South West Milton Keynes

Updated Environmental Statement Volume 3 - Non Technical Summary

Carter Jonas LLP

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1. INTRODUCTION

1.01 An updated Environmental Statement (ES) has been prepared on behalf of the South West Milton Keynes Consortium (SWMK Consortium) in support of the outline planning application submitted to AVDC in 2015 - AVDC Ref. 15/00314/AOP (the Planning Application). The Planning Application is for a mixed use development (The Proposed Development) at South West Milton Keynes (SWMK). This report provides a non-technical summary of the ES, including a summary of the Proposed Development, the likely significant environmental effects and the mitigation measures proposed. The purpose of the non-technical summary is to provide a summary of the Proposed Development in non-technical language so that it can be easily understood by members of the public and the decision makers.

1.02 A new ES has been prepared to address minor amendments that have been made to the Planning Application to Buckinghamshire Council (formerly AVDC) and to take account of regulation, policy and guidance changes that have occurred since the Planning Application was first submitted in 2015. In order to assist consultees and the decision-maker a complete updated ES has been prepared, rather than a series of addendums to the original ES. This ES supersedes the version prepared in January 2015 and revised in August 2016. It should be noted at the outset that the likely significant impacts of the Proposed Development, as identified and assessed in this updated Environmental Statement, are not materially different from those identified in the original ES.

Application Revisions

1.03 This updated ES has been prepared to address a number of minor amendments that have been made to the Proposed Development and to address changes in regulation, policy and guidance since the original application was submitted. The amendments to the Planning Application and the reasons for those amendments are set out below:

- The alignment of the oil pipeline crossing the Application Site was not identified correctly in the original Planning Application drawings and as a result needs to be amended to show the correct alignment. It should be noted that the oil pipeline was and continues to be, located within an area identified as a green infrastructure corridor in the Proposed Development;

- The standards required for climate change mitigation have been enhanced since the Planning Application was submitted. As a result, larger surface water attenuation ponds need to be included within the Proposed Development, which has required changes in the size and disposition of the proposed development parcels;

- The housing needs of older people is identified as a specific issue in the emerging Vale of Aylesbury Local Plan, and this type of housing is supported by policy (Policy H6b as modified) on those sites identified by AVDC as suitable in the Housing and Economic Land Availability Assessment. The Application Site is identified as a suitable housing site and is a draft housing allocation. As a result, the Applicant has decided that an element of elderly persons' accommodation (within use class C3) should be included in the Proposed Development within the total quantum of housing.

1.04 These changes are not substantial. The oil pipeline remains in an area identified for a green infrastructure corridor within the Proposed Development. The surface water attenuation ponds have increased in size but are located within similar areas of the Proposed Development. The proposed extra care housing will be within use class C3 and is located within an area previously identified as a residential development parcel.

1.05 In light of these minor amendments, certain revisions need to be made to the submitted Planning Application, including the consequential amendment of the description of development and the submitted plans and drawings. These revisions will need to be subject to consultation with statutory consultees and local residents.

1.06 As mentioned above, there have also been a number of changes in regulation, policy and guidance since the original application was submitted. These include the Town and Country Planning (Environmental Impact Assessment) Regulations which were revised in 2017. There have also been changes to relevant adopted and emerging development plan documents and policies since the Planning Application was submitted; Plan:MK was adopted in 2019 and the emerging Vale of Aylesbury Local Plan (VALP) was prepared and submitted for examination in 2017, with consultation on proposed modifications in late 2019. The Application Site is now identified as an allocation in the Submission Vale of Aylesbury Local Plan (SVALP2017) for a mixed use sustainable urban extension – Site Ref. NVL001: Land at South West Milton Keynes. This updated ES reflects the requirements of the 2017 Regulations and addresses the up-to-date policy and regulatory framework.

Application Site

1.07 The Application Site is unchanged. The SWMK Consortium control land to the south west of Milton Keynes, south of the A421 and north of the disused former Oxford to Bletchley railway line (due to be reopened as part of the East West Rail project) – the Application Site. The Application Site is shown on Drawing No. CSA/4857/111 – see **Appendix 1**.

1.08 The Proposed Development area is located within the area of Buckinghamshire Council (formerly AVDC), but the principal access points to the A421 are within the area of Milton Keynes Council (MKC). Duplicate planning applications were submitted to both AVDC and MKC, so that each planning authority could determine the elements of the Proposed Development that fall within their respective administrative areas.

Revised Description of Development

1.09 The revised description of development for Planning Application (AVDC Ref. 15/00314/AOP) and as assessed in this updated ES, is as follows:

Outline planning application with all matters reserved except for access for a mixed-use sustainable urban extension on land to the south west of Milton Keynes to provide up to 1,855 mixed tenure dwellings, including 60 extra care units (C3); an employment area (B1) including provision for a 6GP surgery (D1); a neighbourhood centre including retail (A1/A2/A3/A4/A5), community (D1/D2) and residential (C3) uses; a primary school; a secondary school; a grid road reserve; multi-functional green space; a sustainable drainage system; and associated access, drainage and public transport infrastructure.

Planning Application Background

1.10 The Planning Application was submitted in 2015. The Application has been subject to consultation and detailed discussions since then and has been reported to committees.

1.11 The Application (AVDC Ref. 15/00314/AOP) was considered at AVDC's Strategic Development Management Committee on 7th June 2017 which determined that it should be supported and deferred and delegated to officers subject to the completion of a legal agreement (with Bucks County Council, Aylesbury Vale District Council and if appropriate Milton Keynes Council) as outlined in the officer's report and subject to conditions as considered appropriate by officers.

1.12 Draft conditions have been discussed with AVDC, and are agreed subject to minor amendments; the issues that are covered by conditions are identified in Section 4. The final conditions will need to relate to the updated Planning Application documents.

1.13 The S106 Agreement for the application has been discussed with AVDC, MKC and Buckinghamshire County Council. The Agreement document is at an advanced stage but has not yet been completed and signed.

1.14 It is anticipated that once the updated Application documents have been subject to consultation, the Planning Application will be reported back to Buckinghamshire Council's Strategic Development Management Committee for a decision.

1.15 On 19th November 2019 MKC issued a decision notice on the elements of the application (MKC Ref. 15/00619/AOP) that fall within its administrative area i.e. the access points onto the A421. The application was refused for a single reason, which related to highways. The SWMK Consortium has submitted an appeal against this decision.

Updated Delivery Timetable

1.16 Approximately five years have elapsed since the Application was submitted and as a result the delivery timetable needs to be updated. It is now anticipated that construction of the Proposed Development will commence in 2022/23, subject to the grant of planning permission and that the Proposed Development would be completed by 2030/31.

Environmental Impact Assessment

1.17 The purpose of the Environmental Impact Assessment is to protect the environment by ensuring that decision-makers have sufficient knowledge of the likely significant effects of development on the environment so that the impacts can be taken into account in the decision making process.

1.18 The likely significant environmental effects of the Proposed Development are identified and assessed in the ES, both during the construction phase and once completed. Mitigation measures are proposed to prevent, reduce and offset any significant adverse effects on the environment arising from the Proposed Development. The ES provides sufficient information to enable the decision makers to understand and take into account the likely significant environmental effects arising from the Proposed Development.

Updated ES Structure

1.19 This Environmental Statement has been prepared in accordance with The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and comprises three separate volumes:

- **Volume 1 - ES Main Report**: providing the full text of the ES
- **Volume 2 - ES Technical Appendices**: comprising the technical and supporting documents referred to in the relevant chapters of the ES
- **Volume 3 - Non-Technical Summary**: providing a concise summary of the Proposed Development, its likely significant environmental effects and the measures proposed to mitigate or to avoid these effects.

Other Documents

1.20 The Planning Application is supported by other updated documents as set out in Table 1.2 below.

Table 1.2 Planning Application Supporting Documents

SUPPORTING DOCUMENTS	PRODUCED BY
Application Forms & Certificate(s) of Ownership	Carter Jonas LLP

SUPPORTING DOCUMENTS	PRODUCED BY
Planning Statement	Carter Jonas LLP
Design and Access Statement	CSA
Masterplan and Parameters Plans	CSA
Landscape Strategy Plan	CSA
Landscape and Visual Impact Assessment	CSA
Sustainability Strategy	WSP
Flood Risk Assessment	WSP
Retail Assessment	Carter Jonas LLP
Employment Assessment	Carter Jonas LLP
Statement of Community Involvement	Athene
Arboricultural Assessment	CSA
Transport Assessment and Framework Travel Plan	WSP
Energy Statement	WSP
Construction Environmental Management Plan	WSP
S106 draft Heads of Terms	Eversheds

ES Availability and Comments

1.21 The ES and Technical Appendices can be purchased at a cost of £150 for printed copies and £15 for a CD. All documents are available from:

Mark Hyde
Carter Jonas LLP
One Station Square
Cambridge
CB1 2GA

Tel: 01223 326825
Email: mark.hyde@carterjonas.co.uk

1.22 The ES and the Technical Appendices will also be available to view at the Planning Department at Buckinghamshire Council and MKC and on the planning applications database on the Councils' websites. All comments on the planning application should be sent to:

Buckinghamshire Council

Head of Development Management
Buckinghamshire Council
Aylesbury Vale Area Office
The Gateway
Gatehouse Road
Aylesbury
HP19 8FF

Tel: 01296 585679
Email: devcontrol.av@buckinghamshire.gov.uk

Milton Keynes Council

Director of Planning & Transport
Department of Planning and Transport
Milton Keynes Council
Civic Offices
1 Saxon Gate East
Central Milton Keynes
MK9 3EJ

Tel: 01908 252358
Email: dcadmin@milton-keynes.gov.uk

2. APPLICATION SITE AND PROJECT DESCRIPTION

Application Site

2.01 The Application Site covers an area of 144.85 Ha and is located to the west of Far Bletchley, at the south western edge of Milton Keynes. The boundary of the Site is formed by the A421 (H8 Standing Way) and Buckingham Road (A4034) to the north, the disused former Oxford to Bletchley rail line to the south (due to be reopened as part of the East West Rail project), Whaddon Road to the west, and a field to the east with the existing residential area of Far Bletchley beyond. Weasel Lane – an existing bridleway and cycle route – cuts through the site from Whaddon Road to Buckingham Road. There are other public rights of way across the site, including the Milton Keynes Boundary Walk.

2.02 The Site currently comprises agricultural land. There are hedgerows and trees at some of the field boundaries. There are a few existing buildings on the site, which are farm buildings. There are also a number of adjoining buildings that are in residential use.

2.03 An oil pipeline crosses the middle of the site in a north south direction; a 30m wide exclusion zone for the pipeline is incorporated into the layout of the Proposed Development. There are high voltage overhead power lines crossing the north western part of the site; the power lines will be placed underground as part of the Proposed Development. An intermediate pressure gas main passes through the eastern part of the site in a north south direction; the gas main will fall within land set aside for the grid road reserve.

The Surrounding Area

2.04 The Application Site straddles the boundary between the rural hinterland of Aylesbury Vale and the urban area of Milton Keynes. To the north is the industrial area of Snelshall West and to the east is the established residential area of Far Bletchley. To the west and south of the site is farmland and open countryside. The village of Newton Longville is located to the south of the site.

2.05 The Application Site is located adjacent to Milton Keynes, which is a main centre in the region providing significant employment opportunities and containing a broad range of services and facilities. The Proposed Development includes walking, cycling and public transport infrastructure and facilities, which would connect to the existing networks in the surrounding area.

2.06 The surrounding area possesses an undulating landform characterised by a ridge running across the central length of the site from east to west. The predominant topographic features are shallow ridges and valleys sloping away from this focal ridge line, which run broadly on a south west alignment.

2.07 The Application Site is well connected on a local, sub-regional and regional scale. The A421 immediately north of the site enables connections to the established Milton Keynes grid road network, also linking to the A5 and M1 which provide connections to the wider city and region respectively and form part of the Strategic Road Network. To the west, the A421 links to the A43 which connects the M40 to the south with Northampton, Kettering, Corby and Stamford to the north. Via the A43, the A421 also connects the site to the M40 corridor between London and Birmingham.

2.08 The surrounding area possesses an undulating landform which is characterised by a ridge that runs across the central length of the Application Site from east to west. The predominant topographic features of the surrounding area are shallow ridges and valleys sloping away from this focal ridge line, which runs broadly on a south west alignment.

Sensitive Receptors

2.09 The likely significant effects of the Proposed Development, both during construction and once completed, have been considered in the various ES technical studies. The potential sensitive receptors are identified in **Table 2.1** below.

Table 2.1 Potential Sensitive Receptors

CATEGORY	SENSITIVE RECEPTOR / LAND USE
Land Use	Properties within the Application Site and in neighbouring residential areas including: • Residents at Chase Farm, Lower Salden Farm, The Leys Farmhouse, and Bletchley Leys Farmhouse; and • Residents on the edge of Bletchley, Far Bletchley, and Newton Longville.
Cultural Heritage	• Newton Longville Conservation Area; • Listed Buildings; • Areas of Archaeological Interest including late prehistoric/Roman settlements within the Application Site; and • Areas of ridge and furrow.
Agricultural Land	• Agricultural land quality comprising Grade 3a and sub-Grade 3b; and • Three existing farm businesses (two full-time and one part-time).
Ecology	• Milton Keynes Wildlife Corridor Wetland and Woodland within the Application Site • Railway Sidings east of Salden Wood/83F08 • Semi-natural woodland • Mature trees • Hedgerows • Great Crested Newts • Bats • Reptiles • Breeding and Overwintering Birds • Badgers
Landscape and Visual	• Newton Longville Conservation Area; • Landscape Character Areas of Newton Longville – Stoke Hammond Claylands, Whaddon Chase, and Horwood Claylands; • Users of footpaths on Midshires and Swan's Way, Weasel Lane, Milton Keynes Boundary Walk, and at Cowpasture Farm and around Newton Longville; • Residents at Chase Farm, Lower Salden Farm, The Leys Farmhouse, and Bletchley Leys Farmhouse; and • Residents on edge of Bletchley, Far Bletchley, and Newton Longville.
Transport, Movement and Access	• Vehicles, pedestrians and cyclists using the local highway network, including at: • A421 (Standing Way); • Whaddon Road; • Weasel Lane; • Milton Keynes Boundary Walk; and • Other Rights of Way.
Water	• Existing watercourses at the Application Site and in the vicinity:

- Tattenhoe Brook;
- Tributary of River Ouzel; and,
- Field drains

Project Description

2.10 The ES relates to an Application for planning permission for the following:

Outline planning application with all matters reserved except for access for a mixed-use sustainable urban extension on land to the south west of Milton Keynes to provide up to 1,855 mixed tenure dwellings, including 60 extra care units (C3); an employment area (B1) including provision for a 6GP surgery (D1); a neighbourhood centre including retail (A1/A2/A3/A4/A5), community (D1/D2) and residential (C3) uses; a primary school; a secondary school; a grid road reserve; multi-functional green space; a sustainable drainage system; and associated access, drainage and public transport infrastructure.

