

19. CUMULATIVE EFFECTS

Introduction

- 19.1 This Chapter summarises the cumulative effects associated with the Proposed Development.
- 19.2 This Chapter will consider the following effects:
- Intra-Project Effects: relates to the inter-relationship between topics and those effects of the Proposed Development which, when considered together, may have a combined effect on a receptor.
 - Inter-Project Effects: those effects of the Proposed Development and other committed developments.
- 19.3 Cumulative effects have been assessed in each individual chapter of this ES. This Chapter compiles the findings and summarises the cumulative Intra and Inter Project effects.

Legislation and Policy

- 19.4 A requirement of the EIA Regulations is to assess cumulative effects. Schedule 4(5) highlights that the ES should include: *“a description of the likely significant effects of the development on the environment resulting from, inter alia...the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.”*
- 19.5 The PPG states that *“each application (or request for a screening opinion) should be considered on its own merits. There are occasions, however, when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development. The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved development”* (Paragraph: 024 Reference ID: 4-024-20170728).

Assessment Methodology

Intra-Project Effects

- 19.6 In terms of Intra-Project Effects, an exercise has been undertaken which sets out the residual effects against receptors or receptor groups identified within each technical chapter. This allows impacts on receptors to be clearly identified, to allow judgment to be made on the potential for effect interactions on a particular receptor.

- 19.7 Common sensitive receptors identified throughout this ES and outlined within the Technical Chapters have been grouped into categories, which are based on those outlined in Schedule 4(4) of the EIA Regulationsⁱ. The receptor groups are as follows:
- Population and Human Health (human receptors comprising of residents of nearby residential properties, future users of the site, users of services in the surrounding area, labour force, and users of the local road and footpath network);
 - Biodiversity (designated sites, fauna and flora);
 - Water;
 - Air and Climate;
 - Cultural Heritage (including archaeology); and
 - Material assets (where not covered by the above).
- 19.8 Only residual effects identified in the Technical Chapters classified as being minor, moderate and major have been considered in relation to the potential for effect interactions. Whilst minor effects are not deemed to be 'significant' within this ES, there is the potential for these to combine to result in a significant effect. Residual effects considered negligible have been excluded from this assessment as, by their very nature, these effects result in no discernible change to the existing environment/receptor. The assessment includes residual effects only, and therefore is dependent on the mitigation measures being implemented as set out within the respective Technical Chapters.
- 19.9 The assessment considers both construction and operational phases. However, it is noted that construction effects are often temporary and short to medium term. Cumulative effects identified from the operational phase of development are more likely to be permanent and long-term.
- 19.10 When more than one effect is identified on a particular receptor, judgement is applied to establish whether the effect interaction would result in a significant cumulative effect on the receptor. If significant effects are identified, consideration is given to whether additional mitigation measures are required. Where it is considered that there is no potential for interaction between effects, this is stated.

Inter-Project Effects

- 19.11 In terms of Inter-Project Effects, nearby committed developments, which have the potential to lead to likely significant effects on the environment have been identified in **Table 2.6** in Chapter 2. These have been informed by the Scoping Opinion from CDC and subsequent discussions.
- 19.12 Cumulative effects have been considered within each of the technical assessments. This Chapter provides a summary of the potential cumulative effects already described in each Technical Chapter.

Intra-Project Effects

Construction Phase

19.13 **Table 19.1** provides a summary of the residual effects identified within the Technical Chapters, and the receptors effected, during the construction phase of the development. Those that are identified as significant within the Technical Chapters are highlighted in bold.

