versatile agricultural land'* falls into grades 1, 2 and subgrade 3a – which collectively comprises about one-third of the agricultural land in England and Wales. About half the land in England and Wales is either of moderate quality (subgrade 3b) or poor quality (grade 4). Although less significant on a national scale, such land can be locally valuable to agriculture and the rural economy where poorer farmland predominates. The remainder is very poor quality land in grade 5, which mostly occurs in the uplands.

Grade 1 – excellent quality agricultural land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 – very good quality agricultural land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 – good to moderate quality land

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a – good quality agricultural land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b – moderate quality agricultural land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 – poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 – very poor quality agriculture land

Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.