Chapter P
Cumulative Assessment

Milton Keynes East Environmental Statement

Chapter P: Cumulative Impact Assessment

March 2021

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P1.0 Introduction

P1.1 This chapter draws together and summarises the findings from the individual inputs into the Environmental Statement ('ES'); defines inter-relationships between these assessments and any other developments in the area surrounding the site; and establishes whether there are any other residual effects on the identified sensitive receptors which may require additional mitigation not previously identified.

P1.2 Chapter Q then summarises the mitigation and monitoring measures identified within this ES and how these can be delivered and secured.

P1.3 There are different inter-relationships between the various assessments within the ES and this section identifies the key links between any impacts identified and how these may influence each other. Where these relationships give rise to other combined direct effects arising from the developments, it is necessary to identify how these impact on those defined sensitive receptors identified in this ES.

P1.4 There may also be other indirect effects arising from the developments when considered with other proposals or schemes in the surrounding area. These effects may also give rise to the need to consider additional mitigation measures; albeit it is necessary to consider the likelihood of those other schemes proceeding and the ability or necessity of the applicant to mitigate any such effects for other sites.

P1.5 Accordingly, this Chapter considers two types of cumulative environmental effect in association with the proposed developments:

1 Synergistic – the combined effect of different type of impacts attributable to the proposed development ('direct impacts') in respect of a particular receptor. An example of this could include the combined impact of noise, air quality and daylight, sunlight and overshadowing effects on a residential dwelling. This includes consideration of the impacts during the construction and operational phases; and

2 Cumulative – these arise from the combined effect of the proposed development with committed development schemes that, individually, may be insignificant, but when combined with other impacts, may be significant.

P1.6 During the process of agreeing the scope of the Environmental Impact Assessment ("EIA") with the Milton Keynes Council ('MKC') (see Chapter B of this ES), a number of developments were identified as having the potential to require consideration in relation to those other indirect or cumulative effects. These are listed in Appendix P1. Those which require consideration are listed in Table P4.1, and each development is reviewed further in this chapter.

P1.7 Sensitive receptors have been identified in individual chapters of the ES and are summarised in Section G2.0. These receptors are those with varying degrees of sensitivity to environmental impact and change as a result of the proposals. Regard has been given to the sensitivity of the identified receptors to ensure consideration is then given to those which are potentially the most susceptible to impact, taking into account the extent of the effects arising. The professional judgement of those undertaking the EIA as well as topic specific criteria, legislation or guidelines have been used to identify the degree of sensitivity.

P1.8 A consideration of the impacts arising from the construction and operation phases of the development has been carried out within this ES and is also addressed in the assessment of the interrelationship and cumulative effects arising from the scheme.

P2.0 Identification of Key Sensitive Receptors

P2.1 Chapters C to O of this ES have identified a series of receptors most likely to be affected by significant environmental effects as a result of the Proposed Development. The EIA process has then identified the degree of change or impact to which each receptor is likely to be affected.

P2.2 Assuming that identified mitigation will be implemented as identified in this ES, an analysis has been carried out of the residual effects arising from the assessment of each technical aspect scoped into the EIA. This section draws out and identifies those key sensitive receptors which are likely to be affected by an impact which will be greater than negligible. This means any receptor identified with an effect classified as being of minor, moderate or substantial/major significance is identified.

P2.3 It is assumed that there is a low likelihood for cumulative or synergistic effects to arise for those receptors which are subject to no or negligible impacts when the Proposed Development is considered in isolation. These are therefore discounted at this stage.

P2.4 Using the significance criteria described within Chapters B and D to O, it is also then possible to identify which of these effects are significant and which are non-significant effects. This approach accords with EIA legislation and best practice which focuses on the main or significant effects arising from the development. The Planning Practice Guide states (ID: 4-035-20170728, last updated 28 July 2017) [Ref 3]:

"Whilst every Environmental Statement should provide a full factual description of the development, the emphasis should be on the "main" or "significant" environmental effects to which a development is likely to give rise."

P2.5 It is against these identified key sensitive receptors that the analysis of synergistic and cumulative effects will be carried out. This will include all receptors likely to be affected by significant effects (typically major or moderate effects). It also considered all those receptors currently likely to be affected by non-significant (typically only minor effects) to robustly assess whether, cumulatively or synergistically, these may give rise to new significant effects previously not identified.

Summary of Residual Effects

P2.6 Table P2.1 provides a summary of the main residual effects (following incorporation of the mitigation measures described in Chapter Q) as identified in Chapters D to O of this ES that could be expected to arise during construction and operation the Proposed Development:-

Table P2.1 Summary of Residual Effects

	Summary of Residual Effects
During Construction	
Transport	**Slight (non-significant) temporary adverse** impact arising from construction traffic using the Lorry Route Network (M1, A509, A422); otherwise known as the major strategic highway network.
Landscape & Views	**Substantial (significant) temporary adverse** impacts on medium range viewers from footpaths and routes just outside and to the east of the site and from bridleways in the south-east corner of the site; also on the landscape close to Moulsoe and the River Ouzel **Moderate (significant) temporary adverse** impacts from the majority of the other locations and landscapes assessed including within and outside (including long range) views of the site.

	Summary of Residual Effects
	Minor (non-significant) temporary adverse impacts on views from the west/north-west of the site including A509 London Road/Newport Pagnell bypass, Cranfield Road recreation ground, Willen Park, Caldecote and on the setting to Campbell Park **Minor (non-significant) permanent beneficial** impact on the local landscape due to the removal of unsightly built features on the site
Ecology	**Minor (non significant) temporary adverse** impact on farmland bird species as habitat is removed Negligible effects on all other receptors
Air Quality	Negligible effects on all receptors
Noise & Vibration	**Moderate (significant) temporary adverse** noise impacts on dwellings at Carteret Close during night time bridge construction and during construction plant operation **Minor (non-significant) temporary adverse** noise impacts for dwellings at Pyms Stables, northern end of the A509 London Road, the Holiday Inn, Willen Road traveller's site and (during later stages of construction) future residents of MKE. The effects on these receptors will become **moderate (significant) temporary adverse** noise impacts when construction plant is operating in close **proximity.** **Moderate (significant) temporary adverse** vibration impacts for dwellings at Pyms Stables, northern end of the A509 London Road, Willen Road traveller's site and (during later stages of construction) future residents of MKE but only when the vibratory roller will be in operation. Negligible impacts at all other times and for all other receptors assessed.
Ground Conditions & Soils	Negligible impacts on all receptors
Historic Built Environment	**Major (significant) temporary adverse** impact on Grade II Listed Moulsoe Buildings Farmhouse (Holiday Inn). **Minor (non-significant) temporary adverse** impacts on all other identified Listed built heritage receptors (all Grade I or Grade II). Negligible effects on other non-designated receptors considered (Moulsoe Glebe Farm barn, Moulsoe School and Cotton Valley Sewage Treatment Works)
Archaeology	**Minor/moderate (non significant) permanent adverse** impact on possible/potential regionally important palaeoenvironmental evidence, Iron Age/Roman settlements and Medieval fortification/settlements (where these arise) **Minor (non significant) permanent adverse** impacts on possible/potential locally important Palaeolithic, Mesolithic, Neolithic, Bronze Age artefactual evidence and other post medieval/modern archaeological evidence including that of agricultural activity/land division (where these arise)
Water Environment & Drainage	**Minor (non significant) temporary adverse** impact due to the potential change in quality (i.e. physical/chemical contamination) of surface water discharged to the water environment. Negligible effects on all other receptors
Socio Economics	**Major/moderate (significant) temporary beneficial** impacts on employment and economic output (construction workers and local businesses) **Negligible (non-significant) temporary adverse** impact on business disruption/existing uses lasting only during the first two years of the construction works. .