Table 19.1 - Construction Intra-Project Effects

Topic	Effect	Receptor	Residual Effect (significant effects in bold).	Receptor Group
Landscape	Effects on contextual landscape	County/District LCA D: Yarnton	Minor adverse	Landscape
	Effects on contextual landscape	County/District LCA F: Peartree Hill	Moderate-Minor adverse	Landscape
	Effects on contextual landscape	County/District LCA H: Middle Farm	Minor adverse	Landscape
	Effects on contextual landscape	Contextual Townscape Elements	Moderate adverse	Landscape
	Effects on site landscape	Geology and soils	Minor adverse	Landscape
	Effects on site landscape	Landform and drainage	Moderate adverse	Landscape
	Effects on site landscape	Vegetation cover	Moderate adverse	Landscape
	Effects on site landscape	Cultural/social	Major adverse	Landscape
	Effects on site landscape	Perceptual and aesthetic	Major adverse	Landscape
	Effects on site landscape	Landscape character	Major adverse	Landscape
	Effects on site landscape	Night-time character	Moderate adverse	Landscape
	Visual effects	Visual Receptor – Residential: Hazel Crescent/South Avenue, Kidlington	Moderate adverse	Population and Human Health
	Visual effects	Visual Receptor – Residential: Couling Close, Yarnton	Minor adverse	Population and Human Health
	Visual effects	Visual Receptor - A4165/A4260 Oxford Road to the east of the Site	Moderate adverse	Population and Human Health
	Visual effects	Visual Receptor - A4260 Frieze Way to the west of the Site	Minor adverse	Population and Human Health

	Visual effects	Visual Receptor - Bicester Road and Hampton Drive/Cromwell Way to the northeast of the Site	Minor adverse	Population and Human Health
	Visual effects	Visual Receptor - Almond Avenue/Hazel Crescent to the north of the Site	Minor adverse - negligible	Population and Human Health
	Visual effects	Visual Receptor - A44 Woodstock Road to the southwest of the Site	Minor adverse - Negligible	Population and Human Health
	Visual effects	Visual Receptor - Users of Oxford Parkway Railway station and Park and Ride	Minor adverse	Population and Human Health
	Visual effects	Visual Receptor - Users of PRow Footpath 229/4/30 to the east of the Site	Moderate adverse	Population and Human Health
	Visual effects	Visual Receptor - Users of PRow Footpath PRow 229/16/10 and 265/33/60 (Oxford Green Belt Way/ Oxford Canal walk LDWR) to the west of the Site	Minor adverse - Negligible	Population and Human Health
	Visual effects	Visual Receptor - Users of PRow Footpaths 229/10/10 and 229/10/30 to the southwest and south of the Site	Minor adverse	Population and Human Health
	Visual effects	Visual Receptor - Users of PRow Bridleways 229/5/40, 229/9/10, 229/9/20 and 229/9/30 to the east of the Site	Moderate adverse	Population and Human Health
	Visual effects	Visual Receptor – Users of PRow Footpaths 420/16/10 and 420/14/20 to the west of the Site	Minor adverse - Negligible	Population and Human Health
	Visual effects	Visual Receptor - Users of PRow Footpath 124/2/10 and 419/1/10	Minor adverse	Population and Human Health

		(Oxford Green Belt Way LDWR) to the west of the Site		
	Visual effects	Visual Receptor - Stratfield Brake to the west of the site including the permissive routes vehicular access/car park and sports pitches	Moderate adverse	Population and Human Health
	Visual effects	Visual Receptor - Ron Groves Community Park to the north of the Site	Minor adverse - Negligible	Population and Human Health
	Visual effects	Visual Receptor - North Oxford Golf Club	Minor adverse - Negligible	Population and Human Health
	Visual effects	Visual Receptor – Employees of Oxford Parkway Station	Minor adverse	Population and Human Health
	Visual effects	Visual Receptor - Employees and customers of Sainsbury’s Superstore to the north of the Site	Minor adverse - Negligible	Population and Human Health
Cultural Heritage and Archaeology	Removal of ridge and furrow earthworks	Ridge and furrow and earthworks (non-designated heritage asset)	Minor adverse	Cultural Heritage
	Disturbance of archaeological remains	Buried archaeological remains (non-designated heritage asset)	Minor adverse	Cultural Heritage
Transport and Access	Severance	Frieze Way	Minor adverse	Population and Human Health
	Non-motorised user amenity		Minor adverse	Population and Human Health
	Road safety		Minor adverse	Population and Human Health
	Non-Motorised user amenity	All other road links	Minor adverse	Population and Human Health
	Road safety		Minor adverse	Population and Human Health
Flood risk and drainage	Risk of flooding during construction works	The A4260 Road	Minor adverse	Population and Human Health
		Users of the construction site	Minor adverse	Population and Human Health
		Stratfield Brake Woodland and Sports Field	Minor adverse	Population and Human Health Biodiversity
Socio-Economics	Temporary construction employment	Sub-regional population	Minor beneficial	Population and Human Health