Updated Development Parameters

2.11 The Development Parameters are defined on the following plans are submitted for approval:

- Site Location Plan (Drawing No. CSA/4857/111);
- Illustrative Masterplan (Drawing No. CSA/4857/121 RevE);
- Development Framework Parameter Plan (Drawing No. CSA/4857/100 RevK);
- Proposed Access Designs (see Appendix M, O and P within the Transport Assessment – ES Appendix 10.1).

2.12 The following updated Application drawings are submitted for information:

- Open Space Parameters Plan (Drawing No. CSA/4857/113 RevC);
- Residential Density Plan (Drawing No. CSA/3857/119 RevC);
- Proposed Building Heights Plan (Drawing No. CSA/4857/114 RevC);
- Landscape Character Areas Plan (Drawing No. CSA/4587/121 RevD);
- Landscape Strategy Plan (Drawing No. CSA/4587/105 RevE);
- Key Structural Elements Plan (Drawing No. CSA/4587/120 RevE); and
- Public Transport Plan (Drawing No. CSA/4857/117 RevC)

2.13 A summary of the Development Parameters is provided below.

Overall Development Concept

2.14 The rationale for the design and layout of the Proposed Development is described in more detail in the **Design & Access Statement.** In summary, the form and layout of the Proposed Development is strongly influenced by the principles that have governed the planned expansion of Milton Keynes. The Proposed Development has been designed to be a new standalone neighbourhood, which follows the place-shaping principles identified in Policy SD15 of adopted Plan:MK.

2.15 The proposed land uses are shown in **Table 2.2** below.

Table 2.2 Proposed Land Uses

LAND USE	AREA (HA)
Allotments	1.18

Employment inc. GP Surgery (D1)	2.07
Green Infrastructure	53.97
Grid Road Reserve	7.28
Infrastructure	2.20
Neighbourhood Centre inc. Community Uses and Retail Uses	0.67
Primary School	3.00
Secondary School	5.12
Secondary School Open Space	1.69
Water Attenuation	7.74
Residential (C3) (1,795 dwellings)	53.00
Extra Care Housing (C3) (60 dwellings)	0.90
Sub-Total	138.82
Highway Improvements	6.03
Total	144.85

2.16 TheDevelopment Framework Parameter Plan (Drawing No. CSA/4857/100 RevK) shows the proposed distribution of uses across the Site, and is provided in **Appendix 2**. The proposed distribution of uses is as follows:

- Residential on southern part of site and in north western quadrant
- Mixed-use in north eastern part of site, comprising employment, neighbourhood centre and residential uses including the extra care housing.
- Employment uses in north eastern part of site, opposite Snelshall West employment area, in a visible location and providing good access to the A421 and the wider strategic highway network.
- Land for a Primary School located towards the centre of the site, making it accessible to all future residents of the Proposed Development.
- Land for a Secondary School on the eastern boundary of the site, providing good access to and from existing and proposed residential areas and also good connections to the highway network and walking, cycling and public transport networks.
- The main areas of open space, sport and recreation are located in the centre of the site, making them accessible to all future residents of the Proposed Development and with good connections to existing cycling and pedestrian routes. The formal sport and recreation areas comprise a local park and district park, football pitches, a cricket pitch, tennis courts, a Multi-Use Games Area (MUGA), and a skateboard park.
- A number of children's play areas have been provided throughout the site, within and close to the proposed residential areas.
- Allotment land is provided in the north eastern corner of the site.
- New highway access points at two locations on the A421 comprising an 'at grade' roundabout located on Buckingham Road that would cater for all traffic movements and a left turn 'access only' slip further west along Standing Way.
- A new 'Ghosted Right Turn' access that would cater for all traffic movements off Whaddon Road to the south east of Bottledump roundabout.
- Public Rights of Way that traverse the Application Site, comprising Weasel Lane; the Milton Keynes boundary walk; and a north/south route (Footpath 19) that continues south under the disused railway towards Newton Longville.
- Land within the Application Site for a Grid Road Reserve located towards the eastern part of the site, which would enable a continuation of V1 Snelshall Street to the north west of Tattenhoe roundabout.

Employment

2.17 The Proposed Development includes 2.07 hectares of land for employment uses, comprising small scale starter business units. There is a need and demand for these types of units in Milton Keynes and they are not typically provided within the established employment areas or in Central Milton Keynes at rental levels that suit small businesses. It is appropriate to include small scale employment uses within the mix of uses provided at a sustainable urban extension. The employment provided within the Proposed Development would represent a marginal employment location which would not divert jobs or businesses from the main industrial and employment areas, as explained in the updated Employment Assessment submitted with this Planning Application.

Retail

2.18 The proposed neighbourhood centre would include a small convenience store, intended to meet the day to day needs of future residents. The convenience store would be part of a local centre alongside other retail, service and community uses; all neighbourhoods within Milton Keynes include a neighbourhood centre. The proposed convenience store would not be a supermarket attracting customers from elsewhere in Milton Keynes or the surrounding area. It is anticipated that most future residents of the Proposed Development would continue to shop at the existing supermarkets for their main weekly food shopping, as explained in the updated Retail Assessment.

Grid Road Reserve

2.19 The adopted development plan for AVDC and MKC includes a requirement for a link road between the A4146 and A421. It is understood that both Councils have an aspiration for the link road to be delivered. The link road would remove through traffic from the surrounding villages, which would be a benefit for the existing residents of those villages. The Proposed Development reserves sufficient land to accommodate a dual carriageway grid road, providing a link between Snelshall Street (V1) under the proposed East West railway line and connecting to the A4146 Stoke Hammond By-pass. The land has been reserved within the Application Site, but the link road would in due course be designed and delivered by third parties and not the SWMK Consortium.

Density

2.20 The Proposed Development includes a variety of residential densities, as shown on the Residential Density Parameter Plan (Drawing No. CSA/4857/119 RevC). The average density is 36 dwellings per hectare (dph). Lower densities are proposed at the more sensitive boundaries, and higher densities close to the primary routes and at the neighbourhood centre. The variety of densities across the site is as follows:

- 25 to 30 dph – southern, western and eastern edges in more visually sensitive locations
- 30 to 35 dph – within less visible locations at the Site
- 35 to 40 dph – towards centre and north of Site adjacent to primary routes
- 40 to 45 dph - close to neighbourhood centre
- 66 dph – for extra care housing

Building Heights

2.21 The height of buildings within the Proposed Development is shown on the Building Heights Parameter Plan (Drawing No. CSA/4857/114 RevC). The plan shows the maximum building heights within the Proposed Development. The proposed building heights for the different uses are as follows:

- Residential Areas: 2 to 2.5 storeys (up to 10m) for most of Site, with 3 storeys (up to 11m) along primary routes and at key entrances or intersections in order to provide landmark or gateway buildings.
- Extra Care Housing: up to 13m.
- Employment Area: up to 12m, which is similar to other employment sites opposite and adjacent to A421.
- Neighbourhood Centre: up to 13m, with retail and community uses at ground floor and residential above.
- Primary School: up to 10m and two storeys for efficient use of site.
- Secondary School: up to 12m.
- Changing Pavilion: up to 5.5m.

Access

2.22 The Proposed Development includes proposals to create new access points and improvements to the wider highway network, comprising the following: new highways access points to Whaddon Road, Buckingham Road, and a 'left in' only junction from A421; junction improvements to specific junctions on A421 and other key routes; financial contribution towards other highway improvements along A421 further west towards Buckingham and in the east through Milton Keynes; traffic calming on all the approach roads leading towards Newton Longville to discourage 'rat-running and reduce vehicle speeds; speed management proposals for other local villages; and funding to either extend an existing bus service or implement a new 'start up' service to connect the Proposed Development with Central Milton Keynes and social infrastructure. The Transport Assessment (in ES Appendix 10.1) includes drawings of proposed access arrangements with the public highway. Weasel Lane – an existing bridleway and Sustrans Route 51 – cuts through the Application Site from Whaddon Road to Buckingham Road. There are other public 'rights of way' across the site, including the Milton Keynes Boundary Walk. These 'rights of way' will be retained and incorporated into the Proposed Development. The Proposed Development includes walking, cycling and public transport infrastructure and facilities, which would connect to the existing networks in the surrounding area thus providing future residents with the opportunity to travel by non-car modes of transport. A Public Transport Plan (Drawing No. CSA/4857/117 RevC) is submitted with the Planning Application to indicate a bus route and the location of bus stops within the Proposed Development.

Open Space & Recreation

2.23 The open space within the Proposed Development is shown on the Open Space Parameters Plan (Drawing No. CSA/4857/113 RevC). The Proposed Development includes open space and recreation facilities within the site, including a local park and play area, formal sports pitches, tennis courts and two Multi-Use Games Area (MUGA), a skateboard park, children's play areas comprising two Neighbourhood Equipped Area of Play (NEAP) and nine Local Equipped Area of Play (LEAP) and allotments. These facilities are located where they are easily accessible to future residents within the Proposed Development and also existing residents from neighbouring areas.

Sustainability

2.24 The Proposed Development is sustainable in terms of the following: energy efficiency and carbon reduction; sustainable transport; water resource management; information and communications technology; business and employment; healthy community; social well-being and governance; landscape and biodiversity; materials, waste and recycling; and housing. The Sustainability Statement explains how the Proposed Development is sustainable.

Drainage

2.25 The majority of the site lies within Flood Zone 1 and therefore is at low risk of flooding. The north western corner of the site is within Flood Zone 3 and as such is at high risk of flooding. However, the Environment Agency has no records of flooding at the site. All buildings will be located within Flood Zone 1. The Proposed Development will include sustainable drainage systems comprising green roofs, rainwater harvesting and permeable paving, and attenuation basins will be included to attenuate surface water run-off to green field rates. The Proposed Development incorporates drainage infrastructure, foul water pumping stations and statutory undertakers equipment.

Waste Management

2.26 The Proposed Development would generate construction, household, commercial, and organic waste. The appointed contractor will prepare a Site Waste Management Plan (SWMP). The SWMP will include measures to minimise the amount of waste generated and disposed of during the site clearance and construction phase of the Proposed Development.

2.27 The Proposed Development will include both internal and external waste and recycling storage facilities. These facilities will be located within the curtilage of each house and in suitably designed enclosures on ground level for flats. These facilities will be designed to be convenient and easily accessible for future residents and waste collection crews. Sufficient exterior storage space will be provided to enable the installation by future residents of a home composting bin/food digester in the gardens of private houses and community composting facilities may also be an option.

2.28 Bring Sites will be required within the Proposed Development to provide additional recycling opportunities. Bring Sites are generally located within publicly accessible areas such as supermarkets and public car parks and typically comprise a number of containers allowing separate collection of materials for recycling.

Utilities & Infrastructure

2.29 The site contains a variety of utilities infrastructure. Exclusion zones are required for the oil pipeline and intermediate pressure gas main, and these areas are kept free of development within green infrastructure and highway corridors. The high voltage overhead power lines which cross the site would be placed underground as part of the Proposed Development. The relevant utility companies and statutory undertakers were contacted during the preparation of the Services & Utilities Chapter of the ES. The Application Site does not currently have utility supplies, but water, electricity, gas and telecommunications services exist in the neighbouring areas, so it would be possible for utilities connections to be made to the Proposed Development. The Proposed Development would incorporate drainage infrastructure, foul water pumping stations, statutory undertakers' equipment and surface water attenuation measures

3. POLICY CONTEXT AND ALTERNATIVES

Introduction

3.01 The EIA Regulations 2017 requires that Environmental Statements include:

> *"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."*

Strategic Background and Policy Context

3.02 The planning background to the Application Site provides the context for the Proposed Development. The south western edge of Milton Keynes, including the Application Site, has been identified as a suitable and sustainable location for an urban extension since the early 1990s, through a series of technical studies and in former development plan documents. An urban extension to the south west of Milton Keynes was considered at a strategic level through the former Milton Keynes South Midlands Sub Regional Strategy (adopted 2005), the South East Plan (adopted 2009), the Vale of Aylesbury Proposed Submission Core Strategy (published for consultation 2009) and the Consultation Draft Salden Chase Masterplan & Delivery SPD (published for consultation 2010) processes. In all cases, the south western edge of Milton Keynes, including the Application Site, has been assessed as a suitable and sustainable location for development. The Application Site has historically been comprehensively considered for mixed use development at a strategic level and it has been compared with realistic alternatives during those processes.

Consideration of Alternative Sites

3.03 The Application Site has been assessed through the site assessment and examination processes for SVALP2017, and it is proposed to be allocated as a residential-led mixed use development – Ref. D-NLV001. As part of those processes, alternative locations for an urban extension to the south and west of Milton Keynes have been considered and assessed.

3.04 The decision to allocate the land at South West Milton Keynes in the SVALP2017 was informed by the Housing Economic Land Availability Assessment (HELAA) (January 2017), and the Sustainability Assessment Report (SA) and Technical Annex (SATA) (September 2017). As part of the site selection process, alternative locations for an urban extension to the south and west of Milton Keynes were considered and assessed, including two strategic sites.

3.05 As such, the Application Site has been considered against a range of alternative sites through the site assessment processes and examination process for SVALP2017 and it has been identified as a proposed allocation for a mixed use urban extension.

Consideration of Alternative Site Layouts

3.06 The process to establish the design and layout of the Proposed Development is described in detail in the updated Design & Access Statement, including the site context and the opportunities and influences. The design and layout evolved from an iterative design process alongside an appraisal of the physical characteristics of the Application Site and the surrounding area, site constraints and an extensive series of workshops and consultations.

3.07 The site analysis demonstrates that the Proposed Development area has clearly defined boundaries. The northern boundary of the site is formed by the A421 and Buckingham Road, the southern boundary by the disused former Oxford to Bletchley rail line, the western boundary by Whaddon Road, and the eastern boundary by a hedgerow, beyond which lies a public footpath followed by a rectangular field and the western built up edge of Far Bletchley. A defensible boundary would be required to the west where the site fronts open countryside, which has been addressed by strategic landscaping on the western boundary. The significant ridge line across the site provides opportunities to create views into and out of the site. The site has a varied topography, and the undulating landform creates three discrete land parcels with different characteristics. The landform also influences the drainage strategy for the site and the location of surface water attenuation within the Proposed Development. There is an existing public right of way and a bridleway/cycle route through the site and a further public footpath adjacent to the sites eastern boundary. There is also an established road network in the surrounding area and the Proposed Development must connect to all these existing links. The site contains existing landscape, ecological habitats and archaeological features which would be retained within the Proposed Development. The areas of archaeological interest – two areas of late prehistoric/Roman settlement - will be preserved within the green space within the Proposed Development. The site also contains a variety of utilities infrastructure. Exclusion zones are required for a pair of existing high pressure oil pipelines which run north-south through the centre of the Application Site. These areas are kept free of development, within the green infrastructure. The high voltage overhead power lines which cross the site can be placed underground as part of the Proposed Development. The proximity of the rail line at the southern boundary requires a buffer to be retained and careful design in order to avoid any adverse noise or visual impacts. The existing features of the site have influenced the design and layout of the Proposed Development.