	Summary of Residual Effects
Climate Change and Resilience	**Moderate (significant) temporary adverse** impacts on greenhouse gas emissions affecting the UK climate; but against a context of the conclusion adopting a best practice approach to assigning significance and a robust strategy by the applicant to reduce its carbon footprint for the development
Waste	**Minor (non-significant) temporary adverse** impact on waste facilities in the area due to waste arisings during construction
During Operation	
Transport	**Slight (non significant) permanent adverse** impact on main strategic routes affecting drivers and bus passengers. Neutral effects only on other receptors.
Landscape & Views	**Substantial (reducing to Moderate by 2062) (significant) permanent adverse** impacts on views from footpaths and routes to the east of the site around Moulsoe **Moderate (significant) permanent adverse** impacts on views and on landscapes in the south-east corner and to the south-east and north-east of the site as well as on the landscape setting of Moulsoe **Minor/moderate (non significant) adverse** impacts changes to minor adverse (non significant) and moderate beneficial (significant) impacts on viewpoints, routes and the landscape of the Ouzel Valley **Minor (non significant) permanent adverse** impacts on views and routes from the north-west and west and south of the site **Moderate (significant) beneficial** impacts on landscape as it relates to vegetation
Ecology	**Minor (non significant) permanent adverse** effect on farmland birds due to removal of habitat (albeit with potential for enhancement due to new habitats created) **Minor (non significant) permanent beneficial** effect on woodland due to new planting within the site Negligible effect on all other receptors albeit with the potential for enhancement (new beneficial effects) to be created with the implementation of ecological measures in respect of reptiles, invertebrates, GCN, birds, bats, stream/pond habitats and the habitat associated with the River Ouzel
Air Quality	Negligible effects on all receptors
Noise & Vibration	**Minor (non significant) permanent adverse** noise impacts due to additional traffic for dwellings along Newport Road (near Moulsoe) and Tickford Lodge Farm. **Moderate (significant) permanent beneficial** noise impacts on residents in the Willen area due to the installation of the Tongwell Street noise barrier. Negligible noise and vibration effects on other receptors
Ground Conditions & Soils	No effects anticipated to all receptors.
Historic Built Environment	**Major (reducing to Moderate with time) (significant) permanent adverse** impacts on Grade II Listed Moulsoe Buildings Farmhouse (Holiday Inn). **Minor (non-significant) permanent adverse** impacts on all other identified Listed built heritage receptors (all Grade I or Grade II). Negligible effects on other non-designated receptors considered (Moulsoe Glebe Farm barn, Moulsoe School and Cotton Valley Sewage Treatment Works)
Archaeology	No effects anticipated to all receptors.
Water Environment & Drainage	Negligible/neutral effects on all receptors

	Summary of Residual Effects
Socio Economics	**Moderate to minor (significant to non significant) beneficial** impacts on employment and economic output (reducing as more of the development becomes operational) **Minor to moderate (non significant to significant) beneficial** impacts on local businesses (arising from increased resident expenditure) and on the housing market (availability of housing to local residents) (increasing as more of the development becomes operational) **Minor (non-significant) permanent beneficial** impacts for users of open and play space Negligible effects arising from all other aspects assessed which would affect the local community (including education, healthcare, community facilities and surveillance) due to the provision of uses as part of MKE
Climate Change and Resilience	**Moderate (significant) temporary adverse** impacts on greenhouse gas emissions affecting the UK climate; but against a context of the conclusion adopting a best practice approach to assigning significance and a robust strategy by the applicant to reduce its carbon footprint for the development
Waste	Negligible effects only on affected receptors.

Summary of Sensitive Receptors

P2.7 Table P2.1 has identified that the following sensitive receptors are likely to be affected by effects that can be considered to be significant during either construction or operation1:-

- Construction workers;
- Future residents of MKE;
- Local businesses;
- Local housing market;
- Moulsoe Buildings Farmhouse (Holiday Inn);
- Residents and business in Moulsoe;
- Residents of Carteret Close (and other residents of the Willen area);
- The landscape and built heritage of Moulsoe;
- The landscape of the River Ouzel / River Ouzel and other water courses;
- The UK climate (greenhouse gases);
- Users of footpaths/bridleways to the east of the Development Site and within the south-eastern corner; and
- Vegetation and Woodland within the Development Site Boundary.

P2.8 Table P2.1 has also identified that the following sensitive receptors are likely to be affected by effects that can be considered non-significant during either construction or operation:-

- Built heritage at Willen Park;
- Drivers and bus passengers using the strategic road network (M1, A509, A422);
- Farmland bird species (agricultural land);
- Possible/potential archaeological finds within the Development Site boundary;

1 Where a receptor is likely to be subject to both significant and non-significant effects, a precautionary approach has been adopted and it is identified as receiving significant effects. However other non-significant effects may also be relevant. Further consideration is given in Section P3.0 of this Chapter

- Pyms Stables;
- Users of footpaths and routes to west of site;
- Users of Willen Park;
- Waste facilities in the area; and
- Willen Road traveller's site.

Figure P2.1 Location of Key Sensitive Receptors

Key: 1 – Moulsoe Buildings Farmhouse; 2 – Moulsoe; 3 - Pyms Stables; 4 – footpaths to west of site; 5 – Willen Road traveller's site; 6 – Carteret Close; 7 – Willen Park; LB – clusters of listed buildings; A – River Ouzel corridor and landscape; B – footpaths, bridleways and routes to east/south-east of site; key routes noted

P3.0 Inter-relationship of Direct Effects

P3.1 This section considers the inter-relationship between the direct effects or synergistic effects arising from the Proposed Development. It takes account of the residual effects affecting the key sensitive receptors identified in Section P2.0.

P3.2 The analysis has considered both positive and negative impacts and makes reference to the degree of effect as identified within the technical assessments. The objective is to identify where the accumulation of effects on particular receptors, and the relationship between those effects, may give rise to a need for additional mitigation not identified previously.

P3.3 To assist in this analysis, the table below summarises the effects anticipated against each receptor and identifies where particular receptors may be subject to an accumulation of environmental impacts.

Table P3.1 Direct Residual Effects for Identified Sensitive Receptors

Receptor	During Construction	During Operation
Construction workers	SE	X
Future residents of MKE	X	SE/(SE)
Local businesses	(NV)/NV*; SE	SE/(SE)
Local housing market	X	SE/(SE)
Moulsoe Buildings Farmhouse (Holiday Inn)	LV; (NV)/NV*; BH	LV; BH; SE/(SE)
Residents and business in Moulsoe	LV; SE	LV; (NV); SE/(SE)
Residents of Carteret Close (and other residents of the Willen area)	(LV) ; NV*	(LV); **NV**
The landscape and built heritage of Moulsoe	LV; (BH)	LV; (BH)
The landscape of the River Ouzel / River Ouzel (and other watercourses)	LV; (WED)	(LV)
The UK climate (greenhouse gases)	CC	CC
Users of footpaths/bridleways to the east of the Development Site and within the south-eastern corner	LV	LV
Vegetation and Woodland within the Development Site Boundary	X	LV; (EN)
Built heritage at Willen Park	(BH)	(BH)
Drivers and bus passengers using the strategic road network (M1, A509, A422)	(T) ; (LV)	(T); (LV)
Farmland bird species	(EN)	(EN)
Possible/potential archaeological finds within the Development Site boundary	(AR)	X
Pyms Stables	(LV) ; (NV)/NV*	SE/(SE)
Users of footpaths and routes to west of site	(LV)	(LV)
Users of Willen Park	(LV)	(LV)
Waste facilities in the area	WS	X
Willen Road traveller's site.	(LV) ; (NV)/NV*	(LV)

Key: T- Transportation; LV - Landscape and views; EN - Ecology; AQ - Air Quality; NV - Noise and Vibration; GC - Ground conditions; BH - Built Heritage; AR - Archaeology; WED - Water Environment & Drainage; SE - Socio-Economics; CC - Climate Change; WS – Waste

RED – adverse effect; GREEN – beneficial effect; X – no effect anticipated; () – non-significant effect; * - transitory/short-term effect; <> - intermittent effect

P3.4 Table P3.1 highlights residual effects on identified receptors after mitigation. Where a series of technical aspects have the potential to impact (adversely or beneficially; significantly or non-significantly), then a review of whether the interaction of these different effects could give rise to a new significant effect giving rise to a need for mitigation. This has been conducted with reference to the technical aspect chapters of this ES and the understanding of sensitivity of the relevant receptor which those chapters have identified. Consideration has also been given to mitigation measures already either embedded into the development or capable of being delivered through planning conditions or planning obligations.