Climate Change	CHG Emissions	Global climate system	Minor adverse	Air and Climate
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- 19.14 The above table excludes effects in respect of ecology and nature conservation, noise, air quality, lighting, waste and major accidents and disasters as the respective Chapters identify only Negligible residual effects.
- 19.15 In order for there to be effect interactions between individual residual effects on a receptor, the residual effects have to impact on that particular receptor at the same time. The effect on a particular receptor varies depending on the activity, the location and extent of the activity.
- 19.16 Whilst the above table identifies effects in respect of Population and Human Health, Biodiversity, Landscape and Cultural Heritage, and Air and Climate the only receptor group where effects have been identified in multiple technical topics is Population and Human Health.
- 19.17 In terms of effects to this receptor group, adverse visual impacts are identified on a number of residential properties, users of roads and PRowWs (transient receptors), and users of recreational uses and services in the vicinity of the Site. The above table identifies that there is also potential for adverse effects on users of local roads, where there will be effects in relation to severance, non-motorised user amenity and road safety, associated with the construction traffic movements. The assessment of visual effects on the identified receptors takes into account the presence of construction vehicles (non-motorised user amenity), and given the limited inter-relationship between the remaining transport and visual effects, the level of effect is considered to be no greater than identified within the individual Technical Chapters. There is the potential for the risk of flooding on Frieze Way. However, this relates to the risk of flooding which are one-off events and therefore unlikely to interact with the above transport effects to any great extent. Mitigation measures identified within Chapter 14 look to manage flood risk during the construction phase through best practice techniques and the CEMP, which results in no significant effects. No further mitigation is considered to be required.
- 19.18 The socio-economic benefits cover a wider geographical area (sub-regional level) than the other effects which generally are in close proximity to the site. Whilst it is possible that some of the construction jobs on site would be taken by those living in close proximity of the site, it is considered unlikely that these benefits would interact with the other effects to a noticeable extent.
- 19.19 Overall, the effects are not considered to be greater than those reported in the individual Technical Chapters.

Operational Effect

19.20 **Table 19.2** provides a summary of the residual effects, and the receptors effected, during the operational phase of the development. Those that are identified as significant within the Technical Chapters are highlighted in bold. All effects are long-term and permanent unless stated.

Table 19.2 - Operational Intra-Project Effects

Topic	Effect	Receptor	Residual Effect (significant effects in bold).	Receptor Group
Landscape	Effects on contextual landscape	County/District LCA D: Yarnton	Minor Adverse - Negligible (year 1)	Landscape
			Minor adverse - Negligible (year 15)	
	Effects on contextual landscape	County/District LCA F: Peartree Hill	Moderate-Minor adverse (year 1)	Landscape
			Minor adverse (year 15)	
	Effects on contextual landscape	County/District LCA H: Middle Farm	Minor adverse - Negligible (year 1)	Landscape
			Minor adverse - Negligible (year 15)	
	Effects on contextual landscape	Contextual Townscape Elements	Moderate-Minor adverse (year 1)	Landscape
			Moderate-Minor adverse (year 15)	
	Effects on site landscape	Geology and soils	Minor adverse (year 1)	Landscape
			Minor adverse (year 15)	
	Effects on site landscape	Landform and drainage	Moderate adverse (year 1)	Landscape
			Minor adverse (year 15)	
	Effects on site landscape	Vegetation cover	Minor adverse (year 1)	Landscape
			Minor-Moderate Beneficial (year 15)	
Effects on site landscape	Cultural/social	Major-Moderate adverse (year 1)	Landscape	
		Moderate adverse (year 15)		
Effects on site landscape	Perceptual and aesthetic	Moderate adverse (year 1)	Landscape	
		Moderate-Minor adverse (year 15)		
Effects on site landscape	Landscape character	Moderate adverse (year 1)	Landscape	
		Moderate adverse (year 15)		
Effects on site landscape	Night-time character	Moderate-Minor adverse (year 1)	Landscape	
		Moderate-Minor adverse (year 15)		

