Land North of Hill Rise & Land North of Banbury Road Woodstock

Environmental Statement
Main Report

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Introduction

9.1 This chapter summarises the findings of the EIA. A comprehensive assessment has been undertaken of the potential environmental effects arising from the proposed developments. Where possible, measures have been incorporated into the development proposals to prevent or reduce the potential for adverse environmental effects. These primary mitigation measures are an integral part of the designs and were taken into account in the impact assessments. The primary mitigation measures are summarised in tables 9.1 and 9.2.

9.2 Measures to help mitigate adverse effects identified during the assessment process have also been proposed for some of the environmental topics. These secondary mitigation measures are summarised in tables 9.3 and 9.4.

9.3 The residual effects, i.e. the significant effects remaining after mitigation, are summarised in tables 9.5 to 9.7. The measures envisaged for monitoring adverse effects are set out in tables 9.8 and 9.9.

Design description / detail	Environmental issue addressed / avoided / reduced
6.23 ha of amenity greenspace, natural greenspace, parks and children's play areas will be provided. The play areas will be spread across the site and will include local equipped areas of play, kickabout areas, informal natural play spaces and local areas of play for younger children. The existing children's play area in the south of the site will be improved through the provision of additional play equipment, improved boundary treatment and access to integrate with the new footpath network, additional seating and bins, and additional tree and shrub planting. The existing kickabout area will be reconfigured so that it has the same area in a rectangular footprint and realigned to lie parallel with the site's southern boundary. 0.35 ha of allotments / community orchard will be provided between the southern and eastern residential parcels.	Minimised impacts on demand for existing amenity greenspace, play areas and allotments.
The location and form of the built development have been carefully designed to provide appropriate set backs from Blenheim Palace. The built development will be set back by between 24 m and 54 m to create a landscaped buffer to the existing properties along Hill Rise, the A44 and Vanbrugh Close. The massing, height and scale of development were considered to reduce densities and building heights along the northern boundary, adjacent to the open countryside.	Minimised impacts on the setting of the Blenheim Palace World Heritage Site (WHS) and registered park and garden and on views from residential properties to the west and south and the countryside to the north.
Connectivity between Woodstock and the proposed development has been maximised through the retention and incorporation of the public right of way that runs through the centre of the site and creating a new network of pedestrian access to the site. The view of the tower of St Mary Magdalene's Church in Woodstock from the public right of way has been retained.	Retained key views from the site and ensured a sense of connectivity between existing and new development.
Existing site boundary hedgerows and hedgerow trees have been retained apart from approximately 30 m of the hedgerow on the western site boundary, which will be removed to facilitate access. New areas of native woodland and hedgerow planting are proposed along the northern boundary to help assimilate the development into the landscape in views from the north.	Minimised habitat loss and changes to views from vegetation loss. Minimised impacts on views from the north and provided biodiversity enhancements.
Within phase 1, building materials and boundary treatments are proposed that respond to the local vernacular and historic townscape character of Woodstock. A high percentage of the planting species within phase 1 will reflect locally prevalent species and respond to the site's landscape context. Tree and shrub planting are proposed within phase 1 to integrate the development into the wider landscape and respond to local character.	Minimised impacts on landscape and townscape character and views.
An off-site biodiversity enhancement area is proposed on approximately 9.1 ha of land to the east of the site, which is currently in agricultural use. It will provide a habitat corridor between the two sites and give a continuous link for biodiversity within the area, including to the Woodstock Water Meadows Local Wildlife Site and the Glyme and Dorne Valleys Conservation Target Area. The existing woodland corridor to the east of the Land North of Hill Rise site will be enhanced through tree planting of native species to provide additional foraging and roosting habitat for birds and bats. The grassland will be planted with a native meadow mixture, providing a range of nectar sources for pollinators. The grassland will be encouraged to become tussocky in some areas and hibernacula will be constructed to provide suitable habitat for foraging and shelter for reptiles, as well as amphibians, small mammals and invertebrates. Scrub and woodland edge planting between the grassland and woodland will provide a gradual transition between the mosaic of habitats to benefit a range of different species.	Minimised the potential for adverse effects as a result of habitat loss and provided a net gain of more than 10% of the current baseline biodiversity for the sites.

Design description / detail	Environmental issue addressed / avoided / reduced
Localised traffic calming measures are proposed along the section of the A44 Manor Road / Oxford Street between the site and the town centre, including the following: • New town entrance feature, including a physical island with bollards • Reduction in the existing speed limit from 50 mph to 30 mph • Reduction in the existing speed limit from 30 mph to 20 mph with an entrance feature, which may include signing, lining and physical elements • Providing formalised priority arrangements in narrow stretches where this currently occurs informally when two large vehicles meet. This will allow the footways to be widened Blenheim Estate will fund these improvements, which will be the subject of a Traffic Regulation Order.	Improved pedestrian amenity between the site and the town centre.
The existing public right of way on site will be retained in its current alignment and will run through areas of greenspace in the north and south of the site, alongside the primary road and through residential areas. The existing informal pedestrian access point from Hill Rise to the west of the site will also be retained and new pedestrian access points will be created in the site's south eastern corner and in the east, connecting to Balliol Lane. In addition, the following measures are proposed to improve pedestrian and cycle accessibility at the site: • A 2 m wide footway will be created onto the A44 Manor Road from the proposed site access to Hill Rise • A good level of street and path lighting will be provided • On-site roads will be designed to a 20 mph speed limit • Tactile and coloured surfacing will be used • Signage will be provided to direct pedestrians and cyclists to key facilities and places of interest • Cycle parking will be provided in accordance with Oxfordshire County Council's parking standards for new residential developments • E-bikes will be provided for hire throughout the site	Facilitated pedestrian and cyclist accessibility to and from the site and reduced the potential for increased pedestrian severance and reduced pedestrian amenity associated with increased traffic on the A44.
A formal turning area for buses will be provided in the north west of the site to allow buses to terminate and turn at the site in forward gear. All dwellings will be within 400 m of a bus stop.	Reduced journey times and operator costs, which will benefit local bus services.
Sustainable drainage systems will be put in place as part of the proposed development, including an infiltration basin, cellular soakaways, infiltration swales (including some with a permeable sub-base) and permeable paving. Catchpits will be used to trap sediment in runoff. The proposed sustainable drainage techniques will accommodate the peak rainfall event for a 1-in-100 year storm with a 40% allowance for climate change.	Avoided the potential for increased surface water runoff from the site and effects on surface water and groundwater quality.
Table 9.1: Land North of Hill Rise primary mitigation measures	