P3.5 The conclusions of this review has highlighted that the following should be noted:

1 No synergistic effects are anticipated in respect of Ecology, Air Quality, Ground Conditions, Archaeology, Water Environment and Drainage, Climate Change and Waste. This is either because no significant effects are anticipated (and therefore there is no potential for integration of effects based on the assumptions made in this Chapter) or because the potential for in combination effects has been examined, assessed and no significant impacts are considered likely to arise;

2 During construction, several receptors within the Development Site boundary or on the immediate periphery (on strategic routes, within or close to Moulsoe or to the south of the site at Willen) are subject to a series of both significant and non significant temporary adverse visual and noise/vibration impacts. The majority of the noise/vibration impacts arise as transitory effects when machinery is in operation or during the installation of the bridge infrastructure;

3 During construction, the Grade II listed Moulsoe Buildings Farmhouse (Holiday Inn) is identified to be subject to significant and non significant temporary adverse visual, noise/vibration and built heritage impacts. The impacts are due to the location of the building within the centre of the Development Site; and

4 During operation, the Grade II listed Moulsoe Buildings Farmhouse (Holiday Inn), users of footpaths/bridleways close to Moulsoe and residents/business in Moulsoe to significant and non-significant permanent beneficial and adverse landscape and visual, noise and vibration and socio-economic impacts. The incremental growth in adverse impacts during the phased delivery of operational impacts and simultaneous beneficial socio-economic impacts will assist to balance each other rather than giving rise to a new significant effects.

P3.6 Other receptors would also experience one or two adverse and beneficial effects but none of these are considered likely to give rise to new significant effects when considered synergistically.

P3.7 The analysis has demonstrated a need to ensure a comprehensive communication strategy with those likely to be affected by more than one effect during construction and operation. The applicant is committed to a communication strategy to ensure that receptors have information on likely effects and to provide a mechanism for any issues to be addressed.

P3.8 The analysis above has also identified that there is a requirement for mitigation measures to manage some of the effects arising affecting those receptors close to the site. However, it is considered that mitigation already identified through the EIA process is sufficient to ensure that both individual and synergistic effects can be addressed.

P3.9 Mitigation measures relating to the individual effects summarised in Table P3.1 are described further in Chapter Q of this ES and are all capable of being secured via planning conditions and section 106 obligations. In addition, Chapters D to O (and Chapter P) set out a series of possible enhancements to the development that may assist in further increasing the beneficial effects and reducing any adverse effects during the construction and operational periods.

P4.0 Other Cumulative Effects

P4.1 It has been agreed with MKC that the ES will assess likely significant cumulative or inter-project effects arising from the Proposed Development interacting with other developments. The objective is to identify whether impacts from several developments, which individually might be insignificant could, when considered together, cause a significant indirect and cumulative impact requiring additional mitigation. Where such effects are identified, this chapter identifies the extent of mitigation required.

Scope of Cumulative Assessment

Schemes to be Assessed

P4.2 Best practice dictates that cumulative assessments of this nature should have regard to those schemes which are 'reasonably foreseeable' (i.e. usually those under construction or with planning permission, as specified in guidance such as IEMA's "Guidelines for Environmental Impact Assessment" (2004) [Ref 4], the EC's "Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions" (1999) [Ref 5] and the Planning Inspectorate's Advice Note 17 [Ref 6 2]). This is further clarified in the Planning Practice Guidance (Environmental Impact Assessment) which states that:

"The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved development" [Lichfields emphasis] (ID: 4-024-20170728) (last updated 28 July 2017)

P4.3 The assessment is also only capable of being carried out based on the information available at this time.

P4.4 Various schemes have been identified for potential consideration in this EIA. These have been identified via:

1 Review of planning records held by MKC to identify projects which have the potential to give rise to cumulative effects as a result of their geographical proximity to the site, scale of development or other relationship which may be relevant (these records were reviewed regularly throughout the EIA process to ensure that all relevant developments have been captured and assessed within the ES); and

2 Further clarification on the schemes to be considered was also sought via the Scoping Opinion from MKC.

P4.5 A complete list of potential schemes considered for inclusion in the Cumulative Impact Assessment is provided at Table P4.1 and a plan showing their proximity to the development sites is provided at Appendix P1.

Table P4.1 Potential Cumulative Schemes for Assessment

Ref	Site Address	Application Reference	Application Description	Relationship to MKE Development Site
1	Land at Brooklands, Newport Road, Broughton, Milton Keynes	20/03322/REM	Reserved Matters for x46 units at Brooklands (plot substitution of 17/02226/REM)	Beyond 1km from site; south of M1 motorway

2 Guidance relates to the delivery of Nationally Significant Infrastructure Projects but provides helpful guidance on cumulative impact assessment relevant to this ES

Ref	Site Address	Application Reference	Application Description	Relationship to MKE Development Site
2	Site A Towegate Groveway V11 to H8 Milton Keynes MK17 8JE	20/02932/REM	Approval of reserved matters for appearance, landscaping, scale, layout (pursuant to the permitted outline planning application 17/03205/OUT) for up to 150 dwellings	Beyond 1km from site; south of M1 motorway
3	Former Wavendon Golf Centre Lower End Road Wavendon Milton Keynes MK17 8DA	20/01841/REM	Reserved matters application (access, appearance, layout and scale) for 400 dwellings and associated works, pursuant to outline planning permission 14/00350/OUTEIS (Resubmission of 19/01196/REM)	Beyond 1km from site; south of M1 motorway
4	Willen House Emerald Gate Fox Milne Tongwell Street H5 To H6 Milton Keynes MK15 0YS	20/01134/FUL	Demolition of existing building and the erection of approximately 24,000 sqm (GIA) of B1c and/ or B8 uses with ancillary B1 offices, associated access, landscaping and parking (resubmission of 19/02406/FUL)	Within 1km from site; south of M1 motorway
5	Glebe Land North of Broughton Brook Fen Street Magna Park Milton Keynes MK17 8EW	20/00476/FUL	Erection of distribution warehouse with ancillary offices, vehicle parking and manoeuvring areas, access and other associated works	Beyond 1km from site; south of M1 motorway
6	Tickford Fields Farm, North Crawley Road, Newport Pagnell, MK16 9HG	20/00133/OUTEIS	Outline planning application (all matters reserved except access) for the demolition of the existing farm buildings on site and the development of up to 930 dwellings (including affordable dwellings), primary school, local centre, open space, sports pitches, play areas, pavilion/wellbeing centre and other associated works.	Within 1km from site; north of Development Site
7	Land at Brooklands, Newport Road, Broughton, Milton Keynes	19/01615/REM	Reserved matters application pursuant to outline planning permission 14/01544/OUT for access, appearance, landscaping, layout and scale for 152 new dwellings at Brooklands BDW Parcels 1B	Within 1km from site; south of M1 motorway