3.08 In addition to the existing physical characteristics and the various constraints and opportunities that the site presents, the development concept has also been influenced by the intrinsic functional character and structure of Milton Keynes. The Proposed Development would be a part of Milton Keynes. It would include some of the characteristic features of the City, such as self-contained residential neighbourhoods surrounded by substantial areas of open space and strategic landscaping and it would connect to the existing grid road network. It has been designed to be a standalone new neighbourhood which follows the place-shaping principles identified in Policy SD15 of adopted Plan:MK. The design approach has been discussed with both AVDC and MKC before the Planning Application was submitted and in post-submission discussions. Therefore, there are adopted place-shaping principles for sustainable urban extensions on the edge of Milton Keynes with which the design and layout of development must comply.

3.09 The Illustrative Masterplan for the Planning Application has been developed through a series of pre-application discussions and workshops, through consultation as part of the current Planning Application and most recently to accommodate amendments. Through these processes, alternative designs and layouts for the Proposed Development have been considered, which included alternatives to the distribution of uses across the site, alternatives to the location and extent of the green infrastructure and open space areas, and additional land uses.

3.10 The Illustrative Masterplan (Drawing No. CSA/4857/121 RevE) is provided in **Appendix 3**.

4. ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

General Approach

4.01 The ES has been prepared in accordance with the EIA Regulations 2017 which implement European Council Directive No. 97/11/EEC (as amended). Practice guidance on EIA has also been followed, including:

- Planning Practice Guidance (PPG)
- Guidelines for Environmental Impact Assessments, Institute of Environmental Management and Assessment (IEMA) 2004

4.02 Paragraph 003 (Id. 4) of the PPG provides a summary of the stages of preparing an EIA, including the screening and scoping stages and preparing the ES.

- Screening
- Scoping
- Preparing an Environmental Statement
- Making a planning application and consultation
- Decision making

4.03 The Proposed Development was subject to screening and scoping in 2013. As set out below, the topics that were subject to assessment in the previous ES have been reassessed. However, the EIA Regulations 2017 have identified additional environmental topics that should be assessed i.e. climate change, human health and disaster management; and these topics are also included and assessed in this updated ES.

Scoping

4.04 The purpose of requesting a Scoping Opinion is to obtain a formal opinion from the LPA on what should be included in the ES.

4.05 In January 2013 a formal EIA Scoping Opinion request was submitted to AVDC. On 16th September 2013, AVDC adopted a scoping opinion which confirmed that the matters identified in the Scoping Report were those that needed to be addressed in the ES for the previous application. The SWMK Consortium subsequently decided to address waste and contaminated land matters.

4.06 Schedule 4 of the EIA Regulations 2017 identifies the topics that should be addressed in an ES. There are three environmental topics that were not assessed in the original ES but are included in the updated ES to meet the requirements of the EIA Regulations 2017, which are as follows: human health, climate change and disaster management.

Assessment Methodology

4.07 The EIA Regulations 2017 stipulate that the EIA process should identify, describe and assess in an appropriate manner the direct and indirect significant effects of the proposed development on the environment, both during construction and operation. Therefore, the ES identifies and assesses the significance of likely environmental effects of the Proposed Development, including an assessment of iterative and cumulative effects.

4.08 The environmental effects have been evaluated against definitive standards and legislation where available. Where it has not been possible to quantify effects, qualitative assessments have been undertaken, based on available knowledge and professional judgement. Where uncertainty exists, this has been noted in the relevant assessment chapter.

Determining Significance

4.09 The significance of effects reflects the relationship between two factors:

- The actual change taking place to the environment i.e. the magnitude or severity of an impact; and
- The sensitivity, importance or value of the affected resource or receptor.

4.010 Significance will generally be classified as major, moderate or minor (although each discipline uses slightly different terminology). Impacts of 'major' or 'moderate' significance are considered to equate to significant impacts in the context of the EIA Regulations.

4.011 The effects are also described as:

- Adverse – detrimental or negative effects to an environmental resource or receptor; or
- Beneficial – advantageous or positive effect to an environmental resource or receptor.

4.012 Where an effect is considered to be not significant this is classified as 'not significant' or 'negligible'.

4.013 Each of the technical chapters or accompanying technical appendices provides the criteria, including sources and justifications, for quantifying the different levels of effect. Where possible, this has been based upon quantitative and accepted criteria, together with the use of value judgements and expert interpretations to establish the extent to which an effect is likely to be environmentally significant.

Assumptions and Limitations

4.014 The assumptions that have been made when preparing this updated ES are as follows:

- That the principal existing land uses adjoining the Application Site remain unchanged.
- The outline planning permission will include appropriate conditions that are sufficient to limit the Proposed Development to that which has been assessed; a list of draft conditions have been discussed and agreed.
- The planning conditions will be sufficient to control of those activities associated with the construction phase of the Proposed Development e.g. noise and disturbance.
- The S106 Agreement will include a range of planning obligations to address the impacts of the Proposed Development; a draft S106 Agreement is at an advanced stage of preparation.
- Construction will commence in 2021/22 (subject to obtaining planning permission) and the Proposed Development will be completed in by 2031.
- The Proposed Development will be constructed in accordance with the identified Development Parameters.
- The necessary off-site services infrastructure for the Proposed Development will be provided by statutory undertakers.

5. ARCHAEOLOGY AND CULTURAL HERITAGE

5.01 An assessment of the likely significant effects of the Proposed Development on heritage assets has been undertaken. The potential impacts of the proposed development have been considered utilising existing information contained in the Buckinghamshire and Milton Keynes Historic Environment Records, Newton Longville Conservation Area Review, the Buckinghamshire & Milton Keynes Historic Landscape Characterisation Report, and DEFRA Magic Map. A geophysical survey and archaeological evaluation has also been undertaken, the scope of which was agreed with Buckinghamshire County Council.

5.02 There are no scheduled ancient monuments, listed buildings, conservation areas, registered parks and gardens, battlefield sites or World Heritage Sites within the Application Site. Therefore, there will be no direct impacts on designated historic assets.

5.03 The Proposed Development lies beyond the setting of Lower Salden Farmhouse (Grade II) which lies 1.5km to the south west of the site. The Proposed Development will have no effect on the setting or significance of the house.

5.04 The Newton Longville Conservation Area is entirely surrounded by late 20th century development. The Proposed Development will be visible in long distance views from Whaddon Road within the Conservation Area. The Proposed Development will not be visible from elsewhere within the Conservation Area. The Proposed Development will have a minor change on the periphery of the setting of the Conservation Area and no change to the significance of the Conservation Area, and these effects are assessed as not significant.

5.05 There are two areas of late prehistoric/Roman settlement within the Application Site, which were identified during the geophysical survey and evaluation trenching. These are classified as non-designated archaeological remains. The Proposed Development has been designed so that the settlement areas will be preserved within open space and school playing fields. Consequently, the Proposed Development will have a negligible impact on non-designated archaeological heritage assets, which is not significant. Furthermore, an archaeological watching brief will be implemented so as to enable any peripheral remains that may be associated with these settlements to be recorded.

5.06 The historic landscape of the site is essentially that of 19th century parliamentary enclosure which has subsequently suffered from significant hedgerow loss. The hedgerows within the Site will be retained and therefore there will be a negligible effect on the parliamentary enclosure field system, which is not significant.

5.07 Weasel Lane is the oldest surviving feature of the historic landscape within the Site. Weasel Lane will be incorporated into the Proposed Development and would be mostly retained unaltered except where internal roads cross the lane. The Proposed Development will have a minor impact on Weasel Lane, but this is not significant.

5.08 Overall, the Proposed Development will have a minor impact on the historic environment.

6. AGRICULTURAL LAND

6.01 The Application Site comprises approximately 119 Ha of Grade 3b agricultural land and 16 Ha of Grade 3a agricultural land. It is the Grade 3a land that falls into the 'best and most versatile agricultural land quality' category. The agricultural land is primarily in arable use with a small area of grassland on the northern boundary. The Site is occupied by three farm businesses under a variety of tenures, with two of the businesses operating full time and one operating on a part time basis.

6.02 The Proposed Development involves the loss of less than 20 hectares of 'best and most versatile agricultural land'. The effect of the loss of this quantity of the 'best and most versatile agricultural land' is assessed as minor adverse, which is not significant. The adverse effects on agricultural land cannot be adequately addressed through mitigation measures and would remain as a result of the Proposed Development.

6.03 The development will involve the loss of land from three occupying agricultural businesses. The effect of the loss of land from the two full time businesses is assessed minor adverse and effect of the loss of land from the part-time business is assessed as negligible. The effects on the existing farm businesses are not significant. The full time business will to continue to farm in a viable and sustainable manner on other land and the part time business will continue to farm the remainder of the land within the smallholding.

6.04 The existing soil resources on the Application Site will be reused for the open space and landscaping within the Proposed Development.

6.05 The Proposed Development includes strong physical boundaries and areas of open space to restrict the possibility of trespass of neighbouring agricultural land.

7. ECOLOGY

7.01 An assessment of the likely significant effects of the Proposed Development on ecology and nature conservation has been undertaken. The ecological assessment comprises an assessment of desk study information and habitat and species surveys at the Application Site and surrounding area. The search area for biodiversity information was determined by the significance of sites and species and potential zones of influence i.e. 20km from a site of international importance, 3km from a site of national or regional importance, and 1km for non-statutory designated sites.

7.02 Ecological survey work has been carried out at the Site in 2002, in 2006 to 2009, in 2012 to 2014, and in 2018 to 2020. An Extended Phase 1 Habitat Survey was carried out in April 2020, which confirmed that the current ecological importance and condition of the Site remains as characterised in previous surveys. The following detailed field survey work has been carried out at the Site: badger; bats; riparian mammals; breeding birds; reptiles; and amphibians. In addition, relevant ecological information was collected from a range of organisations including DEFRA MAGIC Map, Buckinghamshire and Milton Keynes Environmental Records Centre, Buckinghamshire Badger Group and North Buckinghamshire Bat Group.

7.03 The Site itself is dominated by farmland, bisected by Weasels Lane, with arable fields to the south and a combination of arable farmland and grazed grassland /arable leys to the north. Fields across the Site are typically bound by field hedgerows, as well as some drainage ditches. Some remnant wooded and scrub habitats are present to the north of the Site, along with a number of small and derelict ponds.

7.04 There are no statutory nature conservation designations present on or immediately adjacent to the Site. Furthermore, there are no nature conservation designations of international importance (e.g. Special Protection Areas [SPAs], Special Areas of Conservation [SACs] or Ramsar Sites) within 20km of the Site. A total of two Sites of Special Scientific Interest (SSSI) and a single Local Nature Reserve (LNR) are present within 3km. In addition, three non-statutory Local Wildlife Sites (LWSs) are present within 2km of the Site.

7.05 The assessment identified significant effects as those which change the conservation status or degree of integrity of any important ecological feature.

7.06 No significant effects from the Proposed Development have been identified at the designated sites at Howe Park Wood SSSI, Oxley Mead SSSI, Blue Lagoon LNR, Railway sidings east of Salden Wood LWS, Broadway and Thrift Wood LWS, Salden Wood LWS, or the Milton Keynes Wildlife Corridors.

7.07 The assessment has identified moderate adverse effects at the construction stage on Hedgerow and Mature Trees, woodland, bats, and birds unless mitigation measures are implemented. No significant effects at construction stage are identified on badgers, reptiles and amphibians provided mitigation measures are implemented.

7.08 No significant effects are identified on protected species and habitats once the Proposed Development is completed and mitigation measures have been implemented. The ecological measures will be secured by a planning condition and a site wide Ecological Mitigation, Enhancement and Management Plan (EMEMP) will be implemented for the Proposed Development.

7.09 The following ecological mitigation measures are included within the Proposed Development:

- Hedgerows: The existing hedgerows and habitats are retained and protected, with new hedgerow planted, and a hedgerow management and enhancement scheme implemented.

- Woodland: The existing woodland habitat is retained and protected, with new woodland planted, and a woodland management and enhancement scheme implemented.
- Bats: The trees which would be subject to felling or significant work will be surveyed prior to construction, with new habitat, bat hop-overs, integrated bat boxes and sensitive lighting scheme implemented.
- Badgers: The existing badger setts are retained, with badger surveys undertaken prior to construction phase, and precautionary working methods and sensitive lighting scheme implemented.
- Birds: Nesting bird avoidance measures will be implemented at construction phases, and new habitat created and integrated bird boxes provided.
- Reptiles: Precautionary clearance methods implemented at construction phase, and new habitat created for reptiles.
- Amphibians: The existing ponds will be retained, and new habitats will be created including wildlife ponds and micro-pools within the sustainable drainage system.

7.10 A Biodiversity Metric Calculation has been undertaken for the Proposed Development which demonstrates that there would be a substantial net gains for biodiversity and for hedgerows.

8. DRAINAGE

8.01 An assessment of the likely significant effects of the Proposed Development on drainage has been undertaken. The assessment incorporates the findings of the Flood Risk Assessment (FRA) contained in ES Appendix 8.1. The FRA sets out the drainage strategy for the Proposed Development.

8.02 The majority of the Application Site is located within Flood Zone 1 of the EA Flood Map and therefore is at low risk of flooding. The north western corner of the site is within Flood Zones 2 and 3 and as such is at high risk of flooding. All buildings within the Proposed Development will be located within Flood Zone 1.

8.03 A Construction Environmental Management Plan will be prepared for the construction phase of the Proposed Development to manage flood risk and drainage and to prevent pollution to water. The assessment identified negligible effects on flood risk, surface water drainage, geomorphology, water resources and ground water during the construction phase of the Proposed Development. The assessment identified a minor adverse effect on water quality during the construction phase, but the effect is not significant and guidance on water pollution would be implemented to protect water quality.

8.04 The Proposed Development will include sustainable drainage systems comprising rainwater harvesting and permeable paving, and attenuation basins will be included to attenuate surface water run-off to green field rates. The surface water drainage strategy for the Proposed Development would ensure that there are no significant effects on flood risk, drainage and water.

9. LANDSCAPE AND VISUAL

9.01 The likely significant effects of the Proposed Development on landscape and visual amenity during both construction and operational phases have been assessed.

9.02 The Application Site is located immediately adjacent to the south western settlement edge of Milton Keynes and Bletchley. It comprises undulating farmland which rises to a local ridgeline along Weasel Lane, falling gently northwards to the A421 and southwards towards the disused railway. The Site shares many of the characteristics of the wider Newton Longville – Stoke Hammond Claylands (LCA 4.9 in AVDC LCA). It is related to both the existing settlement edge of Milton Keynes and Bletchley and to the rural surroundings.