	Visual effects	Visual Receptor – Residential: Hazel Crescent/South Avenue, Kidlington	Minor adverse (year 1)	Population and Human Health
			Minor adverse (year 15)	
	Visual effects	Visual Receptor – Residential: Couling Close, Yarnton	Minor adverse (year 1)	Population and Human Health
			Minor adverse - Negligible (year 15)	
	Visual effects	Visual Receptor - A4165/A4260 Oxford Road to the east of the Site	Minor adverse (year 1)	Population and Human Health
			Minor adverse (year 15)	
	Visual effects	Visual Receptor - A4260 Frieze Way to the west of the Site	Minor adverse (year 1)	Population and Human Health
			Minor adverse - Negligible (year 15)	
	Visual effects	Visual Receptor - Bicester Road and Hampton Drive/Cromwell Way to the northeast of the Site	Minor adverse (year 1)	Population and Human Health
			Minor adverse - Negligible (year 15)	
	Visual effects	Visual Receptor - Almond Avenue/Hazel Crescent to the north of the Site	Minor adverse - Negligible (year 1)	Population and Human Health
			Minor adverse - Negligible (year 15)	
Visual effects	Visual Receptor - Users of Oxford Parkway Railway station and Park and Ride	Minor adverse (year 1)	Population and Human Health	
		Minor adverse (year 15)		
Visual effects	Visual Receptor - Users of PRow Footpath 229/4/30 to the east of the Site	Moderate adverse (year 1)	Population and Human Health	
		Moderate-Minor adverse (year 15)		
Visual effects	Visual Receptor - Users of PRow Footpath PRow 229/16/10 and 265/33/60 (Oxford Green Belt Way/Oxford Canal walk LDWR) to the west of the Site	Minor adverse - Negligible (year 1)	Population and Human Health	
		Minor adverse - Negligible (year 15)		
Visual effects	Visual Receptor - Users of PRow Footpaths 229/10/10 and 229/10/30 to the southwest and south of the Site	Minor adverse (year 1)	Population and Human Health	
		Minor adverse (year 15)		
Visual effects	Visual Receptor - Users of PRow Bridleways	Minor adverse (year 1)	Population and Human Health	

		229/5/40, 229/9/10, 229/9/20 and 229/9/30 to the east of the Site	Minor adverse (year 15)	
	Visual effects	Visual Receptor - Users of PRow Footpath 124/2/30 to the west of the Site	Minor adverse - Negligible (year 1) Minor adverse - Negligible (year 15)	Population and Human Health
	Visual effects	Visual Receptor - Users of PRow Footpath 419/1/10 (Oxford Green Belt Way LDWR) to the west of the Site	Minor adverse (year 1) Minor adverse - Negligible (year 15)	Population and Human Health
	Visual effects	Visual Receptor - Stratfield Brake to the west of the site including the permissive routes vehicular access/car park and sports pitches	Moderate adverse (year 1) Moderate – Minor adverse (year 15)	Population and Human Health
	Visual effects	Visual Receptor - Ron Groves Community Park to the north of the Site	Minor adverse - Negligible (year 1) Minor adverse - Negligible (year 15)	Population and Human Health
	Visual effects	Visual Receptor - North Oxford Golf Club	Minor adverse - Negligible (year 1)	Population and Human Health
	Visual effects	Visual Receptor – Employees of Oxford Parkway Station	Minor adverse (year 1) Minor adverse - Negligible (year 15)	Population and Human Health
	Visual effects	Visual Receptor - Employees and customers of Sainsbury’s Superstore to the north of the Site	Minor adverse - Negligible (year 1) Minor adverse - Negligible (year 15)	Population and Human Health
Ecology and Nature Conservation	Loss of Habitats	Willow plantation and neutral grassland	Minor-Moderate beneficial	Biodiversity
		Mixed Scrub	Minor beneficial	Biodiversity
	Loss of foraging Ground/ suitable Habitat	Badgers	Minor beneficial	Biodiversity
		Bats	Minor-Moderate beneficial	Biodiversity
		Birds	Minor beneficial	Biodiversity
		Great Crested Newts	Minor beneficial	Biodiversity
		Invertebrates (brown hairstreak)	Minor beneficial (Moderate beneficial)	Biodiversity
Loss of nesting habitat	Birds	Minor beneficial	Biodiversity	
Transport	Severance	Frieze Way	Minor adverse	Population and Human Health