Ref	Site Address	Application Reference	Application Description	Relationship to MKE Development Site
8	Land at Brooklands, Newport Road, Broughton, Milton Keynes	18/02664/REM	Reserved matters application for 111 dwellings pursuant to outline planning approval 14/01544/OUT	Within 1km from site; south of M1 motorway
9	Parcel E, Fen Street, Brooklands, Milton Keynes	18/02561/FUL	Development of 38 dwellings with associated external works	Within 1km from site; south of M1 motorway
10	Glebe Lane, North of Broughton Brook Fen Street Magna Park Milton Keynes MK17 8EW	17/02052/FUL	Erection of distribution warehouse with ancillary offices, vehicle parking and manoeuvring areas, formation of access, construction of a further section of Fen Street including bridge over Broughton Brook, formation of earth mounds and landscaping and an extension to Broughton Brook Linear Park	Beyond 1km from site; south of M1 motorway
11	Land at Brooklands, Newport Road, Broughton, Milton Keynes	17/02553/REM	Reserved matters application pursuant to outline planning permission 14/01544/OUT for the development of Parcel D at Brooklands Square for 46 houses and associated parking and public realm for siting, design, external appearance and landscape.	Within 1km from site; south of M1 motorway
12	Broughton Manor Business Park, Newport Road, Broughton, Milton Keynes, Newport Pagnell	17/02254/REM	Reserved matters (appearance, landscaping, layout and scale) pursuant to outline permission 11/01340/MKPCO for 62 dwellings.	Within 1km from site; south of M1 motorway
13	Brooklands Parcel 5B – 6B Fen Street, Brooklands, Milton Keynes	17/02226/REM	Reserved matters application pursuant to outline planning permission 14/01544/OUT for access, appearance, landscaping, layout and scale for 260 new dwellings at Brooklands parcels 5B and 6B	Within 1km from site; south of M1 motorway

Source: Milton Keynes Planning Register

Wider Strategic Allocation

P4.6 In addition to the above, and as described in MKC's Scoping Opinion (see Appendix B2, Volume 2 to this ES), it has been agreed that the cumulative assessment should include a review of potential development that would be brought forward within the Wider Strategic Allocation for

Milton Keynes East3. This has been taken into account as a standalone exercise when considering cumulative effects. It is of particular relevance given the majority of the sensitive receptors, as identified in Section P2.0 of this Chapter, are located within the boundary of the Strategic Allocation (see Chapter A of this ES for further details)

P4.7 In addition to the Development Site that is the subject of this ES, the wider Strategic Allocation includes three parcels of land which are referred, for the purposes of the assessment in this Chapter as the 'Newlands land', the 'Bloor land' and the 'MKC land'. Figure P4.1 below identifies the location and broad extent of each parcel and their relationship to the Development Site:-

Figure P4.1 Location of other land within the wider Strategic Allocation

Source: Google Earth, Lichfields
Note: Red line indicates broad extent of Development Site only – refer to Appendix A1 for an accurate Development Site Boundary Plan. The extent of the Newlands, Bloor and MKC land is shown for indicative purposes only – precise site boundaries will be determined by subsequent planning applications.

P4.8 The Newlands, Bloor and MKC land parcels are not currently subject to any extant planning permissions or live planning applications. However the following planning history is relevant to the Newlands and Bloor land:-

- Newlands land – planning permission was refused (MKC ref: 19/02402/FUL) was refused on 30 June 2020 for a scheme including the erection of two storage and distribution (use class B8) units comprising 81,293 sq m of floorspace with associated access, car parking, servicing, landscaping, earthworks, on and off-site drainage and off-site highway works.

3 Background to the wider strategic allocation are provided in Policy Background provided at Chapter A of this ES

- Bloor land – a scoping opinion was issued (MKC ref: 20/01881/EIASCO) was issued on 14 October 2020 in relation to the development of the land for up to 800 dwellings with associated works. The opinion identifies that the following technical aspects should be included as part of an EIA for the development: ecology/biodiversity, archaeology, transport and traffic, landscape and views, air quality/noise issues during construction, cumulative impacts.

P4.9 In the absence of reasonably foreseeable schemes on which a cumulative assessment can be conducted, this ES has established the following phasing assumptions for the purposes of assessment:-

P4.10 sets out the assumed phasing of other housing development on land parcels within the wider Strategic Allocation and which have been taken into account by individual technical chapters in review of the issues. Bloor, MKC, Newlands (was Segro) 18 ha B8 (before 2030 once bridge constructed)

Table P4.2 MKE Wider Allocation - Delivery Programme assumed for the purposes of assessment

Phase	Residential				Commercial	
	St James	Bloor	MKC	Totals	St James	Newlands
Phase 1 2024-2030	600	650	0	1,250	145,750 sqm (offices, B2, B8)	18ha (B8)
Phase 2 2031-2037	1,100	150	350	1,600	257,900 sqm (offices, B2, B8)	0
Phase 3 2038-2048	2,900	0	0	2,900	0	0
TOTALS	**4,600**	**800**	**350**	**5,750**	**403,650 sqm (80 hectares)**	**18 hectares**

Source: St James

Consideration of Potential for Cumulative Effects

Assumptions and Approach

P4.11 Given the location and degree of separation (due to the M1 motorway) between the Development Site and the majority of the schemes identified in Table P4.1, the extent of cumulative effects is limited with those schemes. However, the potential for cumulative effects associated with the schemes has been reviewed in relation to each technical aspect of the ES and where there is not considered to be any reasonably foreseeable prospect of cumulative impacts occurring, this is explained below.

P4.12 No cumulative effects are likely to occur where the zone of impact or influence of a particular aspect area has no potential to overlap with those arising from the schemes identified for assessment in this cumulative assessment. There is therefore no potential for cumulative effects and no further requirement for further consideration.

I1.1 For this same reason, however, there is greater likelihood for cumulative effects when the Proposed Development is considered alongside the potential future development of the three plots within the wider Strategic Allocation. This is because the zone of impact or influence ('ZOI') of a particular aspect area[4] is more likely to coincide with the three plots due to their adjacency to the Development Site. In addition, and as explained above, because many of the sensitive receptors identified in this chapter also have a close geographical relationship with the

4 Zone of Impact/Influence – the area within which the significant effects from MKE are likely to be experienced

three plots within the wider Strategic Allocation. However, and importantly, the identification of any cumulative effects arising from an assessment of the wider Strategic Allocation must be balanced against the fact that the development of none of the three additional plots are, at the time of this ES, 'reasonably foreseeable, in EIA terms. Schedule 4 requires only that the cumulative effects of other' existing and/or approved projects', however given the length of time the Proposed Development is likely to be built; and known information about likely form and quantum of development on the wider Strategic Allocation, it has been included within the cumulative assessment for robustness. There are some circumstances where the cumulative assessment of both the schemes identified in Table P4.1 and the theoretical delivery programme for the Wider Strategic Allocation identified in Table P4.2 has already been assumed to be in place as part of the assessments described in Chapters D to O of this ES. In these circumstances, the assessments described in those chapters has already had regard to the potential for cumulative effects. To ensure a proportionate approach, and avoid duplication, no further consideration is therefore provided in this chapter as impacts have already been inbuilt into the assessments reported earlier in this ES. However this is stated below for ease of reference.

I1.2 The inter-project assessment is quantitative where possible, and utilises relevant data from the corresponding planning applications relating to construction timing, where available, however it is noted that information on construction timing is limited in relation to the identified schemes. Therefore, reasonable assumptions have been made, for the purpose of this inter-project assessment, on the policy requirements for developments in the area surrounding the Proposed Development, based on the thorough assessment of the local, regional and national policy that has been undertaken as part of this ES.

I1.3 For a number of the schemes considered, limited information is available and therefore reasonable assumptions have been made.

I1.4 The remainder of this sections reviews each technical aspect.

Transport

Wider Strategic Allocation

P4.13 As set out in Chapter D of this ES, the Milton Keynes Multi-Modal Model ('MKMMM') spreadsheet traffic model used as a basis for assessment in this EIA has considered all significant planned and/or committed development in the proposed development area. Where the detailed information of the specific development is known, this was included in the model directly. The other developments are included under the NTEM/TEMPro assumptions embedded in the model during its development.