9.03 It is assessed that the Site has reasonable ability to accommodate change without being discordant with the surrounding landscape/townscape character. The Site is assessed as being of medium landscape quality and medium-low landscape value. Overall, the Site is assessed as being of medium-low landscape sensitivity.

9.04 The Proposed Development has been sensitively designed to retain as much of the existing trees and vegetation on the field and Site boundaries as practicable. Several sections of the Site's hedgerows will require removal in order to facilitate the new accesses into the Site, the internal road and areas of housing and built form. The proposals will bring a number of benefits to the prospective and current residents of the area. These include extensive new areas of public open space including several MUGAs, NEAPs and LEAPs, new pedestrian footways and cycleways linking to the existing public rights of way network, together with a new neighbourhood centre, school, employment and various full size sports pitches to accommodate various different sports.

9.05 The Landscape Strategy Plan (Drawing No. CSA/4587/105 RevE) for the Proposed Development is provided in **Appendix 4**.

9.06 The landscape effects resulting from the Proposed Development after mitigation planting has established, will generally be no greater than slight adverse, which is not significant. The loss of farmland within the Site will result in a moderate adverse landscape effect on the character of the Site and the immediate area, which is significant. There will also be some slight beneficial residual landscape effects arising from the substantial amounts of tree and hedgerow planting that will take place as part of the Proposed Development.

9.07 The visual effects resulting from the Proposed Development after mitigation planting is established, will generally reduce to slight adverse which are not considered significant. There will be some residual visual effects that are significant, which are confined to public vantage points within and near to the Site. These visual receptors will experience moderate adverse visual effects following mitigation. Those receptors that will experience moderate adverse visual effects are as follows: users of Milton Keynes Boundary Walk within the southern part of the Site; users of Weasel Lane crossing the Site; residential properties on the northern edge of Newton Longville; residential properties on the edge of Bletchley adjacent to the Site; and, residential properties adjacent to the northern and western Site boundaries. These effects are considered to be significant.

10. TRAFFIC AND TRANSPORT

10.01 The significant effects of the Proposed Development on traffic and transport have been assessed. The Transport Assessment, contained in ES Appendix 10.1, provides full details of the impact of the Proposed Development on the local and strategic highway network. A worst case assessment of the transport network has been undertaken that considers the impacts of the Proposed Development on all modes during both the construction and operational phases. Due consideration has also been given to impacts on surrounding villages, highway safety and the strategic road network

10.02 The Proposed Development includes proposals to create new access points and improvements to the wider highway network, comprising the following: new highways access points to Whaddon Road, Buckingham Road, and a 'left in' only junction from A421; junction improvements to specific junctions on A421 and other key routes; financial contribution towards other highway improvements along A421 further west towards Buckingham and in the east through Milton Keynes; traffic calming on all the approach roads leading towards Newton Longville to discourage 'rat-running' and reduce vehicle speeds; speed management proposals for other local villages; and; funding to either extend an existing bus service or implement a new 'start up' service to connect the Proposed Development with Central Milton Keynes and social infrastructure.

10.03 The Proposed Development includes walking, cycling and public transport infrastructure and facilities, which would connect to the existing networks in the surrounding area thus providing future residents with the opportunity to travel by non-car modes of transport.

10.04 A Construction Traffic Management Plan would be implemented to address the impact of construction traffic on Buckingham Road, Whaddon Road and A421. It is assessed that there would be a negligible effect on these roads from construction traffic associated with the Proposed Development, which is not significant.

10.05 The traffic levels at all potentially affected junctions have been assessed. A Travel Demand Management Strategy and Framework Travel Plan would be implemented for the operational phase of the Proposed Development to reduce traffic levels. Local highway improvements would be implemented as part of the Proposed Development to mitigate the impact of traffic levels at the following locations: Whaddon Road at Site access; Bottle Dump Roundabout and Whaddon Crossroads; on Whaddon Road; A421 Standing Way and Tattenhoe Roundabout; Buckingham Road,; and, in Newton Longville. It is assessed that with these mitigation measures and local highway improvements there would be no significant effect on traffic levels from the Proposed Development.

11. AIR QUALITY

11.01 The potential air quality impacts associated with the Proposed Development during the construction and operational phases have been assessed. There is potential for construction activities to have an impact on air quality at both existing and new properties, and the main pollutants of concern are dust and particulate matter PM_{10}. The air pollution in urban areas and close to main roads is dominated by emissions from vehicles, and the main pollutants emitted from road traffic are nitrogen dioxide (NO_2) and fine particulates (PM_{10} and $PM_{2.5}$).

11.02 The Application Site does not fall within an Air Quality Management Area, and the existing conditions within the study area show good air quality with concentrations all below the air quality objectives.

11.03 The impacts from dust and particulates on existing and future residents during the construction phase of the Proposed Development have been assessed. A Construction Environmental Management Plan and Dust Management Plan would be implemented to separate dust causing activities from residents and to minimise the impact of pollution and dust from construction activities. It is assessed that the effects on air pollution from construction activities associated with the Proposed Development would be not significant provided the identified mitigation measures are implemented.

11.04 The results of the assessment demonstrate that the Proposed Development would lead to negligible increases in pollutant concentrations for existing and future residents, but the levels would remain below air quality objectives for NO_2, PM_{10} and $PM_{2.5,}$ and statutory objectives would not be exceeded. The effect on air quality is assessed as not significant.

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12. NOISE AND VIBRATION

12.01 The potential direct and indirect noise and vibration impacts arising from construction activities, road traffic and noise associated with the employment uses of the Proposed Development have been assessed.

12.02 Noise from the Proposed Development would be generated by construction activities (ground preparation, excavation for foundations, construction of roads and buildings, offloading of materials and vehicle movements), fixed plant equipment (in employment area, schools and local centre), additional road traffic, and a reopened railway line. The existing and future residents are those that would be most affected by noise from the Proposed Development unless mitigation measures are implemented.

12.03 A Construction Environmental Management Plan (CEMP) would be implemented for the Proposed Development to address impacts associated with construction noise and vibration. The CEMP would ensure that good working practices, including the maintenance of equipment and public relations, are implemented in order to protect residents from noise and vibration during the construction phase. It is assessed that construction noise would result in a negligible to moderate adverse effect, which is not significant. It is assessed that the effect from construction vibration would be negligible, which is not significant.

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12.04 The potential impacts of noise during the operational phase of the Proposed Development have been assessed. The detailed impacts of noise will be assessed at detailed design stage. It is proposed that internal noise impacts will be addressed by separating dwellings from noise sources, providing boundary screening, and providing internal layouts and sound insulation measures within buildings. The external noise impacts will be addressed by providing boundary acoustic treatment and by using buildings to screen gardens and external amenity areas from noise sources. The commercial and industrial buildings will be designed to include appropriate noise mitigation measures, with external activities controlled to minimise operational noise. It is assessed that the effects from internal and external noise and noise from commercial and industrial development would be negligible provided the noise mitigation measures are implemented at detailed design stage, which is not significant.

13. SOCIO-ECONOMIC ISSUE

13.01 An assessment of the likely significant effects of the Proposed Development on socio-economic issues have been assessed in the EIA. Socio-economic issues include housing, employment and community infrastructure.

13.02 The Proposed Development would have long-term significant beneficial impacts on the local economy. The Proposed Development will primarily have the capacity to provide 1,855 new mixed tenure dwellings. This will help meet the identified housing need in Aylesbury Vale. The development would also ensure significant provision of affordable housing units, which will contribute significantly towards one of the most important local priorities.

13.03 The Proposed Development would create employment opportunities during the construction phase. The Proposed Development includes 2.07 hectares of land for employment uses, comprising small scale starter business units. The growth in the local population would support the local economy by providing employees for businesses, services and facilities. In a wider socio-economic context, the Proposed Development has the
13.04 potential to raise the local area's economic profile with regards to economic activity, employment and income. The employment opportunities would be a minor beneficial effect.

13.05 The Proposed Development would provide land for a primary school and secondary school, neighbourhood centre, additional community and recreational facilities, which will be a moderate beneficial effect for the local community. The significant amount of multifunctional green infrastructure to be provided within the Proposed Development would be a minor beneficial effect.

13.06 The Proposed Development will have long-term significant minor to moderate beneficial effects on the local economy.

14. SERVICES AND UTILITIES

14.01 An assessment of the significant effects of the Proposed Development on the services and utilities have been assessed in the EIA. The services and utilities relate to water, gas, electricity, telecommunications and oil pipelines. The Application Site has no utility supply provision, although there are a number of existing utility supplies present in adjacent residential areas supplying water, electricity, gas and telecommunications. There are a number of services that pass through the Site.

14.02 An oil pipeline crosses the middle of the site in a north south direction; an exclusion zone for the pipeline is incorporated into the layout of the Proposed Development. There are high voltage overhead power lines crossing the north western part of the site; the power lines will be placed underground as part of the Proposed Development. An intermediate pressure gas main passes through the eastern part of the site in a north south direction; the gas main will fall within land set aside for the grid road reserve.

14.03 The effects associated with the Proposed Development are the short term loss of supply during works to connect to the supply network at the construction phase and shortages of service supplies locally and in the wider network due to constraints in the supply network at the operational phase.

14.04 The network operators have developed methodologies to permit live jointing whereby the existing network remains fully operational during connection works. If the local network needs to be shut down for a temporary period, the supply company is obliged to give adequate notice to the affected users and ensure that appropriate provision is made for essential supplies.

14.05 A potential loss of supply through network damage is mitigated through careful planning of the construction phases of the development and good construction practice.

14.06 The regulatory regimes applicable to public service supply companies dictate that any network expansion should result in no loss or reduction of service. The supply companies will ensure that the minimum regulatory standards are maintained and that no environmental effect will result from supplying the Proposed Development.

14.07 Any short-term potential effects during the construction phase are assessed as minor, which is not significant. There will be no significant effects during the operational phases because the supply will be maintained by the utility companies.

15. WASTE

15.01 The likely significant effects of the Proposed Development in terms of waste have been assessed. For the purpose of this assessment, 'waste' is defined as "any substance or object the owner discards, intends or is required to discard".

15.02 In the context of the Proposed Development, waste is anticipated to comprise the following:

- Construction waste arising from site clearance, excavation and construction activities;
- Household waste generated by residents; and,
- Commercial waste generated by businesses and people using the local facilities.

15.03 A Site Waste Management Plan will be prepared for the construction phase of the Proposed Development to minimise the amount of waste generated during site clearance and construction activities, so that construction waste is reused on-site or reused and recycled off-site. The Site Waste Management Plan would be secured by planning condition to ensure that it is implemented. It is assessed that the effect of construction waste from the Proposed Development would be negligible and not significant.

15.04 Internal and external waste and recycling storage facilities will be provided within dwellings at the Proposed Development. The Council operates a weekly kerbside food waste collection service which residents of the Proposed Development would use. The Proposed Development will provide home composting and community composting facilities for residents. It is assessed that the effect on household waste from the Proposed Development would be negligible and not significant.

15.05 The commercial and industrial uses within the Proposed Development would be provided with waste and recycling storage facilities. It is assessed that the effect on commercial waste from the Proposed Development would be negligible and not significant.

16. GROUND CONDITIONS

16.01 The likely significant effects of the Proposed Development on ground conditions have been assessed. An Interpretive Environmental Desk Study Report has been prepared to determine the ground conditions at the Application Site, and is contained in ES Appendix 16.1

16.02 The ground conditions assessment considered the potential impacts on the following receptors:

- effects on geology, soils and contamination;
- effects on human health (site users and adjacent site users including construction workers);
- the disturbance of potentially contaminated soils and the potential for construction to establish pathways between contaminants and receptors;
- effects on infrastructure in the operational phase (new building foundations and buried service pipes); and,
- effects on controlled waters, specifically from the mobilisation of contaminants to controlled waters.

16.03 It is not possible to mitigate the loss of soil from agricultural land, which is assessed as a major adverse effect that is significant.

16.04 A Materials Management Plan will be implemented at the construction phase of the Proposed Development to ensure materials do not risk human health. It is recommended that further ground investigation is undertaken at detailed design stage with a remediation strategy implemented if required. It is assessed that, with these mitigation measures, the effect on human health from ground conditions will be negligible and not significant.

16.05 The Construction Environmental Management Plan would ensure that material stockpiles are covered/sealed during construction phase to prevent contamination of drainage network. The temporary and permanent surface water drainage strategy for the Proposed Development would be implemented to prevent contamination from surface water run-off during the construction and operational phases. It is assessed that, with these mitigation measures, the effect on controlled waters from ground conditions will be negligible and not significant.

16.06 The Construction Environmental Management Plan will require the appointed contractor to maintain a watching brief during the construction phase so that any unexpected contamination is dealt with in an efficient and appropriate manner.

17. CLIMATE CHANGE

17.01 The likely significant effects of the Proposed Development on climate and the effects of climate on the Proposed Development have been assessed. The emission of greenhouses gases from the Proposed Development will have an impact on global warming which affects the climate. As a result of changes to the climate, the Proposed Development could potentially be affected by the urban heat island effect, increased flood risk, water shortage and drought, subsidence and extreme weather events.

17.02 The emission of greenhouse gases would be derived from construction activities and from transport movements and buildings within the Proposed Development. The following mitigation measures are included within the Proposed Development to address the impacts on the climate:

- The manufacturers, suppliers and materials for the proposed buildings will be selected to reduce carbon emissions, including through the use of local suppliers and the use of reusable and recyclable materials.
- The detailed design of the buildings will be based on the energy hierarchy, including energy efficient buildings and the use of renewable energy.
- The use of sustainable modes of transport will be encouraged through the design and layout, including the delivery of walking, cycling and public transport facilities.
- Framework Travel Plans will be implemented for all uses to ensure the use of sustainable modes of transport.

17.03 It is assessed that if these mitigation measures are implemented within the Proposed Development that the effects would be minor adverse and therefore not significant.

17.04 The mitigation measures included within the Proposed Development to address effects of climate change are as follows:

- A surface water drainage strategy will be implemented including swales and attenuation ponds.
- The water will be recycled and reused.
- Measures to reduce consumption and discharge of water will be implemented.
- Green infrastructure included in the design and layout and a landscape strategy implemented.
- At detailed design stage passive design measures will be provided including energy efficient lighting, external shading and landscape planting.
- At detailed design stage active design measures will be provided including the use of mechanical ventilation and low energy cooling systems.
- At detailed design stage the appropriate plants and vegetation will be selected and a maintenance strategy will be implemented to deal with extreme weather.

17.05 It is assessed that the effect would be neutral and not significant if these mitigation measures are included within the Proposed Development.

18. MAJOR ACCIDENTS AND DISASTERS

18.01 The likely significant effects arising from the vulnerability of the Proposed Development to major accidents and disasters (MA&D) has been assessed.