	Pedestrian Delay		Moderate beneficial	Population and Human Health
	Non-motorised user amenity		Moderate beneficial	Population and Human Health
	Road Safety		Minor adverse	Population and Human Health
	Pedestrian Delay	Oxford Road	Moderate beneficial	Population and Human Health
	Non-motorised user amenity		Moderate beneficial	Population and Human Health
	Road Safety		Minor adverse	Population and Human Health
	Severance	Banbury road N and S, Elsfield Way and A40 North Way	Minor adverse	Population and Human Health
	Driver Delay		Moderate/Minor adverse (temporary)	Population and Human Health
	Road Safety		Minor adverse	Population and Human Health
	Severance	A44 Woodstock road (C) and (S), A40 Northern Bypass Road and Godstow Road	Minor adverse	Population and Human Health
	Driver Delay		Minor adverse	Population and Human Health
	Road Safety		Minor adverse	Population and Human Health
Lighting	Building and sign illuminance (Non-Match Days)	LR01/L01 – Safety of users of Oxford Road	Minor adverse	Population and Human Health
		LR02/L02 – Safety of users of Kidlington Roundabout	Minor adverse	Population and Human Health
		LR03/L03 - Safety of users of West Eaton Bridge / Oxford Parkway Station	Minor adverse	Population and Human Health
		LR04/L04 - Safety of users of Frieze Way (A4260)	Minor adverse	Population and Human Health
	Building and sign illuminance (Match Days)	LR01/L01 – Safety of users of Oxford Road	Minor adverse	Population and Human Health
		LR02/L02 – Safety of users of Kidlington Roundabout	Minor adverse	Population and Human Health
		LR03/L03 - Safety of users of West Eaton Bridge / Oxford Parkway Station	Minor adverse	Population and Human Health
		LR04/L04 - Safety of users of Frieze Way (A4260)	Minor adverse	Population and Human Health
	Sky Glow (Match Days)	LR01/L01 – Safety of users of Oxford Road	Minor adverse	Population and Human Health

		LR02/L02 – Safety of users of Kidlington Roundabout	Minor adverse	Population and Human Health
		LR03/L03 - Safety of users of West Eaton Bridge / Oxford Parkway Station	Minor adverse	Population and Human Health
		LR04/L04 - Safety of users of Frieze Way (A4260)	Minor adverse	Population and Human Health
		LR05/L05 Amenity of Residential Dwellings on Oxford Road	Minor adverse	Population and Human Health
		LR06/H01 - Amenity of Stratfield Farm (Grade 2 listed building currently used as a residential dwelling).	Minor adverse	Population and Human Health
		LR07/H02 – Amenity of Frieze Farm (Grade 2 listed building. Currently used as office space).	Minor adverse	Population and Human Health
Flood risk and drainage	Pluvial flooding	Users of the proposed development and roads.	Minor adverse	Population and Human Health
	Flood risk associated with blocked or unmaintained culvert under the A4260 and downstream ditch/channel	Users of the proposed development and downstream receptors	Minor adverse	Population and Human Health Biodiversity Water
Socio-Economics	Employment (on-site)	Local population (District)	Minor beneficial	Population and Human Health
	Labour Market	Local Population (District and sub-regional)	Moderate beneficial at District Level Minor beneficial at sub-regional level	Population and Human Health
	Visitor Expenditure	Visitor Economy (sub-regional)	Minor beneficial	Population and Human Health
	GVA	Economic performance (District)	Minor beneficial	Population and Human Health
	Business Rates	Local population (District)	Minor beneficial	Population and Human Health
	Open space provision	Local population (local)	Minor beneficial	Population and Human Health
	Deprivation	Local population (local and District)	Moderate beneficial	Population and Human Health