P4.14 The MKMMM considers the full extent of potential development within the Wider Strategic Allocation and as described in Table P4.2. To that extent Chapter D has already considered the potential for all cumulative effects when MKE is considered alongside developments in the Wider Strategic Allocation. The mitigation measures therefore presented in Chapter D are considered sufficient to address any cumulative effects arising and no further effects are anticipated nor mitigation measures are considered necessary in respect of transport.

Other Developments

P4.15 As for the Wider Strategic Allocation, the MKMMM spreadsheet traffic model also includes all developments identified in Table P4.1. The assessment provided in Chapter D has already therefore had regard to the potential for cumulative effects with those developments in place. The mitigation measures therefore presented in Chapter D are considered sufficient to address

any cumulative effects arising and no further effects are anticipated nor mitigation measures are considered necessary in respect of transport.

Landscape and Views

Wider Strategic Allocation

P4.16 As set out in Chapter E of this ES, the assessment of the Proposed Development at both Years 2048 and 2062 has had regard, and has assumed, the development of the Wider Strategic Allocation to be in place (referred to as 'the wider allocation' throughout Chapter E).

P4.17 To that extent Chapter E has already considered the potential for all cumulative effects when MKE is considered alongside developments in the Wider Strategic Allocation. The mitigation measures (including embedded mitigation) therefore presented in Chapter E are considered sufficient to address any cumulative effects arising and no further effects are anticipated nor mitigation measures are considered necessary in respect of landscape and views.

Other Developments

P4.18 The other developments identified within Table O4.1 are located within the existing built up areas of Milton Keynes and Newport Pagnell and their development would therefore be viewed as part of the wider urban landscape within which the Proposed Development would be located and which has already been taken into account as part of the assessment within Chapter E of this ES.

P4.19 The location of the other developments within Table O4.1 are such that they would not interact with the views of the Proposed Development as assessed and considered in Chapter E of this ES which have been identified to consider the worst case scenario views of the development. There is therefore no potential for cumulative effects.

P4.20 It is considered that the embedded mitigation measures included as part of MKE, and any landscape and design proposals forming part of the other developments are such that there is no potential for likely significant cumulative effects in respect of landscape and views.

Ecology

Wider Strategic Allocation

P4.21 Consideration has been given to the potential for cumulative effects to arise on the ecology of the site and its surrounds in relation to the sites identified as part of the Wider Strategic Allocation.

P4.22 It would not be expected that cumulative effects would arise in combination on the majority of ecological receptors relevant to the site, subject to the employment of standard avoidance and mitigation measures in accordance with the 2006 NERC Act, planning policy, guidance and nature conservation legislation. It is expected that each proposal would be required to include sufficient measures to ensure that there would be no negative effects on features of nature conservation interest. Effects on the majority of the ecological receptors would therefore be expected to be negligible.

P4.23 No likely significant effects on the ancient woodlands in the vicinity of the site either alone or in combination with other plans or projects are anticipated.

P4.24 Exceptions to this include relatively common and widespread but declining farmland birds of open habitats such as Skylark and Yellowhammer, of which relatively large numbers have been recorded at the site due to the size of the site and dominance of farmland habitats. These would

largely be expected to be lost from the site as a result of the Proposed Development and have been identified as residual significant effect in Section P2.0 and P3.0 of this Chapter.

P4.25 Farmland habitats of a similar character to that present within the site are found extensively in the wider area and including within the wider Strategic Allocation. The sites may also therefore support populations of these species. In the absence of compensation measures the cumulative effects of these developments listed above, in combination with the loss of open farmland habitats through the Proposed Development of the MKE, are highly likely to contribute towards a significant negative effect on the availability of habitat for these species at up to a low district level. Appropriate assessment of farmland bird species should therefore be conducted as part of planning applications for the site to ensure that mitigation measures can be identified as part of each site as needed. This will ensure that the potential for cumulative effects can be reduced as far as is possible.

Other Developments

P4.26 The conclusions reached above in respect of the wider Strategic Allocation equally apply to the sites identified within Table P4.1; some of which include farmland habitats of the type described. The same measures will ensure that the potential for cumulative effects associated with ecology are addressed. There are no further measures capable of being brought forward by the applicant for the Proposed Development that is the subject of this ES to address the potential or cumulative effects.

Air Quality

Wider Strategic Allocation

P4.27 The Institute of Air Quality Management (IAQM) guidance for the assessment of dust from construction defines the study area (or ZOI) as within 350m of the Proposed Development's Site boundary and within 50m of likely routes of construction vehicles up to 500m from the Site entrance. Therefore, there is the potential for cumulative effects where other construction activities with the potential for dust and particulate emissions will be undertaken within 700 metres of the Development Site boundary. The three sites within the wider Strategic Allocation all lie within this area.

P4.28 Mitigation measures proposed in Chapter G: Air Quality will minimise the impact of dust and particulate emissions associated with the Proposed Development's construction phase, and therefore reduce any potential cumulative impacts and it is expected that similar measures will be in place in any nearby developments that are being constructed at the same time as the Proposed Development. In addition, regular liaison meetings should be held with the developers (and contractors) if relevant, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.

P4.29 In the peak construction year, an annual average daily traffic flow of 397 light goods vehicles and 88 heavy goods vehicles will be added to the local road network as a result of the construction phase of the Proposed Development. These are below the IAQM / Environmental Protection UK (EPUK) Guidance indicative thresholds for air quality assessment for new development outside of an AQMA. On this basis an air quality assessment of construction traffic was scoped out as effects are unlikely to be significant.

P4.30 It is not known when developments within the wider Strategic Allocation would have their own peak construction year, nor the additional construction traffic flows that they would contribute to the road network. The headroom between the Proposed Development's contribution and the

IAQM / EPUK Guidance indicative thresholds suggests that significant cumulative effects are unlikely during the construction period.

P4.31 During operation, it is relevant that the assessment of air quality related to the Proposed Development and included in Chapter G of this ES utilised traffic data generated for use in the assessment of transport effects provided in Chapter D of this ES. As identified above, the traffic model used has already taken into account the development of all sites within the wider Strategic Allocation and therefore the assessment provided in Chapter D already takes into account cumulative effects. A similar conclusion must therefore be reached in respect of Air Quality and the assessment provided in Chapter G already has regard to the potential for cumulative effects on air quality arising from transport.

P4.32 The mitigation measures therefore presented in Chapter G are considered sufficient to address any cumulative effects arising and no further effects are anticipated nor mitigation measures are considered necessary in respect of air quality.

Other Developments

P4.33 Utilising the defined IAQM study area or ZOI, the following developments identified in Table P4.1 have been assessed to identify the potential for cumulative effects:-

- Site 1 - Land at Brooklands, Newport Road, Broughton, Milton Keynes (20/03322/REM);
- Site 4 - Willen House, Emerald Gate, Fox Milnem Tongwell Street H5 to H6, Milton Keynes MK15 0YS (20/01134/FUL); and
- Site 6 - Tickford Fields Farm, North Crawley Road, Newport Pagnell, MK16 9HG (20/00133/OUTEIS).

P4.34 Consideration of the potential for cumulative effects in respect of each of these development has reached the same conclusion as that identified above in respect of the wider Strategic Allocation. No additional cumulative effects are considered likely and no additional mitigation measures are required in respect of air quality.

Noise

Wider Strategic Allocation

P4.35 The noise assessment provided at Chapter H of this ES included a consideration of noise receptors within or close to the boundaries of each of the three sites identified in the Wider Strategic Allocation to ensure that noise effects from the Proposed Development did not give rise to likely significant effects on each location:-

- Receptor locations 5, 6, 7 and 8 are all located within the Bloor land;
- Receptor locations 4 and 5 are located immediately adjacent to the Newlands land; and
- Receptor location 10 is located within the MKC land.

P4.36 Negligible residual effects were identified at each location. It is assumed that the development of each of the sites will similarly aim to incorporate standard best practice measures to reduce the potential for noise associated with the construction and operation of development of each site and that, therefore, cumulatively no significant effects can be considered likely.