18.02 The assessment of major accidents and disasters identifies whether an appropriate risk management structure is in place, for both health and safety and environmental risks from the Proposed Development. It also reports on whether the potential for major accidents and disaster events to impact on human health and the environment has been identified for the Proposed Development and how it will be managed to be as low as reasonably practicable. The purpose of the assessment is to identify risks which require additional precautionary mitigation measures beyond those already embedded into the design, construction and operational phases of the Proposed Development.

18.03 Given the controls, mitigation and processes that are in place it is considered that the risks of any MA&D event occurring will be managed to be as low as reasonably practicable. As a result, all risks of MA&D events occurring on the Proposed Development or as a result of the Proposed Development are Not Significant in both the construction and operation phases.

18.04 The major accidents and disasters that have been assessed at construction and operational phases for the Proposed Development are as follows:

- Flooding event
- Severe weather (extreme temperatures and drought) event
- Poor air quality event
- Urban fires event
- Human diseases event
- Power failure event
- System failure event
- Major traffic accidents event
- Industrial and urban accidents event
- Pollution accidents event

18.05 The following measures will be implemented in order to prevent the possibility of these major accident and disaster events from occurring at the Proposed Development:

- Health and safety legislation;
- Emergency response planning;
- Construction Environmental Management Plan;
- Drainage, services and utilities, and ground conditions mitigation;
- Transport mitigation; and
- Air quality mitigation

18.06 The effect of major accidents and disasters on the Proposed Development is assessed as not significant if these mitigation measures are implemented, and no additional mitigation measures are required.

19. SIGNIFICANT, CUMULATIVE AND INTERACTIVE EFFECTS

19.01 The likely significant interactive and cumulative effects of the Proposed Development following implementation of the proposed mitigation measures have been assessed in Chapters 5 to 18 of the ES. This Chapter provides a summary of the main effects, including those effects which are significant. Table 19.1 in Appendix 5 summarises the likely significant effects of the Proposed Development.

19.02 There are three environmental topics where significant effects as a result of the Proposed Development are identified: agriculture, landscape and ground conditions. There are significant effects identified on the following sensitive receptors:

Agriculture

- Loss of approximately 16 Ha of best and most versatile agricultural land

Landscape

- Arable farmland (during construction and operational phases)
- Watercourses (during construction phase)
- The Site and immediately surrounding area (during construction and operational phases)
- Users of A421 and B4034 (during construction phase)
- Users of Whaddon Road, west of Site (during construction phase)
- Users of footpath NLO/18/1, south east of the Site (during construction phase)
- Users of Milton Keynes Boundary Walk within the southern part of the Site (during construction and operational phases)
- Users of Weasel Lane, crossing the Site, forming part of the Milton Keynes Boundary Walk (during construction and operational phases)
- Users of Weasel Lane, west of Site (during construction phase)
- Residential properties on northern edge of Newton Longville (during construction and operational phases)
- Residential properties on edge of Bletchley, including ‘New Leys Farmhouse’, indented into northern Site boundary (during construction and operational phases)
- Residential properties at Bletchley Leys Farm adjacent to western Site boundary and ‘The Leys Farmhouse’, indented into western Site boundary (during construction and operational phases)
- Residential properties adjacent to the eastern Site boundary within Bletchley (during construction and operational phases)

Ground Conditions

- Soils

19.03 The significant effects on agricultural land and soil cannot be addressed through mitigation measures. A number of the significant effects on landscape would only occur during the construction phase and as such would be temporary, although significant effects on landscape would occur during the construction and operation phases for the nearest residential properties but the significant effects would be reduced once landscape mitigation measures have been implemented.

Cumulative Effects

19.04 Cumulative effects are impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the Proposed Development. Table 19.2 identifies the cumulative developments considered, the potential sensitive receptors from cumulative effects and the significance of those cumulative effects.

19.05 The traffic modelling has included all known committed developments within and on the edge of Milton Keynes, and as such the cumulative effect of traffic from these developments on air quality and noise matters has already been assessed and mitigation measures identified.

19.06 It is anticipated that all known committed developments would meet all regulation and policy requirements e.g. construction activities, drainage, waste and be subject to planning conditions to control these matters.

19.07 The assessment of cumulative effects has identified no additional significant effects on any environmental topic or sensitive receptor. The Proposed Development already includes mitigation measures to address significant effects on sensitive receptors, and those mitigation measures would also address any adverse cumulative effects.

Interactive Effects

19.08 Interactive effects arise where the effects of development on one environmental topic bring about changes in another topic. The original version of the ES identified interactive effects related to water. It is noted that all of the previously identified interactive effects related to water were assessed as negligible, and therefore not significant and no additional mitigation measures were required. Chapter 8: Drainage of this updated ES did not identify any interactive effects related to water, on the basis that during the construction phase a Construction Environmental Management Plan would be implemented to prevent water pollution, and during the construction and operational phases drainage facilities would be provided to control the discharge of surface water run-off to limit the interaction between the surface and groundwater. These proposed mitigation measures would prevent pollutants from entering watercourses or the drainage system.

20. CONCLUSION

20.01 An updated ES has been prepared to address a number of minor amendments that have been made to the Planning Application (AVDC Ref. 15/00314/AOP) and to reflect changes in regulation, policy and guidance that have occurred since the original application was submitted in 2015. This updated ES supersedes the ES prepared in January 2015 and its Addendum in August 2016.

20.02 Regulatory changes include the Town and Country Planning (Environmental Impact Assessment) Regulations which were revised in 2017. Schedule 4 of the EIA Regulations 2017 identifies the topics that should be addressed in an ES. There are three environmental topics that were not assessed in the original ES but are included in this updated ES, which are as follows: human health, climate change and disaster management. There have also been changes to relevant adopted and emerging development plan documents and policies since the Planning Application was submitted; Plan:MK was adopted in 2019 and the emerging Vale of Aylesbury Local Plan (VALP) was prepared and submitted for examination in 2017, with consultation on proposed modifications in late 2019. The Application Site is now identified as an allocation in the Submission Vale of Aylesbury Local Plan (SVALP2017) for a mixed use sustainable urban extension – Site Ref. NVL001: Land at South West Milton Keynes.

20.03 It should be noted that the Application Site and the Applicant are unchanged. The Proposed Development still provides for a mixed-use sustainable urban extension for up to 1,855 dwellings on 144.85 Ha of land to the south west of Milton Keynes. The description of development has changed to include extra care units within the total quantum of proposed new housing.

20.04 Draft conditions for the Proposed Development have been discussed with the former AVDC and are agreed subject to minor amendments. The final conditions will need to relate to the updated Planning Application documents.

20.05 The S106 Agreement for the Planning Application has been discussed with the former AVDC, MKC and former Buckinghamshire County Council. The Agreement is at an advanced stage but has not yet been completed and signed.

20.06 This updated ES has reconsidered alternative sites and alternative site layouts as required by the EIA Regulations 2017.

20.07 Development Parameters have been established and assessed for the Proposed Development so that appropriate planning conditions can be defined which would provide limits and controls for future reserved matters applications.

20.08 All likely significant effects have been identified and the proposed mitigation measures have been assessed in Chapters 5 to 18 to inform conclusions as to the residual effects of the Proposed Development on the environment. Chapter 19 summarises the likely significant effects of the Proposed Development

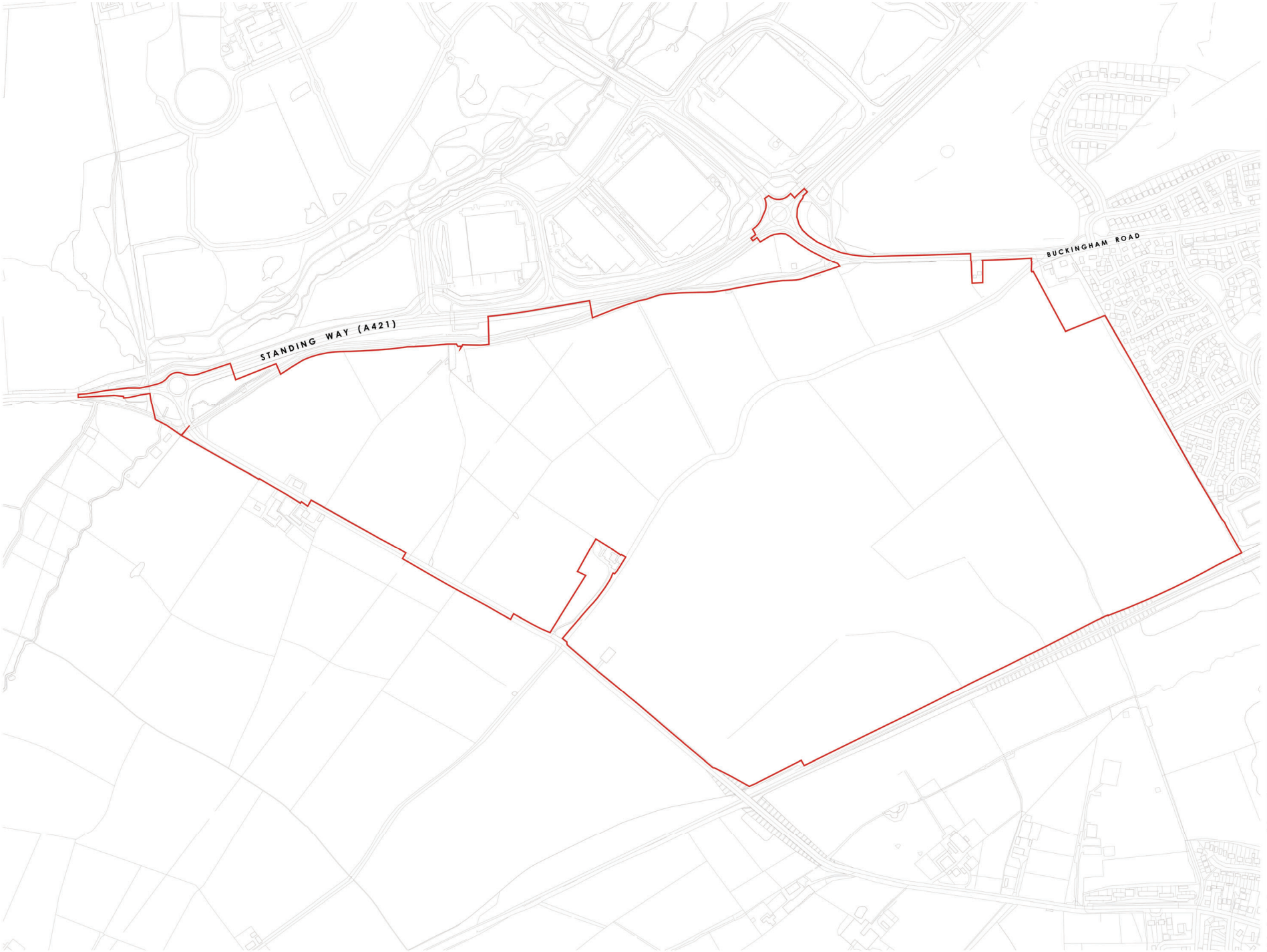
20.09 There are three environmental topics where significant effects as a result of the Proposed Development are identified, which are: agriculture, landscape and ground conditions. The significant effects on agricultural land and soil cannot be addressed through mitigation measures. A number of the significant effects on landscape would only occur during the construction phase and as such would be temporary, although significant effects on landscape would occur during the construction and operation phases for the nearest residential properties but the significant effects would be reduced once landscape mitigation measures have been implemented.

20.10 The assessment of cumulative effects has identified no additional significant effects on any environmental topic or sensitive receptor. The Proposed Development already includes mitigation measures to address significant effects on sensitive receptors, and those mitigation measures would also address any adverse cumulative effects.

20.11 No significant interactive effects have been identified in the assessment.

20.12 In conclusion, the likely significant environmental effects of the Proposed Development are identified and assessed in this ES, both during the construction phase and once completed. Mitigation measures are proposed to prevent, reduce and offset any significant adverse effects on the environment arising from the Proposed Development. This updated ES has been prepared in accordance with the EIA Regulations 2017, and it provides sufficient information to enable the decision makers to understand and take into account the likely significant environmental effects arising from the Proposed Development.

APPENDIX 1: SITE LOCATION PLAN



N

0 1km 2km

Site Boundary: Approx. **144.85ha**

Rev	Date	By	Description
A	16.04.20	JC	Project title update

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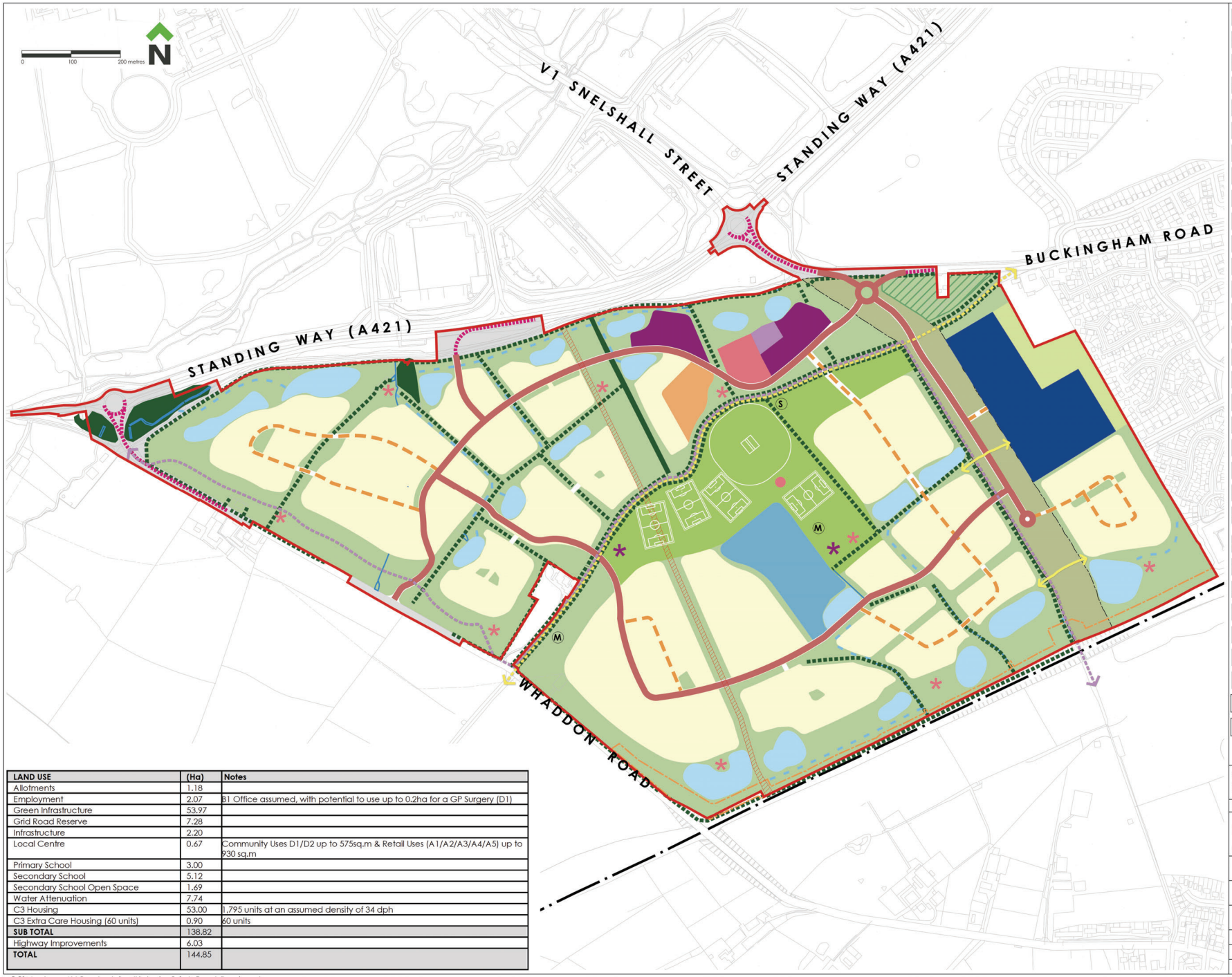
Project	Land at South West Milton Keynes
Title	Site Location Plan
Client	Taylor Wimpey UK Ltd, William Davis Ltd, Hallam Land Management Ltd, Bellcross Homes and Connolly Homes
Scale	1:2500 @ A0
Drawn	SM
Date	March 2020
Checked	RR
Drawing No.	CSA/4827/111
Rev	A