Climate Change	GHG emissions – energy use	Global climate system	Minor adverse	Air and Climate
	GHG emissions – traffic emissions	Global climate system	Minor beneficial	Air and Climate
	Increasing and/or extreme temperature events	Stadium structure and M&E assets	Minor adverse	Material assets
		Landscape planting	Minor adverse	Landscape
		Players and other Site users	Minor adverse	Population and Human Health
	Increasing and/or extreme rainfall events	Stadium structure and M&E assets	Minor adverse	Material assets
		Landscape planting	Minor adverse	Landscape
		Players and other Site users	Minor adverse	Population and Human Health
	Decreasing in precipitation (during summer)	Landscape planting	Minor adverse	Landscape

19.21 As above, the above table excludes cultural heritage and archaeology, noise and vibration, air quality, waste and major accidents and disasters as the respective Chapters identify only Negligible residual effects.

19.22 In order for there to be effect interactions between individual residual effects on a receptor, the residual effects have to affect that particular receptor at the same time. The effect on a particular receptor would vary dependent on the activity, and the location and extent of the activity.

19.23 Whilst the above table identifies effects in respect of Population and Human Health, Biodiversity, Landscape, Water, Air and Climate and Material Assets, the receptor group which crosses the majority of technical topics is Population and Human Health.

Population and Human Health

19.24 The above table identifies that there is potential for some receptors to be subject to combined adverse and beneficial effects during the operational phase of the development. Given the breadth of this receptor group, it has been broken down further in order to assess effect interactions on more specific receptors, as follows:

- Neighbouring residential properties
- Users of local roads and PRoWs (transient receptors)
- Local population (including users of neighbouring services, and future site users)

Residential Properties

19.25 In terms of neighbouring residential properties, it has been identified that the properties on the southern edge of Kidlington (Oxford Road and Hazel Crescent/South Avenue) are likely to experience

Minor adverse visual effects from the Proposed Development as well as Minor effects from sky glow on match days. No visual effects have been identified for the other residential properties that will be subject to sky glow. The Lighting Chapter (Chapter 13) identifies that the local area contains high level of existing sky glow, and that the field of play lighting will only result in a minor shift from the baseline sky conditions. It must be noted that the effects of sky glow are only experienced on match days. Furthermore, the stadium floodlighting will provide illuminance levels suitable for the level of competition or task being performed in the stadium; the maximum illuminance will only be provided in specific circumstances, and for the majority of the time the illuminance levels will be lower, or the lighting will be off. As such, the combined visual and sky-glow effects will be infrequent and therefore will not result in a significant intra-project combined effects on nearby residential properties.

Users of Local Road and PRowS

- 19.26 Transient receptors comprise of the users of local road and footpath network. For users of Frieze Way and Oxford Road, there is the potential for effect interactions between visual effects and lighting effects. Non-match day lighting effects are limited to building and sign luminance effects, with match-days also having sky-glow effects.
- 19.27 As highlighted within the Lighting Chapter (Chapter 13), at this stage the lighting design is unknown but sets parameters for future lighting design to accord with. All façade lighting and illuminated signage will conform to the environmental zone requirements set out within the Chapter, which will ensure there are limited effects of lighting as the façade and signs will not appear overly bright compared to the baseline in this location. The overall effect on lighting on Frieze Way, Oxford Road and Oxford Parkway is a minor shift away from the baseline.
- 19.28 In terms of the combined effects with visual effects, it is noted that the assessment ignores trees and other vegetation in order to provide a 'worst case' scenario. The assessment of visual effects identifies that the views from Oxford Road and Oxford Parkway are partial and filtered views. On Frieze Way, views at the site accesses will be open but other views at ground floor level will be filtered over time with mitigation. The 'worst case' Minor effect on lighting is not considered to impact on the overall conclusions made in respect of visual effects which primarily relate to the scale and massing of the building. The lighting of the building has already been considered in this assessment and any combined effects are likely to reduce over time, particularly as views become filtered. As such, the conclusions are no greater than as set out within the relevant Technical Chapters.
- 19.29 In respect of sky glow, as above, the effects of sky glow are only experienced on match days. As such, the combined visual and sky-glow effects from the transient receptors will be infrequent and therefore will not result in a significant intra-project combined effects.