Design description / detail	Environmental issue addressed / avoided / reduced
5.48 ha of amenity greenspace, natural greenspace, parks and children's play areas will be provided. The play areas will be distributed across the site and will include local equipped areas of play, natural play areas and a natural play trail. 0.11 ha of allotments / community orchard will be provided in the south of the site.	Minimised impacts on demand for existing amenity greenspace, play areas and allotments.
The location and form of the built development have been carefully designed to minimise impacts on the surrounding area. The massing, height and scale of the built development have been considered to reduce densities and building heights along the southern edge adjacent to the existing properties and on the boundaries to the west.	Minimised impacts on views from residential properties to the south and west and on the setting of the listed buildings to the south.
Connectivity between Woodstock and the proposed development has been maximised through the retention and incorporation of the public right of way that runs through the site and creating a new network of pedestrian access to the site. The views of the tower of St Mary Magdalene's Church in Woodstock and the Column of Victory at Blenheim Palace from the public right of way have been retained.	Retained key views from the site and ensured a sense of connectivity between existing and new development.
The existing ponds on site have been retained, together with the majority of the existing site boundary hedgerows and hedgerow trees and the line of trees around the ponds. Six trees and sections of two hedgerows and two tree groups that are of low arboricultural quality will need to be removed to facilitate access. New areas of native woodland and hedgerow planting will be provided along the northern and eastern boundaries to help assimilate the development into the landscape in views from the north and east.	Minimised habitat loss and changes to views from vegetation loss. Minimised impacts on views from the north and east and provided biodiversity enhancements.
The visible earthworks and ponds relating to the deserted medieval village of Hensington will be preserved in situ.	Avoided the potential for significant effects on these non-designated heritage assets.
An off-site biodiversity enhancement area is proposed on approximately 9.1 ha of land to the east of the Land North of Hill Rise site, which is currently in agricultural use. It will provide a habitat corridor between the two sites and give a continuous link for biodiversity within the area, including to the Woodstock Water Meadows Local Wildlife Site and the Glyme and Dorne Valleys Conservation Target Area. The existing woodland corridor to the east of the Land North of Hill Rise site will be enhanced through tree planting of native species to provide additional foraging and roosting habitat for birds and bats. The grassland will be planted with a native meadow mixture, providing a range of nectar sources for pollinators. The grassland will be encouraged to become tussocky in some areas and hibernacula will be constructed to provide suitable habitat for foraging and shelter for reptiles, as well as amphibians, small mammals and invertebrates. Scrub and woodland edge planting between the grassland and woodland will provide a gradual transition between the mosaic of habitats to benefit a range of different species.	Minimised the potential for adverse effects as a result of habitat loss and provided a net gain of more than 10% of the current baseline biodiversity for the sites.
The existing public right of way on site will be retained in its current alignment and will run through areas of greenspace and between residential areas. New pedestrian access points will be created into the site's south western corner onto Green Lane and in the east onto Banbury Road. In addition, the following measures are proposed to improve pedestrian and cycle accessibility to the site: • A good level of street and path lighting will be provided • On-site roads will be designed to a 20 mph speed limit • Tactile and coloured surfacing will be used • Signage will be provided to direct pedestrians and cyclists to key facilities and places of interest	Facilitated pedestrian and cyclist accessibility to and from the site and reduced the potential for increased pedestrian severance and reduced pedestrian amenity associated with increased traffic on the local road network.

Design description / detail	Environmental issue addressed / avoided / reduced
• Cycle parking will be provided in accordance with Oxfordshire County Council's parking standards for new residential developments • E-bikes will be provided for hire throughout the site	
Sustainable drainage systems will be put in place as part of the proposed development, including six infiltration basins and permeable paving. Catchpits will be used to trap sediment in runoff. The proposed sustainable drainage techniques will accommodate the peak rainfall event for a 1-in-100 year storm with a 40% allowance for climate change.	Avoided the potential for increased surface water runoff from the site and effects on surface water and groundwater quality.
Table 9.2: Land North of Banbury Road primary mitigation measures	