P4.37 During operation, it is relevant that the assessment of noise associated with traffic and included in Chapter H of this ES utilised traffic data generated for use in the assessment of transport effects provided in Chapter D of this ES. As identified above, the traffic model used has already taken into account the development of all sites within the wider Strategic Allocation and

therefore the assessment provided in Chapter D already takes into account cumulative effects. A similar conclusion must therefore be reached in respect of traffic noise and the assessment provided in Chapter H already has regard to the potential for cumulative effects on noise arising from transport. Mitigation already identified which results in an overall negligible effects from the site is therefore considered sufficient to address the potential for any cumulative effects arising.

P4.38 However, and for robustness, an analysis has been conducted of worst case scenarios with and without the developments identified in Table P4.1 in place. This concluded that the greatest short term change in noise at nearby sensitive receptors is predicted to be 2.2dB and the greatest long term change is predicted to be 3.3dB looking at various assessment years as identified in Chapter H of this ES. These changes would both be classified as minor (non significant) adverse effects. No significant cumulative effects associated with traffic noise have therefore been confirmed.

P4.39 It is considered unlikely that significant cumulative effects from vibration would arise given the relatively low ZOI for this environmental aspect.

Other Developments

P4.40 In general terms, noise and vibration associated with a development will be generated on the site of the development and will affect sensitive receptors close by (i.e. within 600 metres). This is the case during both the construction and operational phase. The exception to this would be any road traffic which has the potential to affect sensitive receptors further afield.

P4.41 Two of the sites identified within Table P4.1 are within the defined ZOI based on this criteria:-

- Site 4 - Willen House, Emerald Gate, Fox Milnem Tongwell Street H5 to H6, Milton Keynes MK15 0YS (20/01134/FUL) (apx 200 metres from the site boundary); and
- Site 6 - Tickford Fields Farm, North Crawley Road, Newport Pagnell, MK16 9HG (20/00133/OUTEIS)(apx 70 metres from the site boundary).

P4.42 However, in both cases, the nearest noise sensitive receptors are located in excess of the study area defined for construction noise of 300m. Therefore, no significant cumulative construction effects are anticipated.

P4.43 In respect of cumulative building services plant noise during operation, consideration has been given to the Land Use Parameter Plan for the Tickford Fields Farm scheme, prepared by BE1 Architects Ltd (drawing number: 5078-PLO2). This does not indicate that there are likely to be any sources of building services plant noise in proximity to the Proposed Development, or the nearest sensitive receptor (i.e. dwelling located within the premises of S R Osborn and Sons Ltd). Therefore, it is considered unlikely that cumulative effects from building services plant noise would be experienced.

P4.44 In respect of operational road traffic noise, and as above, the assessment in Chapter H has already had regard to all schemes identified in Table P4.1. No significant cumulative effects are therefore anticipated and no further mitigation measures are required.

Ground Conditions & Soils

Wider Strategic Allocation

P4.45 There are not considered to be any likely cumulative effects in respect of ground conditions from the Proposed Development and the development of the wider Strategic Allocation. This is as a result of the small ZOI associated with the ground conditions assessment. Soil contamination is

unlikely to be affected; additionally, it is considered that off-site groundwater contamination will be identified under planning conditions for the development of each site identified in Table P4.2 and will be appropriately remediated in line with primary legislation and best practice.

Other Developments

P4.46 Similar to the consideration of the wider Strategic Allocation, no likely significant cumulative effects are anticipated when the Proposed Development is considered alongside other development identified in Table P4.1.

Historic Built Environment

Wider Strategic Allocation

P4.47 Only one built heritage asset (Moulsoe Buildings Farmhouse) has been identified in Chapter J of this ES as being subject to likely significant effects as a result of the Proposed Development. Located centrally within the Development Site which is the subject of this ES, it has no geographical or other relationship (including its setting) with any of the land within the wider Strategic Allocation. There is therefore no potential for likely significant cumulative effects on this asset.

P4.48 All other effects identified in Chapter K are non-significant or negligible in respect of the built heritage assets considered within the 500 metre search zone (or assumed ZOI) of the Development Site. None of the three parcels of land included in the Wider Strategic Allocation include any of the built heritage assets identified within the 500 metre search zone. It is considered that there is limited potential for likely significant cumulative effects on any asset and no further mitigation is required.

Other Developments

P4.49 Only two of the developments identified in Table P4.1 fall within the 500 metre search zone identified in Chapter J of this ES:-

- Site 4 - Willen House, Emerald Gate, Fox Milnem Tongwell Street H5 to H6, Milton Keynes MK15 0YS (20/01134/FUL) (apx 200 metres from the site boundary); and
- Site 6 - Tickford Fields Farm, North Crawley Road, Newport Pagnell, MK16 9HG (20/00133/OUTEIS)(apx 70 metres from the site boundary).

P4.50 Site 4 is located to the south of the Development Site. This area includes the Willen Conservation Area and its associated cluster of listed buildings and the Broughton Conservation Area and its associated cluster of listed buildings. Site 4 is however beyond 500 metres from both Conservation Areas and separated from both by major infrastructure including strategic roads. The development of Site 4 alongside the infrastructure works to Tongwell Street would be viewed in the context of the urban area of Milton Keynes in which they are located and are not considered likely to affect the setting of the built heritage assets within this area and give rise to significant cumulative effects.

P4.51 Site 6 is not in proximity to any heritage asset considered in Chapter J and has therefore not been considered any further.]

Archaeology

Wider Strategic Allocation

P4.52 The ZOI associated with archaeology is limited to the Development Site boundary and therefore no likely significant cumulative effects are anticipated when the Proposed Development is considered alongside the development of sites in the wider Strategic Allocation.

Other Developments

P4.53 Similarly, no likely significant cumulative effects are anticipated when the Proposed Development is considered alongside the development of other sites identified in Table P4.1.

Water Environment and Drainage

Wider Strategic Allocation

P4.54 A review of the other land within the wider Strategic Allocation that none of the Newlands and MKC land appears to fall within the functional floodplain. Whilst part of the Bloor land may fall within part of the functional floodplain, it is assumed that development will not be brought forward in that area.

P4.55 It is assumed that proposals for each of the development will have regard to best practice and the delivery of sustainable drainage solutions which will ensure that that the delivery of the wider Strategic Allocation will not give rise to significant cumulative effects.

P4.56 Additionally, as the Scheme is allocated within the local plan the demands as a result of the Scheme upon the potable water supply and foul water treatment would be accommodated within the current permits and headroom capacity associated with the Anglian Water infrastructure, as indicated by the Milton Keynes Water Cycle Study.

Other Developments

P4.57 Given the requirements within NPPF that there is to be no increase in flood risk and surface water drainage to third parties as a result of any Scheme, no other development in isolation or in combination should result in an adverse change from the baseline flood and surface water drainage conditions.