- 19.30 The Transport Chapter (Chapter 10) identifies that there will be Minor effects on severance and road safety for drivers on Oxford Road and Frieze Way. The Lighting Chapter identifies no adverse effects in respect of glare which is the primary effect which can impact safety of highway users. In terms of building illuminance, of which a Minor effect is outlined, mitigation measures have been included including maximum levels for building and sign luminance and rate of change of moving signs (if applicable), to ensure that drivers are not distracted. Given the mitigation measures in place, the combined effect is considered to be no greater than identified within the individual chapters.
- 19.31 The transport effects at wider receptors (Banbury road N and S, Elsfield Way and A40 North Way and A44 Woodstock road (C) and (S), A40 Northern Bypass Road and Godstow Road) will not combine with any other effects due to the distance from the site.
- 19.32 In respect of non-motorised users (pedestrians and cyclists), whilst there will be adverse visual effects on users of Oxford Road and Frieze Way as a result of the Proposed Development, these will be Minor/Minor-Negligible in the long term. However, the non-motorised user amenity and pedestrian delay see significant beneficial effects on these road links due to the improved pedestrian and cycle paths, and new pedestrian crossings on Oxford Road and Freize Way. As such, whilst it is acknowledged that there will be effects on views from these receptors, it is considered that the overall experience will be beneficial.

Local Population

- 19.33 In terms of users of neighbouring services, namely recreation grounds and nearby commercial uses, significant visual effects have been identified at Stratfield Brake to the west, and other Minor-Negligible effects in the long term at other nearby receptors. There is the potential for minor flood risk to the users of the downstream receptors which includes land in the vicinity of Stratfield Brake. However, given the limited inter-relationship between the flood risk and visual effects, the level of effect is considered to be no greater than identified within the individual chapters.
- 19.34 In respect of the site users, effects have been identified in respect of flood risk and climate change (in respect of extreme temperatures and rainfall). The Flood Risk Chapter (Chapter 14) outlines mitigation and enhancement measures to ensure no significant impacts. For climate resilience, the Climate Change Chapter (Chapter 16) has mitigation and adaptation measures in place to ensure its long-term resilience to the impacts of climate change. The conclusion in respect of climate change takes into account the mitigation measures outlined in relation to flood risk, so the overall level of effect is considered to be no greater than identified within the individual chapters.
- 19.35 There is the potential for a number of beneficial effects on the local population in respect of socio-economic factors. Whilst the majority of the effects cover a much broader area than the other

effects generally in close proximity to the Site, it is reasonable to conclude that these will also benefit a number of receptors in the vicinity of the Site. Nevertheless, it is noted that these effects are not directly comparable and will impact the receptor in different ways (and over the longer-term). The exception to this is the provision of public open space as part of the Proposed Development which will directly effect the local population within the vicinity of the Site. However, this benefit is unlikely to interact with any of the other effects to a noticeable extent. As such, these effects will remain as outlined in the Socio-Economics Chapter (Chapter 15).

- 19.36 During the operational phase, in the long-term, the overall effects on Population and Human Health are expected to range from Moderate adverse to Moderate beneficial (as set out in **Table 19.2** above). No further significant intra-project combined effects have been identified and therefore no additional mitigation is considered to be required.

Landscape and Biodiversity

- 19.37 Both landscape and biodiversity identify effects in relation to the on-site vegetation. The landscape strategy for the site has been driven by the desire to achieve a minimum 10% biodiversity net gain and includes the retention of trees where possible, significant tree planting, and biodiverse roofs and walls. The long-term effect on vegetation cover is considered to be beneficial. The landscape strategy also provides mitigation and enhancement in terms of onsite habitat (willow plantation, natural grassland and mixed scrub), as well as the loss of suitable habitat for protected species. Given that the proposed landscape strategy has informed the landscape and ecology and nature conservation assessments, the effects will remain as identified within the individual chapters.
- 19.38 In terms of the inter-relationship between landscape and climate change, the Climate Change Chapter (Chapter 16) has mitigation and adaptation measures in place to ensure the long-term resilience to the impacts of climate change, including planting species that favour high plasticity clays, to mitigate against summer droughts. No further mitigation or enhancement is considered necessary.
- 19.39 Overall, the level of intra-project effects during the operational phase is considered to be no greater than identified in the Technical Chapters.