Potential effect	Mitigation	Implementation
	Community and social effects	
Increased demand for facilities and services, including early years, primary school and secondary school capacity, GP services, sports pitches and libraries	Financial contributions will be made through a section 106 legal agreement towards a range of community facilities and services, including early years, primary school and secondary school capacity, GP services, sports pitches and libraries.	Blenheim Estate
	Cultural heritage	
Potential loss of below ground archaeological remains (if present) during construction	This effect can be wholly mitigated through a programme of investigation, the form of which could be anything from a watching brief of initial groundworks to sample trench evaluation prior to development. Preservation by record of anything uncovered is a sufficient and policy-recognised form of mitigation.	Archaeological contractor
	Landscape and visual effects	
Changes to views of the site	There is the potential that, during detailed design, building heights may reduce. The articulation of built form could further respect and respond to the townscape and wider landscape setting with the sensitive orientation of buildings and the location of taller buildings in less sensitive areas. Allowing for the retention of some views out to the countryside by orientation of streets, footpaths and green corridors will enhance the overall landscape structure throughout the site.	Blenheim Estate
	The design and style of the built form should make a positive contribution to the local distinctiveness of Woodstock and provide high quality design, which will enrich the local environment and create a sense of place. The phase 1 detailed design illustrates how this can be achieved.	
	The design and access statement submitted in support of the planning application sets out the phase 1 design in order to achieve high quality streetscapes and a public realm that will enhance local distinctiveness and reinforce a sense of place. This will be carried forward into other phases of the development.	
	Development will be in scale and character with the local settlement pattern and will take account of the local vernacular, as demonstrated in the design and access statement. Controlled use of colour and materials is recommended to minimise unnecessary or unintentional visual impacts in the wider landscape.	
	The design and access statement provides details of how biodiversity mitigation measures should be incorporated into the detailed design of the green infrastructure to create an enriched ecological environment. Opportunities for further landscape enhancement of the open spaces and green corridors include woodland, tree, hedgerow and shrub planting through the details set out in the planting strategy. This should have the effect of integrating the development into the wider landscape. The phase 1 landscape designs indicate how the planting strategy will be carried out.	
	Any adverse impacts of lighting can be avoided by detailed development control. Careful consideration will be given to the height and type of street, amenity and building lighting to reduce night time effects. Planting should be used to help filter the lighting, reducing its visual impact in the wider landscape. Further measures to minimise adverse visual effects from lighting are set out in the lighting report submitted in support of the planning application.	

Potential effect	Mitigation	Implementation
	Natural heritage	
Effects on ecological receptors during construction	A construction method statement (CMS) will be produced, with input from a professional ecologist, subject to a planning condition and approved by West Oxfordshire District Council. It will describe the ecology mitigation works that will precede and accompany the construction phase of the proposed development.	Blenheim Estate
Damage to retained habitats during construction	Protective fencing, such as Heras fencing, will be installed prior to any clearance or construction work at the site around retained semi-natural habitats (including hedgerows, trees and grassland). Fencing around individual trees and hedgerows will provide a root protection zone in accordance with BS 5837. Standard pollution prevention measures will be implemented during the construction phase, such as those set out in Defra and the Environment Agency's (2019) *Pollution Prevention for Businesses* guidance to ensure habitats are protected from pollution during construction.	Contractor
Hedgerow loss during construction	The small length of hedgerow that is to be lost will be reinstated through new hedgerow planting along the northern site boundary. These new hedgerows will be native and species-rich and will enhance habitat connectivity across the site and the wider landscape. Hedgerow planting will also be incorporated in and around the built development and the more landscaped public open space areas, with these hedgerows typically being native species where possible. The approximate total length of planted hedgerows will be 2.12 km. The retained hedgerows will be enhanced through infilling and bulking out with native tree species. Grassland and species-rich ground flora will be sown along the margins.	Blenheim Estate
Tree loss during construction	New areas of native broadleaved woodland will be planted along the northern site boundary, which will enhance commuting and foraging networks for a range of species.	Blenheim Estate
Loss of habitats used by bats during construction	The creation of the new pond will provide additional foraging habitats for bats. The new woodland areas will provide high quality commuting and foraging networks, as well as potential roosting features once they have become established. The enhancements to the retained hedgerows and creation of new hedgerows will provide new foraging and commuting opportunities for bats once established.	Blenheim Estate
	As an enhancement, roosting opportunities will be provided through 15 integrated bat boxes within the new dwellings and at least five bat boxes on trees in the newly created woodlands. Their positioning will be advised by an ecologist and approximate locations will be identified in the landscape environmental management plan (LEMP).	
Disturbance of bats by increased lighting during construction	Lighting will be sensitively used during the construction of the proposed development along and around the features of value to bats, to minimise disruption through habitat degradation and abandonment of roosting sites. Lighting will be face directly downwards or away from the site boundaries, using directional shields where required. Particular care will be taken to minimise light spill onto the retained and newly created vegetation. Reference will be made to good practice guidance, such as the Bat Conservation Trust and Institute of Lighting Professionals (2018) *Guidance Note 08/18 – Bats and artificial lighting in the UK.*	Contractor
Disturbance of dormice during construction	Precautionary measures will be adopted during the clearance of habitats that are potentially suitable for dormice, including the short length of hedgerow to be lost and areas of scrub. A non-licensed precautionary method statement will be prepared, outlining timings of works and the sensitive removal of suitable habitat to prevent the killing or injury of dormice. Following the lighting measures prescribed above for bats will minimise disruption to dormice from habitat degradation during construction.	Contractor and Ecologist
Loss of suitable habitat for dormice during construction	A minimum of 10 dormouse nest boxes will be provided on site within the newly created woodland and hedgerows. Their positioning will be advised by an ecologist and approximate locations will be identified in the LEMP. The habitat creation and	Blenheim Estate