Socio Economics

Wider Strategic Allocation

P4.58 Based on the assumptions in Table P4.2, Table P4.3 below considers the potential for cumulative effects for each socio-economic factor assessed in Chapter M of this ES. It identifies, first the anticipated provision that each parcel of land within the wider Strategic Allocation would provide over and above that included within the Proposed Development that is the subject of this ES. The final column then reviews the likely significant cumulative effects that could arise:-

Table P4.3 Potential for Cumulative Socio-Economic Effects in respect of wider Strategic Allocation

Development / Theme	Bloor Land	MKC Land	Newlands land	Likely Cumulative Effects
Operational Employment	Additional employment in primary school and local retail centre.	No direct employment generating uses.	Additional employment. Assumed for the purposes of assessment to be within Use Class B8.	Moderate (significant) beneficial cumulative effect on the local and wider impact areas during Phase 1 of the Proposed Development as the development of the Newlands land comes forward. No requirement for mitigation.
Population Increase	An increase in the local population of up to 1,920 persons (2.4 persons per household)	An increase in the local population of up to 840 persons (2.4 persons per household)	n/a	A cumulative population increase of 3,000 people in Phase 1 and 3,840 people in Phase 2 is estimated when the sites are considered alongside the Proposed Development. However the development of facilities (schools, open space, etc) as part of the wider Strategic Allocation mean that this increase will not give rise to significant cumulative effects in the wider local area.
Housing	Up to 800 additional homes. Assuming 31% affordable, this equates to 264 additional affordable units.	Up to 350 additional homes. Assuming 31% affordable, this equates to 109 additional affordable units.	n/a	The cumulative increase in dwelling numbers would not give rise to likely significant cumulative effects.
Education	Provision of Primary School.	n/a	n/a	No likely significant cumulative effects
Health	n/a	n/a	n/a	No likely significant cumulative effects
Open Space	New play space and open space provision.	New play space and open space provision.	n/a	No likely significant cumulative effects
Community Facilities	n/a	n/a	n/a	No likely significant cumulative effects

Source: Lichfields Analysis

Other Developments

P4.59 The ZOI for the socio-economic assessment encompasses a wider area including all the other developments identified in Table P4.1. Table P4.4 therefore considers each development and its potential to give rise to significant cumulative effects when each is considered alongside the Proposed Development.

Table P4.4 Potential for Cumulative Socio-Economic Effects in respect of other Developments

Development		Ref	Potential for Cumulative Effects
1	Land at Brooklands, Newport Road, Broughton, Milton Keynes	20/03322/REM	The development is part of 'Eastern Expansion Area'. The additional 46 homes and the estimated 111 new residents would slightly increase demand in education, healthcare, open space and community facilities. But the allocation itself includes a variety of facilities provision to meet those needs. Expected to be delivered ahead of the first housing units for the MKE Proposed Development No likely significant cumulative effects.
2	Site A Towegate Groveway V11 to H8 Milton Keynes MK17 8JE	20/02932/REM	This development is part of a wider expansion area. The additional 150 homes and the estimated 360 new residents would increase demand in education, healthcare, open space and community facilities, but the allocation includes the provision of a variety of facilities to meet those needs. No likely significant cumulative effects
3	Former Wavendon Golf Centre Lower End Road Wavendon Milton Keynes MK17 8DA	20/01841/REM	This development is part of a wider expansion area. The additional 400 homes and the estimated 960 new residents would increase demand in education, healthcare, open space and community facilities, but the allocation includes the provision of a variety of facilities to meet those needs. No likely significant cumulative effects
4	Willen House Emerald Gate Fox Milne Tongwell Street H5 To H6 Milton Keynes MK15 0YS	20/01134/FUL	Around an additional 500 to 600 jobs are anticipated from this development as the existing employment uses were vacant. The scheme is near to Proposed Development on the western side of the M1. It is already within a designated employment area. Expected to be delivered ahead of the first housing and employment units for the MKE Proposed Development. No likely significant cumulative effects.
5	Glebe Land North of Broughton Brook Fen Street Magna Park Milton Keynes MK17 8EW	20/00476/FUL	Up to 120 jobs are anticipated across the new 8,143 sqm B8 warehouse. The scheme is c.4.3km south of MKE within Magna Park. It is already within a designated and well-established employment area. Expected to be delivered ahead of the first housing and employment units for the MKE Proposed Development. No likely significant cumulative effects.
6	Tickford Fields Farm, North Crawley Road, Newport Pagnell, MK16 9HG	20/00133/OUTEIS	The development would provide 930 new homes, relating to a population increase of 2,232 people in proximity to the Proposed Development. In addition, a new primary school, a "wellness centre" and a contribution to meeting primary care needs and a small local centre of up to 2,000 sqm, together with open space and community facilities, will be provided. New jobs will be created through the provision of these facilities, albeit these figures will not be significant. This development is expected to overlap with the Proposed Development up to Phase 2 (2037). However both this development and the Proposed Development will meet their own needs and, therefore, no likely significant cumulative effects.
7	Land at Brooklands, Newport Road, Broughton, Milton Keynes	19/01615/REM	The development, which is part of the Eastern Expansion Area, would provide 152 new homes, relating to a population increase of 365 people. This is expected to increase pressures for education, healthcare, community uses and open space facilities

Development		Ref	Potential for Cumulative Effects
			but in a not significant level. The allocation itself includes the provision of a variety of facilities to meet those needs. No likely significant cumulative effects
8	Land at Brooklands, Newport Road, Broughton, Milton Keynes	18/02664/ REM	The development, which is part of the Eastern Expansion Area, would provide 111 new homes, relating to a population increase of 267 people. This is expected to increase pressures for education, healthcare, community uses and open space facilities but in a not significant level. The allocation itself includes the provision of a variety of facilities to meet those needs. No likely significant cumulative effects
9	Parcel E, Fen Street, Brooklands, Milton Keynes	18/02561/ FUL	The development, which is part of the Eastern Expansion Area, would provide 38 new homes, relating to a population increase of 92 people. This is expected to increase pressures for education, healthcare, community uses and open space facilities but in a not significant level. The allocation itself includes the provision of a variety of facilities to meet those needs. No likely significant cumulative effects
10	Glebe Lane, North of Broughton Brook Fen Street Magna Park Milton Keynes	17/02052/ FUL	Up to 575 jobs are anticipated across the new 29,051 sqm of B8 and B1 development. The scheme is c.4.3km south of MKE within Magna Park. It is already within a designated and well-established employment area. It's likely to be built in the short term so there is unlikely to be any concurrent development with employment floorspace at MKE. Expected to be delivered ahead of the first housing units for the MKE Proposed Development. No likely significant cumulative effects.
11	Land at Brooklands, Newport Road, Broughton, Milton Keynes	17/02553/ REM	The development, which is part of the Eastern Expansion Area, would provide 46 new homes, relating to a population increase of 111 people. This is expected to increase pressures for education, healthcare, community uses and open space facilities but in a not significant level. The allocation itself includes the provision of a variety of facilities to meet those needs.
12	Broughton Manor Business Park, Newport Road, Broughton, Milton Keynes, Newport Pagnell	17/02254/ REM	The development, which is part of the Eastern Expansion Area, would provide 62 new homes, relating to a population increase of 149 people. This is expected to increase pressures for education, healthcare, community uses and open space facilities but in a not significant level. The allocation itself includes the provision of a variety of facilities to meet those needs. No likely significant cumulative effects.
13	Brooklands Parcel 5B – 6B Fen Street, Brooklands, Milton Keynes	17/02226/ REM	The development, which is part of the Eastern Expansion Area, would provide 260 new homes, relating to a population increase of 624 people. This is expected to increase pressures for education, healthcare, community uses and open space facilities but in a not significant level. The allocation itself includes the provision of a variety of facilities to meet those needs. No likely significant cumulative effects.

Source: Milton Keynes Planning Register, Lichfields Analysis

P4.60 Considered together, the developments identified above and the Proposed Development will lead to a general uplift in economic output and housing supply which will lead to a generally beneficial cumulative effect as the Proposed Development is brought forward. Table P4.5 below identifies the likely significant cumulative effects during each phase of the construction of the

MKE Proposed Development when it is considered alongside all other developments, and the wider Strategic Allocation.

Table P4.5 Likely Socio-Economic Cumulative Effects

Socio-Economic Aspect or Indicator	MKE Proposed Development Phase (Years)			
	Initial Construction Phase (2022 - 2024)	Phase 1 (2025 - 2030)	Phase 2 (2031 - 2037)	Phase 3 (2038 - 2048)
Employment & Economic Output	Permanent Minor Beneficial	Permanent Minor Beneficial	Permanent Moderate Beneficial	Permanent Minor Beneficial
Housing	Permanent Minor Beneficial	Permanent Minor Beneficial	Permanent Moderate Beneficial	Permanent Moderate Beneficial
Education	Negligible	Negligible	Permanent Minor Beneficial	Negligible
Healthcare	Permanent Minor Beneficial	Permanent Minor Beneficial	Permanent Minor Beneficial	Negligible
Open Space	Permanent Minor Beneficial	Permanent Minor Beneficial	Permanent Minor Beneficial	Permanent Minor Beneficial
Community Facilities	Permanent Minor Beneficial	Permanent Minor Beneficial	Negligible	Negligible
Surveillance	Negligible	Negligible	Negligible	Negligible

Source: Lichfields; green highlighted cells indicate likely significant cumulative effects

P4.61 Due to the beneficial nature of the effect no additional mitigation is required.