Inter-Project Effects

- 19.40 **Table 19.3** provides a summary of the likely significant potential cumulative effects that may result from the construction and operation of the Proposed Development, in combination with the other committed developments described in **Table 2.6**.

Table 19.3 - Summary of likely cumulative effects

Topic	Potential Cumulative Effect
Landscape and Visual Impact	Moderate-Major adverse effects on: <ul style="list-style-type: none"> County/District LCA F: Peartree Hill Contextual Townscape Elements Moderate adverse effects on: <ul style="list-style-type: none"> County/District LCA D: Yarnton Moderate-Minor adverse effects on: <ul style="list-style-type: none"> Visual Receptor - Stratfield Brake to the west of the site including the permissive routes vehicular access/car park and sports pitches
Ecology and Nature Conservation	No significant cumulative effects are anticipated
Cultural Heritage and Archaeology	No significant cumulative effects are anticipated
Transport and Access	No significant cumulative effects are anticipated (operational assessment includes cumulative effects).
Noise and Vibration	No significant cumulative effects are anticipated
Air Quality	No significant cumulative effects are anticipated
Lighting	Moderate adverse - Potential change to the environmental zone of the area surrounding the site from E2 to E3 if all of the planned development comes forward. This would take place whether the Proposed Development is constructed or not.
Flood Risk and Drainage	No significant cumulative effects are anticipated
Socio-Economics	Moderate beneficial effects on: <ul style="list-style-type: none"> On-site employment (District) Labour market (District and Sub-Regional level) GVA (District and Sub-Regional level) Deprivation (local level) Open space provision (local level)
Climate Change	No significant cumulative effects are anticipated
Waste	No significant cumulative effects are anticipated
Major Accidents and Disasters	No significant cumulative effects are anticipated

19.41 The majority of developments outlined in **Table 2.6** are sites that are allocated for development within the adopted development plans for the area. A number of these have planning permission or live planning applications. As a result of the proposed allocations, the area will be subject to significant change, irrespective of the Proposed Development.

19.42 In respect of landscape and visual effects, the significant effects outlined in **Table 19.3** are in respect of:

- LCA F: Peartree Hill.
 - The stadium use is considered to be in keeping with the existing/emerging sporting character in the area defined by the existing Stratfield Brake Sports Ground, 11ha formal sports offer allocated site PR7a, and the land reserved for a replacement Golf Course at Frieze Farm. Despite this complementary land uses, the introduction of the significant number of new homes, associated infrastructure and a new football stadium into LCA F: Peartree Hill is considered to result in Moderate - Major Adverse

cumulative effects on this contextual landscape receptor due to the geographic extent of change within this character area.

- LCA D: Yarnton
 - Moderate Adverse cumulative effects are anticipated to be experienced by LCA D in the wider landscape to the west, although these effects are considered to be more directly as a result on Committed Development Sites 7, 8 and 9, which would directly result in a significant number of new dwellings, associated infrastructure and open space being introduced into the landscape to the west of Kidlington and west, north and east of Yarnton.
- Contextual Townscape Elements
 - Moderate – Major Adverse cumulative effects are identified to the contextual townscape elements due to the changes to settlement boundaries as a result of the committed developments identified above in combination with the introduction of the Proposed Development and massing of the stadium.
- Visual Receptor - Stratfield Brake:
 - Moderate-Minor adverse effects from this receptor which is no greater than the Proposed Development in isolation.

19.43 In respect of lighting, there would likely be a potential change to the background environmental zone in which the Site sits, which would be a moderate-adverse effect. However, this would take place whether the Proposed Development is constructed or not.

19.44 In terms of socio-economic effects, there will be beneficial cumulative effects in terms of job creation, local economic performance (GVA), fiscal contributions (business rates) and open space provision.

19.45 No other significant cumulative effects are anticipated.

ⁱ With the exception of those categories where no residual effects have been identified.