APPENDIX 2: DEVELOPMENT FRAMEWORK PLAN



LAND USE	(Ha)	Notes
Allotments	1.18	
Employment	2.07	B1 Office assumed, with potential to use up to 0.2ha for a GP Surgery (D1)
Green Infrastructure	53.97	
Grid Road Reserve	7.28	
Infrastructure	2.20	
Local Centre	0.67	Community Uses D1/D2 up to 575sq.m & Retail Uses (A1/A2/A3/A4/A5) up to 930 sq.m
Primary School	3.00	
Secondary School	5.12	
Secondary School Open Space	1.69	
Water Attenuation	7.74	
C3 Housing	53.00	1,795 units at an assumed density of 34 dph
C3 Extra Care Housing (60 units)	0.90	60 units
SUB TOTAL	138.82	
Highway Improvements	6.03	
TOTAL	144.85	

- Planning Application Boundary
- Primary routes - 15m corridor
- Secondary routes (Indicative)
- Improvements to existing highway
- Grid Road Reserve
- Existing Infrastructure
- Residential developable area
- Employment Area
- Neighbourhood Centre
- Potential site for a 6GP Practice within Employment Area (up to 0.2ha)
- Primary Education
- Secondary Education
- Open space included as part of Secondary Education site
- C3 Extra Care Housing Unit
- Oil Pipeline exclusion zone
- Extent of East/West Rail boundary for proposed works
- Amenity greenspace
- Central area of public open space including sports fields
- Allotments
- Indicative green space within residential parcels
- Proposed surface water attenuation features
- Potential pedestrian/cycle connections
- Milton Keynes Boundary Walk (existing restricted public byway & public footpath)
- Existing Sustrans Route 51 (existing restricted public byway)
- Disused railway line (future route of East/West railway line)
- Existing hedgerows to be retained
- Existing woodland to be retained
- Indicative Locations of Local Equipped Area for Play (LEAP) - 400sqm
- Indicative Locations of Neighbourhood Equipped Area for Play (NEAP) - 1000sqm
- Indicative location of changing pavilion
- (M) Multi-Use Games Area (MUGA)
- (S) Skateboard park

Rev	Date	By	Description
K	19.05.20	SG	Road realigned in GRR
J	18.05.20	SG	Grid Road centered in reserve
I	12.05.20	SG	Grid Road Reserve moved east and subsequent changes

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Project	Land at South West Milton Keynes
Title	Development Framework Parameters Plan
Client	Taylor Wimpey UK Ltd, William Davis Ltd, Hallam Land Management Ltd, Bellcross Homes and Connolly Homes
Scale	1:5000 @ A2
Drawn	RC
Date	Feb 2020
Checked	RR
Drawing No.	CSA/4857/100
Rev	K

APPENDIX 3: ILLUSTRATIVE MASTERPLAN

0 100 200 metres

N

- Site boundary: **144.85ha**
- Residential developable area (including extra care units): **53.90ha (up to 1,855 dwellings)**
- Proposed new community facilities:
  - Local centre: **0.67ha**
  - Employment land: **2.07ha**
  - 3 Form Entry Primary School: **3ha**
  - Secondary School: **5.12ha**
  - Allotments: **1.18ha**
- Existing public footpath
- Existing bridleway
- Existing Sustrans Route 51
- Proposed recreational routes
- Disused railway line (future route of East/West railway line)
- Existing ditches and watercourses
- Existing vegetation
- Proposed formal and informal recreation areas and green amenity spaces (to include new landscaping and tree planting): **61.71ha**
- Proposed location for sports pitches
- Proposed locations for play facilities for children and young people
- Proposed sustainable drainage features (SuDS features)
- Proposed wildlife ponds
- Listed Buildings

Rev	Date	By	Description
E	21/05/20	SG	Updated to DFPP Rev K
D	04/05/20	SG	Drainage and secondary school updated
C	29/04/20	SG	Drainage and secondary school updated
B	16/04/20	JC	Project title updated, layout amendments to the south eastern development parcel
A	31/03/20	SM	Graphical amendments

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Project	Land at South West Milton Keynes
Title	Illustrative Masterplan
Client	Taylor Wimpey UK Ltd, William Davis Ltd, Hallam Land Management Ltd, Bellcross Homes and Connolly Homes
Scale	1:5000 @ A1
Drawn	SM
Date	March 2020
Checked	RR
Drawing No.	CSA/4857/112
Rev	E

APPENDIX 4: LANDSCAPE STRATEGY

1. Native Woodland Planting

- New native woodland planting will be planted throughout the development together with the Site boundaries. This will help to break up views of the Site from the wider landscape.
- Native woodland species will provide opportunities for wildlife and enhance the biodiversity of the Site. It will help to extend the existing wildlife corridors which cross the Site from the Whaddon Chase area in the west, through the Site and into Milton Keynes.
- The new native woodland planting will also respect the visual amenity and setting of the nearby buildings.

- Typical species planted will reflect those present within local woodlands and semi-natural habitats, and those suitable to soil conditions (calcareous to neutral clay) including the following key tree and shrub species:

Species	Common name
Carpinus betulus	Hornbeam
Acer campestre	Field Maple
Quercus robur	English oak
Prunus avium	Wild cherry
Malus sylvestris	Crab apple
Salix caprea	Goat willow
Viburnum opulus	Guelder rose
Crataegus laevigata	Hawthorn, midland
Rhamnus cathartica	Buckthorn
Corylus avellana	Hazel
Ulmus sp.	Elm (disease resistant)
Prunus spinosa	Blackthorn

2. Sustainable Drainage and Wildlife Ponds and Black Poplar Planting

Sustainable Drainage Systems are incorporated into the strategy in order to allow run-off water to attenuate on Site before being released slowly into the existing watercourses. These basins will be designed to maximise benefits for biodiversity as well as to create attractive and varied landscaping. Those basins which remain dry for much of the year will be sown with a wildflower seed appropriate to chalky and/or clayey soils (Emorsgate's "EM4" & "EM6" meadow mixtures, or similar and approved) to establish species-rich grassland.

The remainder of these basins will be sown with wet grassland seed (Emorsgate's "EM8" &/or "EM11" wet meadow mixtures, or similar and approved) to establish species-rich wet grassland . In all instances, and importantly, nutrient rich topsoil will not be added prior to sowing of wildflower seed to ensure optimum low-nutrient growing conditions for the establishment of species-rich semi-natural grassland. Following initial establishment with more intensive management, long-term management of grassland within basins will comprise a standard nature conservation cut, with all arisings removed to maintain low-nutrient growing conditions.

A proportion of the basins, principally along the north west and along the southern boundary of the Site, will be designed to incorporate 'micro-pools' to serve as a network of wildlife ponds integrated into the SuDS design.

These 'micropools' are effectively central areas of the basins which are 'over dug' beyond their required drainage capacity in order to provide permanently wet waterbodies. These areas would be lined, either with naturally occurring clay horizons or with an installed artificial liner, and would provide substantive benefits for amphibian and other local wildlife. Furthermore, the ponds and surrounding grassland would ensure any mitigation measures in respect of great crested newt *Triturus cristatus* would be integrated into the scheme.

Off-line from SuDS features, six dedicated wildlife ponds will be created, to the northwest and southeast of the Site. These ponds are located in low-lying areas of the Site, close to important amphibian populations within informal open spaces. These water bodies will be formed through the use of site-won or imported puddling clay to create permeant natural features in the landscape. Natural colonisation of aquatic plants will be favoured, although some introduction of oxygenating and floating native species may be necessary to improve water quality and prevent drying, respectively.

Three former field ponds which have silted up / scrubbed over will also be restored through excavation of silt and careful removal of vegetation subject to tree protection measures. These small ponds will be allowed to colonise naturally with remnant aquatic seedbank.

Finally, in association with wetland features, locally grown native black poplar *Poplus nigra* ssp *betulifolia*, one the UK's rarest trees, will be planted. Plants will be sourced via the National Black Poplar Conservation Group, which is coordinated by AVDC. Other native wetland tree species will also be planted, such as grey willow *Salix cinerea*, goat willow *Salix caprea*, osier *Salix viminalis*, alder *Alnus glutinosa*, downy birch *Betulus pubescens* and guelder rose *Viburnum opulus*.

5. Existing Landscape Framework

Across the Site, effort has been made within the scheme design to retain the vast majority of existing hedgerows and woodland belts. Removals will only take place to facilitate access onto Site. The retained vegetation, especially along Weasel Lane, will provide a setting for the new homes and maintain the existing wildlife corridors across the Site.

Site-wide management and enhancement of remnant woodland habitats and the retained hedgerow network will be implemented as part of the Scheme. This will include eradication of invasive non-native species (e.g. variegated yellow archangel and hybrid bluebell), translocation of ground flora/woody features from impacted woodland/hedgerows, the direct aiding of dispersal of certain ground flora (e.g. native bluebell), sensitive coppicing/management of understory and hedgerows, sowing/planting of native ground flora to species-poor areas and appropriate fencing/protection of sensitive areas from recreational impacts.

4. New Public Parks

A range of attractive, accessible and linked open spaces will be provided across the Site, incorporating formal and informal play and recreation spaces. These will include various linear parks running through the Site, wrapping around the western and northern boundary, and through the centre of the Site. There will also be a new district park located through the centre of the Site and along the southern boundary. This will include NEAPs, LEAPs, MUGAs, outdoor sports facilities, incidental open space within residential development parcels, a community allotment and a community orchard. There is also an opportunity to provide trim trail stations at regular intervals throughout the generous open space on Site. The SuDS features on Site will be incorporated into these spaces to provide visual interest and biodiversity benefits.

Planting within these parks and open spaces will be informed by the ecological surveys to provide high quality wildlife habitat together with an amenity benefit. Species will include predominantly native species with some more ornamental species in the smaller scale spaces within the residential blocks:

Trees and shrubs:
Hornbeam - *Carpinus betulus*
Silver birch - *Betula pendula*
Hazel - *Corylus avellana*
Hawthorn - *Crataegus monogyna*
Dogwood - *Cornus sanguinea*
Field Maple - *Acer Campestre*
Wayfaring tree - *Viburnum lantana*
Guelder rose - *Viburnum opulus*

Wildflower grassland:
Emorsgate's "EM4" &/or "EM6" meadow mixtures or similar and approved, to include:
Common Knapweed - *Centaurea nigra*
Lady's Bedstraw - *Galium verum*
Oxeye Daisy - *Leucanthemum vulgare*
Birdsfoot Trefoil - *Lotus comiculatus*
Cowslip - *Primula veris*
Yellow Rattle - *Rhinanthus minor*

Hedgerows
Hawthorn midland - *Crataegus laevigata*
Blackthorn - *Prunus spinosa*
Field rose - *Rosa arvensis*
Hazel - *Corylus avellana*
Hornbeam - *Carpinus betulus*

3. Play Areas

A large area of public space is provide to the south of Weasel Lane, which includes several sports pitches, a cricket pitch, a Neighbourhood Equipped Area for Play (NEAP), a Multi-Use Games Area (MUGA) and a Locally Equipped Area of Play (LEAP). This central area of public open space provides a key focal point to the development and provides new areas for formal and informal recreation for prospective residents of the new development and existing residents of Milton Keynes. There are also several further MUGAs, NEAPs and LEAPs located in key areas of open space within the development.

LEAPs will provide play opportunities mainly aimed at children (up to 8 years old) with a range of equipment for play experiences. NEAPs will be provided at key central locations on the Site. These will have dedicated areas to cater for both older children (8-16 years of age), and younger children (2-8 years of age). They will provide a range of play experiences with an emphasis on adventurous, challenging, and imaginative play elements. These will include elements of natural play such as mounding, boulders, tree trunks and tunnels. New MUGAs will be large enough to accommodate a wide range of outdoor games suitable for use by older children and adults.