Potential effect	Mitigation	Implementation
	enhancement will improve connectivity across the site and to the wider landscape and will create good quality foraging and commuting habitat for dormice once established.	
Harm to reptiles during construction	A precautionary method statement will be prepared, outlining the timings of works and the sensitive removal of suitable habitat to prevent the killing or injury of reptiles. A phased approach will be taken to vegetation clearance, which will be carried out outside the hibernation period (i.e. from March to October, depending on the weather) and, where applicable, in accordance with the dormouse precautionary method statement. The first stage will be for an ecologist to advise the contractor on the areas of suitable reptile habitat at the site. This will then need to be strimmed down to a height of approximately 10-15 cm. The second stage will be undertaken at least two days later and will involve further strimming down to 5 cm and, in highly suitable areas, stripping the turf to make the habitat unsuitable for reptiles. This mitigation strategy can only be adopted in suitable weather conditions when reptiles are considered to be active.	Contractor and Ecologist
	The rubble pile on site will be destructively searched. If vegetation clearance is planned for the winter (November to February), when reptiles are hibernating, the focus will be on avoiding harm to reptiles by avoiding the clearance of materials that reptiles could use for hibernation, such as rubble piles / bunds. An appointed ecologist will advise the contractor which vegetation and material can and cannot be cleared during the hibernation period.	
Loss of reptile habitat during construction	The creation of a new pond, development of terrestrial habitat and creation of new habitat will provide benefits to reptiles.	Blenheim Estate
Disturbance of breeding birds during construction	Vegetation clearance will be undertaken outside the bird breeding season (March to August inclusive) where possible. If clearance during the breeding season cannot be avoided, it may be possible for a suitably experienced ecologist to search vegetation for nesting birds prior to clearance. If nesting birds are found, the nest and a suitable buffer area would need to be retained until any young have fledged or the nest is otherwise disused.	Contractor and Ecologist
Loss of habitat used by breeding birds during construction	The hedgerow and woodland planting will create new breeding habitats for birds. In addition, newly created areas of native wildflower meadow and rough grassland will provide enhanced foraging habitats for a range of bird species.	Blenheim Estate
Harm to amphibians during construction	The newly created pond will be designed in the same manner as the ponds on the Land North of Banbury Road site and terrestrial habitat suitable for all amphibians will be created around the pond and nearby areas. Two new hibernacula will be created near the pond.	Blenheim Estate
Disturbance of badgers during construction	The following badger protection measures will be put in place during construction to protect them from accidental killing or injury as a result of entrapment: • Where possible, all trenches, pits and other diggings at the site will be sealed before nightfall. Where these must be left overnight, they should be completely covered with boards, or an escape ramp should be provided using boards or suitably compacted earth • All pipework and ironworks larger than 35 mm will be sealed or covered overnight • Alternatively, such trenches, pipes or other workings may be fenced off to prevent badgers coming into contact with them	Contractor and Ecologist

Potential effect	Mitigation	Implementation
Loss of habitat used by foraging and commuting badgers during construction	The enhanced hedgerow networks, new woodland planting, native wildflower meadows and areas of rough grassland will provide good opportunities for badger commuting and foraging across the site.	Blenheim Estate
Effects on ecological receptors	A LEMP will be produced to describe habitat creation works that will precede or accompany the construction phase of the proposed development. It will also detail habitat management and monitoring works that will follow the completion of construction, which are discussed in more detail below.	Blenheim Estate
Effects on habitats from poor management post-construction	The retained and created hedgerows will be managed to maintain their biodiversity value through strategic cutting to improve and maintain their shape and size. A maximum of one-third of the hedgerow network will be trimmed in any one winter, which will allow flowering and fruiting across the majority of the hedgerows each year. The newly created woodland areas will be managed to ensure that the newly planted trees become established to provide a benefit to biodiversity.	Management company
	The pond will be monitored and managed to maintain its biodiversity value. The management will include the clearance of overshadowing dense marginal vegetation. Clearance will be targeted around the southern side of the pond. Marginal planting will be monitored and remedial action taken should it encroach on more than 30% of the total pond area. The establishment of aquatic vegetation will be monitored and, where necessary, additional planting will be provided. The pond will be situated within an area of open green space, with grassland, trees and scrub. These habitats will set the pond back from roads and prevent impacts from pollution.	
	A mowing regime will be established for the grasslands, including the native wildflower meadows and rough grasslands, which will ensure their biodiversity value is maintained. Areas will be set aside that are to be left uncut, which will be changed on a rotational basis. This will provide continual cover and provision of rough grassland for various species. Any arisings will be removed from the site and there will be no use of herbicides or fertilisers in the grassland areas. Access will be restricted within certain areas of grassland to maintain their value and prevent disturbance to wildlife. This will be enforced through clearly identifiable hard substrate and mown footpaths. The nature of the rough grassland will also discourage regular use by pedestrians.	
Effects on bats from increased lighting post-construction	The hedgerow management regime set out above will maintain habitat corridors for commuting and foraging bats. A sensitive lighting strategy will be produced and agreed with West Oxfordshire District Council prior to development, with input from the project ecologist. This will be designed to minimise light spread and the illumination of features such as hedgerows and trees, to ensure that habitats potentially used by foraging bats remain unlit. Where it is not possible to avoid lighting in these areas, for safety reasons, low level bollard lighting will be used to avoid light spillage into adjacent habitats.	Blenheim Estate and management company
Effects on dormice from increased lighting and cat predation post-construction	The hedgerow management regime set out above will maintain habitat corridors for commuting, foraging and nesting dormice. The habitat creation will increase the area of suitable habitat available, which is likely to increase dormouse populations. The lighting strategy will ensure that there will be no significant adverse effects from increased disturbance.	Blenheim Estate and management company
Effects on reptiles from increased cat predation post-construction	The habitat creation and management regimes for grassland areas, hedgerows and the pond will ensure continued provision of habitats and resources for reptiles and are likely to result in increased populations.	Blenheim Estate and management company
Effects on breeding birds from increased cat predation and disturbance	The vegetation management described above will be undertaken at appropriate times of year (i.e. between September and February) to avoid impacts on nesting birds. As an enhancement, nesting opportunities in the form of bird boxes will be provided. Fifteen integrated bird boxes will be installed on new dwellings, particularly for sparrows, swifts and starlings. A	Blenheim Estate and management company

Potential effect	Mitigation	Implementation
during vegetation management post-construction	minimum of five bird boxes will be placed on trees in the newly created woodlands. Their positioning will be advised by an ecologist and approximate locations identified in the LEMP. The habitat creation will increase the area of suitable habitat available, which is likely to increase bird populations.	
Traffic and transport		
Generation of traffic post-construction	A comprehensive travel plan has been prepared to minimise single occupancy car use by residents and visitors accessing the site. This sets out a number of measures to promote more sustainable alternatives to the car, including walking, cycling, public transport and car sharing. The measures include the provision of travel information packs to households, sustainable travel events and personalised travel planning.	Blenheim Estate