Climate Change and Resilience

Wider Strategic Allocation

P4.62 This ES identifies a likely significant effect in respect of the release of greenhouse gases ('GHG') into the atmosphere. This conclusion is based on a best practice analysis of climate change issues and must be measured against the commitment by the applicant to embracing new technologies and reducing the footprint of the Proposed Development as far as is possible during its construction and operation.

P4.63 Given the likelihood of significant effects associated with GHG with the Proposed Development by itself, it must be concluded that consideration of the development of the Wider Strategic Allocation could also give rise to a significant cumulative effect in respect of GHG. This would need to be addressed through the implementation of robust strategies with each development to reduce effects as far as is possible. This mitigation cannot be brought forward by the applicant for MKE and as part of the Proposed Development and will need to secured via MKC in negotiation and discussions with individual developers as sites within the Wider Strategic Allocation are brought forward to ensure a robust approach to addressing the issues of Climate Change in the development of each plot.

Other Developments

P4.64 The issues raised under 'Wider Strategic Allocation' are also considered a likely outcome when the Proposed Development is considered against other developments identified in Table P4.1. MKC should liaise with developers of other developments in the wider area to ensure an

appropriate response to issues associated with Climate Change in the development of schemes identified. No mitigation can be brought forward by the application for MKE able to address this issue through the Proposed Development.

Waste

Wider Strategic Allocation

P4.65 The Proposed Development and the development of land within the wider Strategic Allocation will generate demolition and construction waste that will require consideration in relation to existing demands placed on waste management infrastructure.

P4.66 Discussions with the appointed waste management contractors will be required as each site is brought forward to determine the likely cumulative impacts associated with waste transportation. In addition, each scheme should implement a Construction Environmental Management Plan (CEMP) and a Site Waste Management Plan (SWMP) to incorporate measures for the prevention, minimisation and sustainable management of demolition and construction waste. During operation, it is assumed that residents and occupiers will be provided with appropriate internal and external waste storage areas and facilities to maximise the opportunity to segregate recyclables at source.

P4.67 As a consequence of these measures, the quantity of material requiring disposal will be minimised as far as practicable. Considering these factors and the scale of the proposed development in relation to the existing construction projects in the area, the resulting cumulative impact on existing waste management infrastructure is anticipated to be of minor (non-significant) adverse.

Other Developments

P4.68 Given the wide range ZOI of the waste assessment and its reliance on common waste management infrastructure, it is considered that a similar conclusion on likely significant cumulative effects would be reached if the Proposed Development is considered alongside other developments identified in Table P4.1. It is therefore anticipated that the resultant cumulative impact as a result of waste will be minor (non-significant) adverse.

Summary and Conclusions

P4.69 An assessment has been conducted of the potential for likely significant cumulative effects when the Proposed Development is considered alongside the development of land within the wider Strategic Allocation; and also in conjunction with other identified reasonably foreseeable developments in the wider area. The assessment has concluded that for the majority of technical aspects considered within this ES that no significant cumulative effects are considered likely. However the following potential issues have been identified:-

1 **Ecology** – a likely (non significant) cumulative adverse effect is identified on species (predominantly birds such as Skylark and Yellowhammer) which rely on farmland habitats which will be lost due to development. An assessment of all sites where the loss of such a habitat is likely is recommended to ensure that appropriate mitigation measures can be identified as each site is brought forward. This will ensure that the potential for cumulative effects can be reduced as far as is possible;

2 **Socio-Economics** – a range of significant and non-significant beneficial cumulative effects are anticipated in respect of the Proposed Development when considered alongside other developments in the wider area. Significant effects are particularly anticipated in respect of employment and economic output and housing supply and delivery. Other minor

(non-significant) effects are anticipated in respect of education, health, open space and community facilities as the Proposed Development and others in the area bring forward new facilities as part of each development;

3 **Climate Change** – a likely significant cumulative effects is identified in respect of the release of GHG into the atmosphere as a result of all developments considered together. The delivery of strategies through the development of each site to seek to reduce the release of GHG as far as is possible should be brought forward; and

4 **Waste** – a minor (non-significant) adverse cumulative effect is likely on waste management infrastructure. The delivery of robust management strategies to address waste as part of the delivery of each site will assist in ensuring that waste impacts are reduced as much as possible.

P4.70 The above demonstrates that any cumulative effects can be appropriately managed as each site is brought forward and through the appropriate use of best practice or other mitigation measures.

P5.0 Summary and Conclusion

P5.1 This chapter has considered the inter-relationship between impacts identified within the ES and whether there is a need for further mitigation (synergistic effects). It also considers the potential for cumulative impacts when the development is considered with other development in the surrounding area (cumulative effects).

P5.2 The ES has assessed the potential for the effects in relation to the following environmental matters:-

1 Transportation
2 Landscape and Visual Impact
3 Ecology
4 Air Quality
5 Noise and Vibration
6 Ground conditions and Soils
7 Built Heritage
8 Archaeology
9 Water Environment and Drainage
10 Socio-Economics
11 Climate Change
12 Waste

P5.3 A range of mitigation measures have been identified throughout the ES which are largely capable of being enforced through the planning process in relation to the development.

P5.4 It has been identified that non-significant synergistic effects exist for some receptors within the Development Site boundary, which do not give rise to a need for additional mitigation measures.

P5.5 Consideration has also been given to the potential for cumulative effects when the Proposed Development is considered alongside other emerging cumulative schemes in the surrounding area and the wider Strategic Allocation of Milton Keynes East. The assessment has shown that there could be potential for cumulative effects but that these can be addressed on a site by site basis through the use of best practice measures or appropriate mitigation. There are no further mitigation measures required as part of the Proposed Development to address any effects.

P5.6 Chapter Q provides a comprehensive summary of all mitigation measures, and how these can be secured.

P6.0 Abbreviations & Definitions

1 AQ - Air Quality
2 AR – Archaeology
3 BH - Built Heritage
4 CC - Climate Change
5 CEMP - Construction Environmental Management Plan
6 EIA - Environmental Impact Assessment
7 EN – Ecology
8 EPUK - Environmental Protection UK (Guidance)
9 ES - Environmental Statement
10 GC - Ground conditions
11 GCN – Great Crested Newts
12 GHG - greenhouse gases
13 IAQM - Institute of Air Quality Management
14 IEMA – Institute of Environmental Management and Assessment
15 LV - Landscape and views
16 MKC - Milton Keynes Council
17 MKE – Milton Keynes East (the Proposed Development which is the subject of this ES
18 MKMMM - Milton Keynes Multi-Modal Model
19 NERC (Act) - Natural Environment and Rural Communities Act
20 NV - Noise and Vibration
21 SE - Socio-Economics
22 SWMP - Site Waste Management Plan
23 T – Transportation
24 WED - Water Environment & Drainage
25 WS – Waste
26 ZOI - zone of impact or influence

P7.0 References

1 Town and Country Planning (EIA) Regulations 2017

2 Town and Country Planning (EIA) (Amendment) Regulations 2018

3 Planning Practice Guide (https://www.gov.uk/government/collections/planning-practice-guidance)

4 Guidelines for Environmental Impact Assessment (IEMA, 2004)

5 Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (EC, 1999)

6 Cumulative Effects Assessment - Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects (Planning Inspectorate, V2, August 2019)