Tattenhoe Park
Under construction, application reference 17/00918/OUT

Snelshall East
Snelshall West
Windmill Hill Golf Course
Tattenhoe Valley Park
Bletchley
SNELSHALL STREET
STANDING WAY (A421)
WEASEL LANE
WHADDON ROAD

N

LEGEND
- APPLICATION BOUNDARY
- EXISTING
- EXISTING TREES / VEGETATION
- PROPOSED
- PROPOSED STREET / POS TREE
- ORCHARD TREE
- WOODLAND MIX
- NATIVE HEDGE PLANTING
- ORNAMENTAL SHRUB / HERBACEOUS / ORNAMENTAL GRASS PLANTING
- WILDFLOWER MEADOW MIX
- AMENITY GRASS
- LONGER GRASS
- PLAY AREAS - LEAP
- PLAY AREAS - NEAP
- PLAY AREAS - MUGA
- PLAY AREAS - SKATEPARK
- RECREATIONAL FOOTPATH / CYCLEWAY
- EXISTING PUBLIC FOOTPATH
- EXISTING BRIDLEWAY
- EXISTING RESTRICTED BYWAY
- EXISTING SUSTRANS ROUTE 51
- EXISTING PONDS
- PROPOSED WILDLIFE PONDS
- PROPOSED SUSTAINABLE DRAINAGE SYSTEMS (SuDS features)
- PROPOSED COMMUNITY ORCHARD
- PROPOSED COMMUNITY ALLOTMENTS

Rev	Date	By	Description
E	27/05/20	PH	Amended to client comment
D	21/05/20	PH	Amended to highways changes
C	05/05/20	PH	Amended to include ecological mitigation measures and match layout
B	16/04/20	PH	Amended to match layout
A	09/04/20	PH	Amended to match layout

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Project: South West Milton Keynes 3
Title: Appendix 9.3 - Landscape Strategy Plan
Client: Holiam Lane Management, William Davis & Taylor Wimpey
Scale: 1:2500 @ A0 | Drawn: PH/AJ
Date: March 2020 | Checked: CA/JW
Drawing No: CSA/4857/105 | Rev: E

APPENDIX 5: SIGNIFICANT AND INTERACTIVE EFFECTS TABLES

Table 19.1: Likely Significant Effects

Topic	Stage of Development	Receptor	Duration of Effect	Mitigation Measure	Significance of Effect
Archaeology	Construction & Operation	Area 3 late prehistoric/Roman settlement	Permanent	Area retained within open space. Watching brief undertaken during construction phase to record any peripheral archaeological features.	Negligible Not significant
		Area 4 late prehistoric/Roman settlement	Permanent	Area retained within open space. Watching brief undertaken during construction phase to record any peripheral archaeological features.	Negligible Not significant
		Hedgerows and parliamentary enclosure field system	Permanent	All hedgerows to be retained.	Negligible Not significant
		Weasel Lane	Permanent	Weasel Lane to be retained except where internal roads cross the lane.	Minor Not Significant
		Newton Longville Conservation Area	Permanent	Addressed in design and layout, and by providing strategic landscaping.	None Not significant
		Listed Buildings at Westbrook End, Newton Longville	Permanent	Addressed in design and layout, and by providing strategic landscaping.	None Not significant
		Lower Salden Farmhouse	Permanent	No mitigation required.	None Not significant
Agriculture	Construction	Loss of approximately 16 Ha of best and most versatile agricultural land	Permanent	It is not possible to mitigate the loss of agricultural land.	Moderate Adverse Significant
		Unit A (substantial mixed arable and livestock enterprise)	Permanent	Loss of farmed area, but remaining farm enterprise unaffected and would be viable and sustainable. No mitigation required.	Minor Adverse Not significant

		Unit B (smallholding operated on a part-time basis)	Permanent	Loss of farmed area of a part time business. No mitigation required.	Negligible Not significant
		Unit C (full-time arable farm business)	Permanent	Small loss of farmed area, but remaining farm business unaffected and would be viable and sustainable. No mitigation required.	Minor Adverse Not significant
	Operation	Trespass onto neighbouring agricultural land	Permanent	Strong physical boundaries and open space provided to prevent trespass.	Negligible Not significant
		Loss of approximately 16 Ha of best and most versatile agricultural land	Permanent	It is not possible to mitigate the loss of agricultural land.	Moderate Adverse Not significant
Ecology	Construction & Operation	SSSIs	Permanent	No mitigation required.	None Not significant
		Blue Lagoon LNR	Permanent	No mitigation required.	None Not significant
		Railway sidings east of Salden Wood LWS	Permanent	No mitigation required.	None Not significant
		Other LWSs	Permanent	No mitigation required.	None Not significant
		Milton Keynes Wildlife Corridors	Permanent	No mitigation required.	None Not significant
		Hedgerows with Mature trees	Permanent	Retained hedgerow habitat protected. New hedgerow planted. Hedgerow management and enhancement implemented.	Moderate Adverse at construction phase without mitigation. Not Significant at end of operational phase with mitigation. Not significant
		Woodland	Permanent	Retained woodland habitat protected. Woodland management and enhancement	Moderate Adverse at construction phase without mitigation. Not significant at end of operational

				implemented. New woodland planted.	phase with mitigation. Not significant
		Bats	Permanent	Trees subject to felling or significant work surveyed prior to construction. New habitat created. Bat hop-overs provided. Integrated bat boxes provided. Sensitive lighting scheme implemented.	Moderate Adverse at construction phase without mitigation and provided no legal infringement. Not significant at operational phase with mitigation and provided no legal infringement. Not significant
		Badger	Permanent	Existing badger setts retained. Badger survey undertaken prior to construction. Precautionary working methods implemented. Sensitive lighting scheme implemented.	Not Significant at construction phase without mitigation and provided no legal infringement. Not Significant at operational phase with mitigation and provided no legal infringement. Not significant
		Birds	Permanent	Nesting bird avoidance measures implemented. New habitat created. Integrated bird boxes provided.	Moderate Adverse at construction phase without mitigation and provided no legal infringement. Not significant at operational phase with mitigation and provided no legal infringement. Not significant
		Reptiles	Permanent	Precautionary clearance methods implemented. New habitat created.	Not Significant at construction phase without mitigation and provided no legal infringement. Not Significant at operational phase with mitigation and provided no legal infringement. Not significant
		Amphibians	Permanent	Existing ponds retained. New habitats created including wildlife	Not Significant at construction phase without mitigation and provided no

				ponds and micro-pools within sustainable drainage system.	legal infringement. Not Significant at operational phase with mitigation. Not significant
Drainage	Construction	Flood Risk	Temporary	CEMP implemented. Sustainable drainage features completed prior to each phase of development.	Negligible Not significant
		Surface Water Drainage	Temporary	Temporary surface water drainage facilities provided to control discharge of surface water run-off.	Negligible Not significant
		Geomorphology	Temporary	Temporary surface water drainage facilities provided to prevent effects on river channel geomorphology, Measures to restrict movement of materials included in CEMP.	Negligible Not significant
		Water Quality	Temporary	CIRIA and EA guidance on water pollution included in CEMP to protect water quality.	Minor Not significant
		Water Resource	Temporary	Materials with a low water demand used. Low water use fittings provided in construction compounds.	Negligible Not significant
		Groundwater	Temporary	Rapid surface water runoff collection measures and treatment of groundwater prior to discharge included in CEMP to limit interaction between surface and groundwater.	Negligible Not significant
	Operation	Flood Risk	Permanent	Future exceedance flows managed through outline design and layout framework.	Negligible Not significant

		Surface Water Drainage	Permanent	Surface water run-off measures incorporated with swales and attenuation ponds to provide storage and the use of flow control devices to manage discharge rates.	Negligible Not significant
		Geomorphology	Permanent	Impacts on river channel geomorphology avoided by design and layout. No mitigation required	Negligible Not significant
		Water Quality	Permanent	Surface water strategy implemented with swales and attenuation ponds and the use of permeable paving.	Minor Not significant
		Water Resource	Permanent	Surface water drainage strategy implemented. Water recycled and reused. e.g. rainwater harvesting. Measures to reduce consumption and discharge of water implemented including use of low water and water efficient units and fixtures.	Negligible Not significant
		Groundwater	Permanent	Measures to limit the interaction between the surface and groundwater included in design.	Negligible Not significant
Landscape	Construction & Operation	Hedgerows	Permanent	Retained hedgerows protected and managed. New hedgerow planted.	Moderate/Slight Adverse during construction. Slight Beneficial at end of operational phase. Not significant
		Trees	Permanent	Retained trees protected and managed. New trees planted.	Slight Adverse during construction. Slight Beneficial at end of operational phase.

					Not significant
		Arable Farmland	Permanent	New areas of public open space created including new meadow grassland and amenity grassland.	Substantial/ Moderate Adverse during construction. Moderate adverse at end of operational phase. Significant at construction and operational phases.
		Public Rights of Way ('PROW')	Temporary during construction phase. Permanent during operational phase.	PROW temporarily diverted during construction. Existing PROW incorporated into layout, and additional recreational footpaths created.	Substantial/ Moderate Adverse during construction. Slight Adverse at end of operational phase. Not significant
		Landform	Permanent	Overall landform retained. No built development located in most elevated parts of site.	Slight Adverse during construction. Negligible at end of operational phase. Not significant
		Watercourses	Permanent	Existing watercourses retained or realigned. Watercourses integrated with drainage system and incorporated into layout and new areas of open space.	Moderate Adverse during construction. Slight Adverse at end of operational phase. Significant at construction phase. Not significant at operational phase.
		The Site and immediately surrounding area	Permanent	New areas of public open space created including new meadow grassland and amenity grassland. Green infrastructure provided to supplement existing landscape features.	Substantial Adverse during construction. Moderate Adverse at end of operational phase. Significant at construction and operational phases.

		LCA 4.9 Newton Longville – Stoke Hammond Claylands	Permanent	Existing key landscape features retained. New landscaping provided.	Moderate/Slight Adverse during construction. Slight Adverse at end of operational phase. Not significant
		LCA 4.7 Whaddon Chase	Permanent	Woodland blocks planted on northern and western boundaries.	Slight Adverse during construction. Negligible Adverse at end of operational phase. Not significant
		LCA 4.8 Horwood Claylands	Permanent	Woodland blocks planted on western boundaries.	Slight Adverse during construction. Slight Adverse/Negligible at end of operational phase. Not significant
		LCA 4.11 Mursley – Soulbury Claylands	Permanent	Limited intervisibility with Site. No mitigation required.	Slight Adverse during construction. Negligible Adverse/Neutral at end of operational phase. Not significant
		Users of A421 and B4034 (Photographs 07 and 11)	Permanent	Dense vegetation on northern boundary retained. New trees planted on northern boundary and built development set back from site boundary.	Moderate Adverse during construction. Moderate/Slight Adverse at end of operational phase. Significant at construction phase. Not significant at operational phase.
		Users of Whaddon Road, west of Site (Photographs 08, 09 and 15)	Permanent	Extensive woodland belts and linear parks provided on western boundary, and built development set back from site boundary.	Moderate Adverse during construction. Slight Adverse at end of operational phase. Significant at construction phase. Not

					significant at operational phase.
		Users of Bletchley Road, north of Newton Longville (Photograph 21)	Permanent	New planting on southern and western boundaries.	Moderate/Slight Adverse during construction. Slight Adverse at end of operational phase. Not significant
		Users of Midshire & Swan's Way, west of Site (Photographs 35 - 37)	Permanent	Woodland and tree planting provided on western boundary.	Slight Adverse during construction. Slight/Negligible Adverse at end of operational phase. Not significant
		Users of footpath NLO/16/1, west of Newton Longville (Photograph 23)	Permanent	Woodland and tree planting provided on southern boundary and within Site.	Moderate/Slight Adverse during construction. Slight Adverse at end of operational phase. Not significant
		Users of footpath NLO/18/1, south east of the Site (Photograph 18)		Tree planting provided in open space areas and within Site	Moderate Adverse during construction. Slight Adverse at end of operational phase. Significant at construction phase. Not significant at operational phase.
		Users of footpaths near Salden House Farm (Photograph 31 and 32)	Permanent	Woodland and tree planting provided on western boundary and within site.	Slight/Negligible Adverse during construction. Negligible at end of operational phase. Not significant
		Users of bridleway WHA/15/1, near Chase Farm (Photograph 34)	Permanent	Most of vegetation Woodland blocks and tree planting within linear parks provided on western boundary.	Slight/Negligible Adverse during construction. Negligible at end of operational phase. Not significant

		Users of bridleway MUR/16/1 and MUR/16/2 from Newton Longville to Cowpasture Farm (Photographs 24, 25 and 33)	Permanent	Majority of existing vegetation on southern and western boundaries retained. Woodland and tree planting provided on boundaries and within site.	Moderate/Slight Adverse during construction. Slight Adverse at end of operational phase. Not significant
		Users of Hammond Park Recreational Ground, Newton Longville (Photograph 17)	Permanent	Majority of existing vegetation on southern boundary retained. Woodland and tree planting provided in open space and within site.	Moderate/Slight Adverse during construction. Slight Adverse at end of operational phase. Not significant
		Users of Milton Keynes Boundary Walk within the southern part of the Site (Photographs 06 and 16)	Permanent	The route of the footpath retained. Existing hedgerows and vegetation retained. Green infrastructure corridors provided.	Substantial Adverse during construction. Moderate Adverse at end of operational phase. Significant at construction and operational phase.
		Users of Milton Keynes Boundary Walk and footpaths in Tattenhoe Park (Photograph 12)	Permanent	Majority of existing vegetation on northern boundary retained. Additional planting provided within site.	Slight Adverse during construction. Slight Adverse at end of operational phase. Not significant
		Users of Weasel Lane, crossing the Site, forming part of the Milton Keynes Boundary Walk (Photographs 03 - 06 and 41)	Permanent	Right of way temporarily diverted during construction phase. Existing hedgerows mostly retained. Right of way incorporated into area of open space. Additional hedgerow, woodland and tree planting provided.	Substantial Adverse during construction. Moderate Adverse at end of operational phase. Significant at construction and operational phase.
		Users of Weasel Lane, west of Site (Photograph 14)	Permanent	Existing vegetation retained on southern boundary. Woodland, trees, hedgerows and open space	Moderate Adverse during construction. Moderate/Slight Adverse at end of operational phase.

				provided within site.	Significant at construction phase. Not significant at operational phase.
		Users of Whaddon Road within Newton Longville Conservation Area (Photograph 22)	Permanent	Existing vegetation retained on southern boundary. Woodland, trees and hedgerows provided in open space and within site.	Moderate/Slight Adverse during construction. Slight Adverse at end of operational phase. Not significant
		Users to Bletchley Road, North End (Photograph 28)	Permanent	Views of site unlikely because of distance, landform and existing vegetation. No mitigation required.	Negligible during construction. Negligible/Neutral at end of operational phase. Not significant
		Users of Lower Way, Great Brickhill, in Great Brickhill South Conservation Area (Photograph 26)	Permanent	Views of site unlikely because of distance, landform and existing vegetation. No mitigation required.	Negligible during construction. Negligible/Neutral at end of operational phase. Not significant
		Users of bridleway 15, Little Brickhill (Photograph 27)	Permanent	Woodland, trees and hedgerows provided within site.	Slight/Negligible Adverse during construction. Negligible/Neutral at end of operational phase. Not significant
		Residential properties at Chase Farm, west of Site (Photograph 34, Photograph 29 taken from access road to farm)	Permanent	Woodland, trees and hedgerows provided on western boundary.	Slight/Negligible Adverse during construction. Negligible/Neutral at end of operational phase. Not significant
		Residential properties on northern edge of Newton Longville (Photographs 19 and 20 and reverse view Photograph 05)	Permanent	Existing vegetation on southern boundary retained. Woodland belt, tree and hedgerow planting provided as part of a new landscape framework at site.	Substantial/ Moderate Adverse during construction. Moderate Adverse at end of operational phase. Significant at construction and operational phase.