Table 9.3: Land North of Hill Rise secondary mitigation measures

Potential effect	Mitigation	Implementation
	Community and social effects	
Increased demand for facilities and services, including early years, primary school and secondary school capacity, GP services, sports pitches and libraries	Financial contributions will be made through a section 106 legal agreement towards a range of community facilities and services, including early years, primary school and secondary school capacity, GP services, sports pitches and libraries.	Blenheim Estate
	Cultural heritage	
Loss of below ground archaeological remains during construction	This effect can be wholly mitigated through a programme of investigation, the form of which could be anything from a watching brief of initial groundworks to sample trench evaluation prior to development. Preservation by record of anything uncovered is a sufficient and policy-recognised form of mitigation. The extent, location and justification for future archaeological evaluation at the site will be outlined in a brief and specification by Oxfordshire County Council's Archaeology Officer and will be implemented by an archaeological contractor in line with a condition attached to any planning permission by the local planning authority	Archaeological contractor
	Landscape and visual effects	
Changes to views of the site	There is the potential that, during detailed design, building heights may reduce. The articulation of built form could further respect and respond to the townscape and wider landscape setting with the sensitive orientation of buildings and the location of taller buildings in less sensitive areas. Allowing for the retention of some views out to the countryside by orientation of streets, footpaths and green corridors will enhance the overall landscape structure throughout the site.	Blenheim Estate
	The design and style of the built form should make a positive contribution to the local distinctiveness of Woodstock and provide high quality design, which will enrich the local environment and create a sense of place. The Land North of Hill Rise phase 1 detailed design illustrates how this can be achieved.	
	The design and access statement submitted in support of the Land North of Hill Rise planning application sets out the phase 1 design in order to achieve high quality streetscapes and a public realm that will enhance local distinctiveness and reinforce a sense of place. These principles will also be applied to the Land North of Banbury Road development.	
	Development will be in scale and character with the local settlement pattern and will take account of the local vernacular, as demonstrated in the design and access statement. Controlled use of colour and materials is recommended to minimise unnecessary or unintentional visual impacts in the wider landscape.	
	The design and access statement submitted in support of the planning application provides details of how biodiversity mitigation measures should be incorporated into the detailed design of the green infrastructure to create an enriched ecological environment. Opportunities for further landscape enhancement of the open spaces and green corridors include woodland, tree, hedgerow and shrub planting through the details set out in the planting strategy. This should have the effect of integrating the development into the wider landscape. The Land North of Hill Rise phase 1 landscape designs indicate how the planting strategy will be carried out and these principles will also be applied to the Land North of Banbury Road development.	

Potential effect	Mitigation	Implementation
	Any adverse impacts of lighting can be avoided by detailed development control. Careful consideration will be given to the height and type of street, amenity and building lighting to reduce night time effects. Planting should be used to help filter the lighting, reducing its visual impact in the wider landscape. Further measures to minimise adverse visual effects from lighting are set out in the lighting report submitted in support of the planning application.	
Natural heritage		
Effects on ecological receptors during construction	A construction method statement (CMS) will be produced, with input from a professional ecologist, subject to a planning condition and approved by West Oxfordshire District Council. It will describe the ecology mitigation works that will precede and accompany the construction phase of the proposed development.	Blenheim Estate
Damage to retained habitats during construction	Protective fencing, such as Heras fencing, will be installed prior to any clearance or construction work at the site around retained semi-natural habitats (including woodland, hedgerows, trees, ponds and grassland). Fencing around individual trees and hedgerows will provide a root protection zone in accordance with BS 5837. Standard pollution prevention measures will be implemented during the construction phase, such as those set out in Defra and the Environment Agency's (2019) *Pollution Prevention for Businesses* guidance to ensure habitats are protected from pollution during construction.	Contractor
Hedgerow loss during construction	The small lengths of hedgerows that are to be lost will be reinstated through new hedgerow planting along the northern site boundary. These new hedgerows will be native and species-rich and will enhance habitat connectivity across the site and the wider landscape. Hedgerow planting will also be incorporated in and around the built development and the more landscaped public open space areas, with these hedgerows typically being native species where possible. The approximate total length of planted hedgerows will be 1.463 km. The retained hedgerows will be enhanced through infilling and bulking out with native tree species. Grassland and species-rich ground flora will be sown along the margins.	Blenheim Estate
Tree loss during construction	New areas of native broadleaved woodland will be planted along the northern site boundary, which will enhance commuting and foraging networks for a range of species.	Blenheim Estate
Damage to and pollution of ponds during construction	In addition to the standard protection measures set out in guidance, the existing ponds on site will be enhanced. Both ponds will be dredged and the eastern pond will be made deeper to allow water retention further into the summer. This pond is dominated by the non-native invasive species parrot's feather, which will be eradicated where possible. Both ponds will also be enhanced through the planting of submerged and emergent aquatic vegetation and marginal vegetation.	Blenheim Estate
Loss of habitats used by bats during construction	The creation of the new ponds and enhancement of the retained ponds will provide additional foraging habitats for bats. The new woodland areas will provide high quality commuting and foraging networks, as well as potential roosting features once they have become established. The enhancements to the retained hedgerows and creation of new hedgerows will provide new foraging and commuting opportunities for bats once established.	Blenheim Estate
	As an enhancement, roosting opportunities will be provided through 15 integrated bat boxes within the new dwellings and at least five bat boxes on trees in the newly created woodlands. Their positioning will be advised by an ecologist and approximate locations will be identified in the landscape environmental management plan (LEMP).	
Disturbance of bats by increased lighting during construction	Lighting will be sensitively used during the construction of the proposed development along and around the features of value to bats, to minimise disruption through habitat degradation and abandonment of roosting sites. Lighting will face directly downwards or away from the site boundaries, using directional shields where required. Particular care will be taken to minimise light spill onto the retained and newly created vegetation. Reference will be made to good practice guidance, such as the Bat Conservation Trust and Institute of Lighting Professionals (2018) *Guidance Note 08/18 – Bats and artificial lighting in the UK.*	Contractor