		Residential properties on edge of Bletchley, including 'New Leys Farmhouse', indented into northern Site boundary	Permanent	Existing hedgerows on eastern boundary retained. New hedgerow provided adjacent to residential area.	Substantial/ Moderate Adverse during construction. Moderate Adverse at end of operational phase. Significant at construction and operational phase.
		Residential properties within Tattenhoe Park (Photograph 13 and reverse view Photograph 04)	Permanent	Woodland, trees and hedgerows provided within site.	Slight Adverse during construction. Slight/Negligible Adverse at end of operational phase. Not significant
		Residential properties at Bletchley Leys Farm adjacent to western Site boundary and 'The Leys Farmhouse', indented into western Site boundary (Photographs 02, 08 and 09)	Permanent	Existing vegetation at western boundary retained. Open space provided adjacent to residential properties. Built development set back from site boundary.	Substantial/ Moderate Adverse during construction. Moderate Adverse at end of operational phase. Significant at construction and operational phase.
		Residential properties adjacent to the eastern Site boundary within Bletchley (Photograph 30 and 38, reciprocal views shown in Photographs 06, 39 and 40)	Permanent	Existing vegetation at eastern boundary retained. Open space with tree planting provided adjacent to residential properties. Built development set back from site boundary.	Substantial Adverse during construction. Moderate Adverse at end of operational phase. Significant at construction and operational phase.
Traffic & Transport	Construction	Impact of construction traffic on Buckingham Road, Whaddon Road and A421	Temporary	Construction Traffic Management Plan implemented.	Negligible Not significant
	Operation	Traffic levels on Whaddon Road (between Bottle Dump Roundabout and Site access)	Permanent	Travel Demand Management Strategy implemented. Framework Travel Plan implemented for all uses. Local highway improvements implemented including new access junction	Not significant

				and shared footway/cycleway on Whaddon Road at Site access.	
		Traffic levels on A421 (between Whaddon Crossroads and Bottle Dump Roundabouts)	Permanent	Travel Demand Management Strategy implemented. Framework Travel Plan implemented for all uses. Local highway improvements implemented at Bottle Dump Roundabout and Whaddon Crossroads.	Not significant
		Traffic levels on Whaddon Road	Permanent	Travel Demand Management Strategy implemented. Framework Travel Plan implemented for all uses. Local highway improvements implemented including new access junction and shared footway/cycleway at Whaddon Road.	Not significant
		Traffic levels on A421 Standing Way (between Bottle Dump and Tattenhoe Roundabouts)	Permanent	Travel Demand Management Strategy implemented. Framework Travel Plan implemented for all uses. Local highway improvements implemented including new access junction off A421 Standing Way and capacity improvements at Tattenhoe Roundabout.	Not significant
		Traffic levels on Buckingham Road	Permanent	Travel Demand Management Strategy implemented. Framework Travel Plan implemented for all uses. Local highway improvements implemented including new	Not significant

				access roundabout on Buckingham Road with associated footway/cycleway and crossing link.	
		Users of Whaddon Road through Newton Longville	Permanent	Traffic calming measures implemented in Newton Longville.	Not significant
		Users of the following: B4034 Buckingham Road /Sherwood Drive/ Water Eaton Road; A421 Tattenhoe Roundabout; A421 Emerson Roundabout; A421 Bleak Hall Roundabout; A421 Elfield Park Roundabout; and, A421 Windmill Hill Roundabout.	Permanent	Junction capacity improvements implemented by BC and MKC on behalf of Applicant and secured in S106 Agreement	Not significant
Air Quality	Construction	Impacts from dust and particulates on existing and future residents during construction	Temporary	Construction Environmental Management Plan and Dust Management Plan implemented.	Insignificant Not significant
	Operation	Impacts from traffic emissions on existing and future residents	Permanent	Pollutant concentrations for all receptors will remain below objectives for NO_2, PM_{10} and $PM_{2.5}$. No mitigation required.	Negligible Not significant
Noise & Vibration	Construction	Construction noise	Temporary	Construction Environmental Management Plan implemented. Good working practices, maintenance of equipment and public relations implemented.	Negligible/ Moderate Negative Not significant
		Construction vibration	Temporary	Construction Environmental Management Plan implemented.	Negligible Not significant
	Operation	Internal noise	Permanent	Addressed at detailed design stage with dwellings separated from noise sources, and boundary screening, internal layouts and sound insulation	Negligible Not significant

				measures implemented.	
		External noise		Addressed at detailed design stage with boundary acoustic treatment provided, and gardens and external amenity areas screened from noise sources by buildings.	Negligible Not significant
		Development related traffic noise	Permanent	Low-noise road surfacing used for new roads.	Negligible/ Minor Negative Not significant
		Commercial and industrial noise	Permanent	Addressed at detailed design stage, with buildings designed to include appropriate noise mitigation measures and external activities controlled to minimise operational noise.	Negligible Not significant
Socio-Economic	Construction	Construction employment	Temporary	Construction jobs provided for approximately 10 years.	Moderate Beneficial
		Existing economic activity on site	Permanent	Loss of farmed area affecting existing farm businesses. No mitigation required.	Minor Adverse Not significant
	Operation	Operational employment	Permanent	Land for employment uses provided, which would be attractive to small businesses. Jobs provided at neighbourhood centre and schools.	Minor Beneficial
		Social infrastructure – education, healthcare and community facilities	Permanent	Primary school, secondary school and neighbourhood centre provided. Planning obligations for	Minor beneficial

				social infrastructure provided in S106 Agreement.	
		Open space and green infrastructure	Permanent	Formal and informal open space, play areas, and sport and recreation facilities provided. Planning obligations for open space and recreation facilities provided in S106 Agreement.	Minor Beneficial
Services & Utilities	Construction	Loss of supply during works to connect to the supply network	Temporary	Supply shut down localised and planned for quiet periods. Affected users notified. Essential supplies maintained. Good construction practice implemented.	Minor Not significant
	Operation	Capacity of infrastructure network	Temporary	Supply maintained by utility companies.	Negligible Not significant
Waste	Construction	Site clearance and earthworks	Temporary	Site Waste Management Plan prepared to minimise the amount of waste generated and disposed of during site clearance.	Negligible Not significant
		Construction	Temporary	Site Waste Management Plan prepared to minimise the amount of waste generated. Construction waste reused on-site or reused and recycled off-site.	Not significant
	Operation	Household waste	Permanent	Internal and external waste and recycling storage facilities provided. Councils weekly kerbside food waste collection service provided at site. Home composting and community composting	Not significant

				facilities provided at site.	
		Commercial and industrial waste	Permanent	Waste and recycling storage facilities provided.	Negligible Not significant
Ground Conditions	Construction & Operation	Geology and soils	Permanent	No designated geological sites identified, and no mitigation required. It is not possible to mitigate the loss of soil from agricultural land.	None for geology. Major Adverse for soils. Significant
		Human health	Temporary	Materials Management Plan to be implemented at construction phase to ensure materials do not risk human health. Further ground investigation to be undertaken at detailed design stage, and remediation strategy implemented if required.	Negligible Not significant
		Controlled waters	Temporary	Material stockpiles covered/sealed during construction phase to prevent contamination of drainage network. Temporary and permanent surface water drainage strategy implemented to prevent contamination from surface water run-off.	None
Climate Change	Construction	Embodied carbon	Permanent	Manufacturers, suppliers and materials selected to reduce carbon emissions, including the use of local suppliers and the use of reusable and recyclable materials.	Minor Adverse Not significant
	Operation	Building emissions	Permanent	Detailed design based on energy	Minor Adverse

				hierarchy including energy efficient buildings and use of renewable energy.	Not significant
		Transport emissions	Permanent	Sustainable modes of transport encouraged through design and layout, including the delivery of walking, cycling and public transport facilities. Framework Travel Plans implemented for all uses.	Minor Adverse Not significant
		Surface water flooding to public realm and ground floor properties	Permanent	Surface water drainage strategy implemented including swales and attenuation ponds.	Neutral with mitigation measures Not significant
		Building damage due to droughts and ground movement	Permanent	Surface water drainage strategy implemented. Water recycled and reused. Measures to reduce consumption and discharge of water implemented.	Neutral with mitigation measures Not significant
		Damage to buildings or impacts on pedestrian comfort associated with increased extreme weather	Permanent	Green infrastructure included in design and layout, and landscape strategy implemented.	Neutral with mitigation measures Not significant
		Overheating in homes/urban heat island effect in public areas and associated health implications	Permanent	Addressed at detailed design stage, with passive design measures including energy efficient lighting, external shading, and landscape planting.	Neutral with mitigation measures Not significant
		Increased energy needs for cooling for commercial and residential units	Permanent	Addressed at detailed design stage, with active design measures including use of mechanical ventilation and low energy cooling systems.	Neutral with mitigation measures Not significant

		Soft landscaping failure and associated loss of services	Permanent	Addressed at detailed design stage, with appropriate plants and vegetation selected and maintenance strategy implemented to deal with extreme weather.	Neutral with mitigation measures Not significant
		Water shortages for public use and for landscaping	Permanent	Water recycled and reused. Measures to reduce consumption and discharge of water implemented. Surface water drainage strategy implemented.	Neutral with mitigation measures Not significant
Major Accidents & Disasters	Construction	Flooding event on receptors	Temporary	Health and safety legislation implemented. Emergency response planning implemented. CEMP implemented. Drainage mitigation implemented.	Not significant
		Severe weather (extreme temperatures and drought) event on receptors	Temporary	Health and safety legislation implemented. Emergency response planning implemented.	Not significant
		Poor air quality event on receptors	Temporary	Health and safety legislation implemented. Emergency response planning implemented. CEMP implemented. Air quality mitigation implemented.	Not significant
		Wildfires event on receptors	Temporary	Health and safety legislation implemented. CEMP implemented.	Not significant
		Human diseases event on receptors	Temporary	Health and safety legislation implemented. CEMP implemented. Ground conditions	Not significant

				mitigation implemented.	
		Power failure event on receptors	Temporary	Health and safety legislation implemented. Services and utilities mitigation implemented.	Not significant
		System failure event on receptors	Temporary	Health and safety legislation implemented. Services and utilities mitigation implemented.	Not significant
		Major traffic accidents event on receptors	Temporary	Health and safety legislation implemented. Construction Traffic Management Plan implemented.	Not significant
		Industrial and urban accidents event on receptors	Temporary	Health and safety legislation implemented. CEMP implemented. Drainage, ground conditions, and services and utilities mitigation implemented.	Not significant
		Pollution accidents event on receptors	Temporary	Health and safety legislation implemented. CEMP implemented. Drainage and ground conditions mitigation implemented.	Not significant
	Operation	Flooding event on receptors	Temporary	Health and safety legislation implemented. Emergency response planning implemented. Drainage and climate change mitigation implemented.	Not significant
		Severe weather (extreme temperatures and drought) event on receptors	Temporary	Emergency response planning implemented. Climate change mitigation implemented. Addressed at detailed design stage.	Not significant

		Poor air quality event on receptors	Temporary	Air quality mitigation implemented.	Not significant
		Urban fires event on receptors	Temporary	Health and safety legislation implemented. Addressed at detailed design stage.	Not significant
		Human diseases event on receptors	Temporary	Emergency response planning implemented. GP surgery provided.	Not significant
		Power failure event on receptors	Temporary	Health and safety legislation implemented. Addressed at detailed design stage. Services and utilities mitigation implemented.	Not significant
		System failure event on receptors	Temporary	Health and safety legislation implemented. Addressed at detailed design stage. Services and utilities mitigation implemented.	Not significant
		Major traffic accidents event on receptors	Temporary	Health and safety legislation implemented. Transport mitigation implemented.	Not significant
		Industrial and urban accidents event on receptors	Temporary	Health and safety legislation implemented. Emergency response planning implemented. Drainage, services and utilities, and ground conditions mitigation implemented.	Not significant
		Pollution accidents event on receptors	Temporary	Health and safety legislation implemented. Emergency response planning implemented. Drainage, services and utilities, and ground conditions mitigation implemented.	Not significant

Table 19.2: Cumulative Effects

Topic	Cumulative Development	Receptors	Significance of Cumulative Effect	Proposed Mitigation Measures
Ecology	East West Rail	Badgers	Not significant provided mitigation measures implemented and no legal infringement. Not significant	Mitigation measures proposed for East West Rail including artificial badger sett created and new habitat created. At Application Site, existing badger setts retained, badger survey undertaken prior to construction, precautionary working methods implemented, and sensitive lighting scheme implemented.
Ecology	Remaining development at Tattenhoe Park	Amphibians and birds	Not significant with mitigation measures implemented. Not significant	Mitigation measures proposed for Tattenhoe Park including ponds and woodland areas. At Application Site, new habitat created and bird boxes provided.
Ecology	Proposed allocation at Shenley Park	Birds	Not significant with mitigation measures implemented. Not significant	It is expected that ecological mitigation measures will be required for development at Shenley Park. At Application Site, new habitat created and bird boxes provided.
Landscape	East West Rail	Users of Whaddon Road, users of Milton Keynes Boundary Walk, users of PROW, residential properties on northern edge of Newton Longville, and residential properties on western edge of Bletchley.	Moderate Adverse effects already identified on these sensitive receptors from Proposed Development. No additional significant cumulative effects identified for these sensitive receptors. Not significant	Existing vegetation on southern boundary retained. Woodland belt, tree and hedgerow planting provided as part of a new landscape framework at site.
Landscape	Remaining development at Tattenhoe Park	Users of A421, users of Shenley Road, residential properties on northern edge of Newton Longville, and residential properties on western edge of Bletchley.	Moderate/Slight Adverse Not significant	Existing trees and hedgerows retained. Additional woodland and trees planted. Green infrastructure and open space provided. Additional landscaping provided along Weasel Lane corridor, and at southern and western boundary.
Landscape	Proposed allocation at Shenley Park	None identified. Proposed Development and Shenley Park allocation are located within separate	None	Dense vegetation on northern boundary retained. New trees planted on northern boundary

		landscape character areas. Landform and existing vegetation along A421 limit intervisibility between two sites. Proposed Development and Shenley Park allocation will include strategic landscaping at boundaries.	Not significant	and built development set back from site boundary.
Landscape	Remaining development at Newton Leys	Users of Weasel Lane.	None Not significant	Existing vegetation retained on southern boundary. Woodland, trees, hedgerows and open space provided within site.
Air Quality – Dust	Other committed developments at Tattenhoe Park, Kingsmead South and Shenley Park	Existing residents.	Insignificant Not significant	Construction Environmental Management Plan and Dust Management Plan implemented.
Air Quality – Increased Traffic Emissions	Other committed developments at Tattenhoe Park, Kingsmead South and Shenley Park	Existing residents.	Negligible Not significant	Pollutant concentrations for all receptors will remain below objectives for NO^2, PM_{10} and $PM_{2.5}$. No mitigation required.
Waste	Other committed developments within and on the edge of Milton Keynes	Increased waste from site clearance, construction, household waste, and industrial and commercial waste. It is anticipated that all other developments would meet waste regulations and standards and include a Construction Environmental Management Plan and Site Waste Management Plan.	Minor Adverse Not significant	Site Waste Management Plan prepared to minimise the amount of waste generated and disposed of during construction. Waste, recycling, food waste and composting facilities provided.