Potential effect	Mitigation	Implementation
Disturbance of dormice during construction	Precautionary measures will be adopted during the clearance of habitats that are potentially suitable for dormice, including the short lengths of hedgerow to be lost and areas of scrub. A non-licensed precautionary method statement will be prepared, outlining timings of works and the sensitive removal of suitable habitat to prevent the killing or injury of dormice. Following the lighting measures prescribed above for bats will minimise disruption to dormice from habitat degradation during construction.	Contractor
Loss of suitable habitat for dormice during construction	A minimum of 10 dormouse nest boxes will be provided on site within the newly created woodland and hedgerows. Their positioning will be advised by an ecologist and approximate locations will be identified in the LEMP. The habitat creation and enhancement will improve connectivity across the site and to the wider landscape and will create good quality foraging and commuting habitat for dormice once established.	Blenheim Estate
Harm to reptiles during construction	A precautionary method statement will be prepared, outlining the timings of works and the sensitive removal of suitable habitat to prevent the killing or injury of reptiles. A phased approach will be taken to vegetation clearance, which will be carried out outside the hibernation period (i.e. from March to October, depending on the weather) and, where applicable, in accordance with the great crested newt licence and dormouse precautionary method statement. The first stage will be for an ecologist to advise the contractor on the areas of suitable reptile habitat at the site. This will then need to be strimmed down to a height of approximately 10-15 cm. The second stage will be undertaken at least two days later and will involve further strimming down to 5 cm and, in highly suitable areas, stripping the turf to make the habitat unsuitable for reptiles. This mitigation strategy can only be adopted in suitable weather conditions when reptiles are considered to be active.	Contractor and Ecologist
	The rubble piles / bunds on site will be destructively searched. If vegetation clearance is planned for the winter (November to February), when reptiles are hibernating, the focus will be on avoiding harm to reptiles by avoiding the clearance of materials that reptiles could use for hibernation, such as rubble piles / bunds. An appointed ecologist will advise the contractor which vegetation and material can and cannot be cleared during the hibernation period.	
Loss of reptile habitat during construction	The creation of new ponds and enhancement of the retained ponds, development of terrestrial habitat and creation of new habitat will provide benefits to reptiles.	Blenheim Estate
Disturbance of breeding birds during construction	Vegetation clearance will be undertaken outside the bird breeding season (March to August inclusive) where possible. If clearance during the breeding season cannot be avoided, it may be possible for a suitably experienced ecologist to search vegetation for nesting birds prior to clearance. If nesting birds are found, the nest and a suitable buffer area would need to be retained until any young have fledged or the nest is otherwise disused.	Contractor and Ecologist
Loss of habitat used by breeding birds during construction	The hedgerow and woodland planting will create new breeding habitats for birds. In addition, newly created areas of native wildflower meadow and rough grassland will provide enhanced foraging habitats for a range of bird species.	Blenheim Estate
Harm to great crested newts during construction	A European protected species mitigation licence for great crested newts will be required prior to the commencement of works. Details of mitigation and compensation for great crested newts will be secured through this licence. The mitigation will include a method statement for vegetation removal and translocation may also be required. The compensation will include the following: • Creation of new ponds and enhancement of the two retained ponds, with design measures incorporated for great crested newts. These include pond refugia in the form of clean brick and rubble, as well as gravel forebays to provide a varied substrate	Blenheim Estate

Potential effect	Mitigation	Implementation
	• Development of suitable terrestrial habitat for great crested newts, including scrub and rough grassland, around ponds and within the public open space to provide connectivity to other ponds and hibernation habitat • Creation of new habitat piles (hibernacula) from brash and brick rubble, capped in topsoil, close to the retained ponds. These will be approximately 2 m x 1 m x 1 m in size and their form will accord with good practice guidance (English Nature, 2001)	
Harm to other amphibians during construction	The mitigation measures set out above for great crested newts will also benefit other amphibians.	Blenheim Estate
Disturbance of badgers during construction	The following badger protection measures will be put in place during construction to protect them from accidental killing or injury as a result of entrapment: • Where possible, all trenches, pits and other diggings at the site will be sealed before nightfall. Where these must be left overnight, they should be completely covered with boards, or an escape ramp should be provided using boards or suitably compacted earth • All pipework and ironworks larger than 35 mm will be sealed or covered overnight • Alternatively, such trenches, pipes or other workings may be fenced off to prevent badgers coming into contact with them	Contractor
Loss of habitat used by foraging and commuting badgers during construction	The enhanced hedgerow networks, new woodland planting, native wildflower meadows and areas of rough grassland will provide good opportunities for badger commuting and foraging across the site.	Blenheim Estate
Effects on ecological receptors	A LEMP will be produced to describe habitat creation works that will precede or accompany the construction phase of the proposed development. It will also detail habitat management and monitoring works that will follow the completion of construction, which are discussed in more detail below.	Blenheim Estate
Effects on habitats from poor management post-construction	The retained and created hedgerows will be managed to maintain their biodiversity value through strategic cutting to improve and maintain their shape and size. A maximum of one-third of the hedgerow network will be trimmed in any one winter, which will allow flowering and fruiting across the majority of the hedgerows each year. The newly created woodland areas will be managed to ensure that the newly planted trees become established to provide a benefit to biodiversity.	Management company
	Ponds will be monitored and managed to maintain their biodiversity value. The management will include the clearance of overshadowing dense marginal vegetation. Clearance will be targeted around the southern sides of the ponds. Marginal planting will be monitored and remedial action taken should it encroach on more than 30% of the total pond area. Rather than undertake clearance of all ponds at the same time, it is recommended that clearance is staggered between the ponds each year to limit disturbance. The establishment of aquatic vegetation will be monitored and, where necessary, additional planting will be provided. The created and retained ponds will be situated within areas of open green space, with grassland, trees and scrub. These habitats will set the ponds back from roads and prevent impacts from pollution.	
	A mowing regime will be established for the grasslands, including the native wildflower meadows and rough grasslands, which will ensure their biodiversity value is maintained. Areas will be set aside that are to be left uncut, which will be changed on a rotational basis. This will provide continual cover and provision of rough grassland for various species. Any arisings will be removed from the site and there will be no use of herbicides or fertilisers in the grassland areas. Access will be restricted within	

Potential effect	Mitigation	Implementation
	certain areas of grassland to maintain their value and prevent disturbance to wildlife. This will be enforced through clearly identifiable hard substrate and mown footpaths. The nature of the rough grassland will also discourage regular use by pedestrians.	
Effects on bats from increased lighting post-construction	The hedgerow management regime set out above will maintain habitat corridors for commuting and foraging bats. A sensitive lighting strategy will be produced and agreed with West Oxfordshire District Council prior to development, with input from the project ecologist. This will be designed to minimise light spread and the illumination of features such as hedgerows and trees, to ensure that habitats potentially used by foraging bats remain unlit. Where it is not possible to avoid lighting in these areas, for safety reasons, low level bollard lighting will be used to avoid light spillage into adjacent habitats.	Blenheim Estate and management company
Effects on dormice from increased lighting and cat predation post-construction	The hedgerow management regime set out above will maintain habitat corridors for commuting, foraging and nesting dormice. The habitat creation will increase the area of suitable habitat available, which is likely to increase dormouse populations. The lighting strategy will ensure that there will be no significant adverse effects from increased disturbance.	Blenheim Estate and management company
Effects on reptiles from increased cat predation post-construction	The habitat creation and management regimes for grassland areas, hedgerows and ponds will ensure continued provision of habitats and resources for reptiles and are likely to result in increased populations.	Blenheim Estate and management company
Effects on breeding birds from increased cat predation and disturbance during vegetation management post-construction	The vegetation management described above will be undertaken at appropriate times of year (i.e. between September and February) to avoid impacts on nesting birds. As an enhancement, nesting opportunities in the form of bird boxes will be provided. Fifteen integrated bird boxes will be installed on new dwellings, particularly for sparrows, swifts and starlings. A minimum of five bird boxes will be placed on trees in the newly created woodlands. Their positioning will be advised by an ecologist and approximate locations identified in the LEMP. The habitat creation will increase the area of suitable habitat available, which is likely to increase bird populations.	Blenheim Estate and management company
Effects on great crested newts from increased cat predation post-construction	The habitat creation and management regimes for grassland areas, hedgerows and ponds will ensure continued provision of habitats and resources for great crested newts and are likely to result in increased populations.	Blenheim Estate and management company
Accidental killing or injury of great crested newts by road traffic post-construction	As well as the enhancement of the central hedgerow corridor, the following provisions to prevent accidental killing and injury of great crested newts by road traffic will be incorporated into the proposed development: • An Aco guide wall (or similar) will be installed along either side of the road where it bisects the hedgerow to prevent great crested newts and other species reaching the roadway and to guide them to a tunnel under the road • An Aco climate tunnel (or similar) will be installed below the road surface at the point where it bisects the hedgerow, to provide a safe crossing point • Aco wildlife kerbs (or similar) will be installed next to road gully gratings to allow great crested newts to follow the kerb line round the top of the gully grating, to prevent them falling in and becoming trapped. Wildlife kerbs will be installed close to the central hedgerow corridor and pond, and also near the newly created ponds around the rest of the site	Blenheim Estate
Traffic and transport		

Potential effect	Mitigation	Implementation
Generation of traffic post-construction	A comprehensive travel plan has been prepared to minimise single occupancy car use by residents and visitors accessing the site. This sets out a number of measures to promote more sustainable alternatives to the car, including walking, cycling, public transport and car sharing. The measures include the provision of travel information packs to households, sustainable travel events and personalised travel planning.	Blenheim Estate

Table 9.4: Land North of Banbury Road secondary mitigation measures

Significant residual effect	Sensitivity of receptor	Magnitude of change	Nature	Duration	Degree of effect	Level of certainty
Community and social effects						
Effect on public footpath on site during construction	Low	Medium to large	Adverse	Short term	Slight to moderate	Reasonable
Increased affordable housing provision	High	Large (area level) Small (district level)	Beneficial	Long term	Substantial (area level) Moderate (district level)	Absolute
Increased provision of allotments / community orchard	Medium to high	Medium	Beneficial	Long term	Moderate to substantial	Absolute
Increased provision of amenity greenspace, natural and semi-natural greenspace, parks and playspace and improvements to existing recreation ground	Medium to high	Medium	Beneficial	Long term	Moderate to substantial	Absolute
Cultural heritage						
Knowledge gained through excavation required to mitigate the effect on the on-site archaeology	Low	Large	Beneficial	Long term	Moderate	Uncertain
Landscape and visual effects						
Change to the site's landscape character	Medium	Medium	Adverse	Long term	Moderate	Reasonable
Effects on views from residential streets such as Hill Rise, Rosamund Drive, Vanbrugh Close and Mavor Close	Medium to high	Medium Small after 15 years	Adverse	Medium term Long term	Moderate at completion Slight (not significant) after 15 years	Reasonable
Effects on views from public right of way 413/1/10 through the site and to the north	Medium to high	Large Medium after 15 years	Adverse	Medium term Long term	Substantial at completion Moderate after 15 years	Reasonable
Natural heritage						
Creation and enhancement of a range of habitats	Medium to high	Medium	Beneficial	Long term	Moderate	Reasonable
Increased populations of a range of protected and priority species	Low to high	Medium	Beneficial	Long term	Slight to moderate	Reasonable
Traffic and transport						
None	--	--	--	--	--	--

Table 9.5: Land North of Hill Rise significant residual effects

Significant residual effect	Sensitivity of receptor	Magnitude of change	Nature	Duration	Degree of effect	Level of certainty
Community and social effects						
Effect on public footpath on site during construction	Low	Medium to large	Adverse	Medium term	Slight to moderate	Reasonable
Increased affordable housing provision	High	Large (area level) Small (district level)	Beneficial	Long term	Substantial (area level) Moderate (district level)	Absolute
Increased demand for allotments	Medium to high	Small	Adverse	Long term	Slight to moderate	Absolute
Increased provision of amenity greenspace, natural and semi-natural greenspace, parks and playspace	Medium to high	Small to medium	Beneficial	Long term	Moderate	Absolute
Cultural heritage						
Knowledge gained through excavation required to mitigate the effect on the on-site archaeology	Low	Large	Beneficial	Long term	Moderate	Absolute
Changes to the contribution of the setting to the significance of the listed buildings at Hensington Farm (LB2) and the former yard, including the listed barn and stable (LB3, 4), now The Quadrangle, because of the loss of the open agricultural land of the site during construction	High	Negligible to small	Adverse	Permanent	Slight to moderate	Reasonable
Changes to the contribution of the setting to the significance of the listed buildings at Hensington Farm (LB2) and the former yard, including the listed barn and stable (LB3, 4), now The Quadrangle, because of the presence of the proposed development	High	Negligible to small	Adverse	Permanent	Slight to moderate	Reasonable
Landscape and visual effects						
Change to the site's landscape character	Medium	Medium	Adverse	Long term	Moderate	Reasonable
Change to views from residential streets Green Lane, Kenwood Close, Ramillies Close, Bens Close and Banbury Road	Medium to high	Medium	Adverse	Long term	Moderate	Reasonable
Change to views from public right of way 413/7/10 through the site and to the north	Medium to high	Large Medium after 15 years	Adverse	Medium term Long term	Substantial at completion Moderate after 15 years	Reasonable
Natural heritage						
Creation and enhancement of a range of habitats	Medium to high	Medium	Beneficial	Long term	Moderate	Reasonable

Significant residual effect	Sensitivity of receptor	Magnitude of change	Nature	Duration	Degree of effect	Level of certainty
Increased populations of a range of protected and priority species	Low to high	Medium	Beneficial	Long term	Slight to moderate	Reasonable
Traffic and transport						
None	--	--	--	--	--	--
Table 9.6: Land North of Banbury Road significant residual effects						

Significant residual effect	Sensitivity of receptor	Magnitude of change	Nature	Duration	Degree of effect	Level of certainty
Community and social effects						
Change to the demography of Woodstock and Bladon ward as a result of the increased population	Medium	Small to medium	N/A	Long term	Slight to moderate	Absolute
Increased affordable housing provision	High	Large (area level) Small (district level)	Beneficial	Long term	Substantial (area level) Moderate (district level)	Absolute
Increased provision of allotments / community orchard	Medium to high	Medium	Beneficial	Long term	Moderate to substantial	Absolute
Increased provision of amenity greenspace, natural and semi-natural greenspace, parks and playspace and improvements to existing recreation ground	Medium to high	Large	Beneficial	Long term	Substantial	Absolute
Cultural heritage						
No additional cumulative effects of both developments combined	--	--	--	--	--	--
Landscape and visual effects						
No additional cumulative effects of both developments combined	--	--	--	--	--	--
Natural heritage						
No additional cumulative effects of both developments combined	--	--	--	--	--	--
Traffic and transport						
None	--	--	--	--	--	--

Table 9.7: Significant residual cumulative effects of both developments combined

Adverse effect	Proposed monitoring measure	Responsibility for monitoring
Increased demand for community facilities and services, such as early years, primary school and secondary school capacity, GP services, sports pitches and libraries (mitigated through financial contributions via a section 106 legal agreement)	West Oxfordshire District Council's existing planning obligations monitoring system	West Oxfordshire District Council
Habitat loss and potential for effects on protected and priority species on site (mitigated through CMS and LEMP)	Detailed monitoring measures for the mitigation measures and biodiversity enhancements will be set out in the LEMP	Ecologist
Increased traffic generation post-construction (mitigated through travel plan)	The travel plan will be monitored using travel surveys and remedial measures will be put in place if required.	Travel plan coordinator
Table 9.8: Land North of Hill Rise proposed monitoring measures		

Adverse effect	Proposed monitoring measure	Responsibility for monitoring
Increased demand for community facilities and services, such as early years, primary school and secondary school capacity, GP services, sports pitches libraries (mitigated through financial contributions via a section 106 legal agreement)	West Oxfordshire District Council's existing planning obligations monitoring system	West Oxfordshire District Council
Damage to below ground archaeological remains during construction (mitigated through on site investigations)	Liaison with the Oxfordshire County Council Archaeology Officer during the implementation of mitigation	Archaeological contractor / county archaeologist
Habitat loss and potential for effects on protected and priority species on site (mitigated through CMS and LEMP)	Detailed monitoring measures for the mitigation measures and biodiversity enhancements will be set out in the LEMP	Ecologist
Increased traffic generation post-construction (mitigated through travel plan)	The travel plan will be monitored using travel surveys and remedial measures will be put in place if required.	Travel plan coordinator
Table 9.9: Land North of Banbury Road proposed monitoring measures		