# **Tritax Symmetry Limited**

# **Symmetry Park, Ardley**

**Environmental Statement** 

Non-Technical Summary





Project: Symmetry Park, Ardley

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# 1. Introduction

- 1.1. This Non-Technical Summary of the Symmetry Park Ardley Environmental Statement has been prepared by Savills on behalf of Tritax Symmetry Ardley Limited, 'the Applicant'.
- 1.2. In May 2022 Tritax Symmetry Ardley Limited (TSL) (the Applicant) submitted a planning application to Cherwell District Council (CDC, the Council) seeking outline planning permission for the development of buildings on land either side of the B4100, to the east of the A43. The application was accompanied by an Environmental Statement (ES) and is registered under CDC planning reference 22/01340/OUT.
- 1.3. In the period since the planning application was submitted in 2022, discussions have taken place between the Applicant, CDC, and consultees regarding the proposals. As a result, a number of changes have been made to the proposed scheme and further assessment has been undertaken. The update to the planning application is accompanied by an update to the ES.
- 1.4. The Application Site is located north of Bicester, on land either side of the B4100, to the east of the A43 and approximately 1 kilometre (km) north of Junction 10 of the M40.



Figure 1. Site location



- 1.5. The proposal, known as Symmetry Park, Ardley, is for logistics use and ancillary office floorspace, with an energy centre, and construction of new site access from the B4100. The planning application is in outline, with means of access provided in detail.
- 1.6. The extent of planning application Site is edged red on Figure 1.1 below (SGP drawing 131001-P2). In total, the area within the red line, including the B4100 highway land, covers an area of 83.279 hectares (ha).



Figure 2. Planning application boundary (SGP dwg. SGP-XX-XX-DR-A-131001-P2)

The need for the development and choice of location

- 1.7. The proposals need to respond to the distinct locational requirements to accommodate national/regional scale logistics facilities. The Applicant has carried out a search for suitable locations to accommodate a site of at least 50 ha that is suitable for logistics use in proximity to the strategic highway network.
- 1.8. An analysis of suitable and available strategic employment allocations identified in the Cherwell Local Plan concluded that there is no site within Banbury, Bicester or Kidlington that can accommodate the key requirements. Further investigation of potential sites within the rural area that may be suitable and available has been undertaken by a review of the Cherwell Housing and Economic Availability Assessment (HELAA)



(February 2018). None of the sites approach the scale of land that is required to accommodate the requirements. The Ardley site is of the requisite size, it is close to Junction 10 of the M40 Motorway, and is considered to have a landform suitable for B8 uses.

#### Environmental Impact Assessment

- 1.9. Environmental Impact Assessment (EIA) is a process that formally considers the construction and operational aspects of a proposal that may have significant effects on the environment. The findings of an EIA are described in a written report known as an Environmental Statement (ES). An ES provides environmental information about the scheme, including a description of the development, its predicted environmental effects and the measures proposed to mitigate adverse effects: information that is taken into account in the planning decision.
- 1.10. The ES has been prepared in accordance with The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the 'EIA Regulations'). This document is the Non-Technical Summary (NTS), which provides a summary of the main findings of the ES, including the significant environmental effects, mitigation and residual effects predicted to result from the Proposed Development.
- 1.11. Subsequently, when the Council is deciding whether to grant planning permission, it can do so in the full knowledge of any significant effects predicted, and take this into account in the decision making process. EIA is a procedure, rather than a requirement to demonstrate no adverse effects. In cases where an assessment predicts that adverse effects could occur, planning legislation does not direct that permission should therefore be refused.

# 2. The Application Site

- 2.1. The Site borders the A43 and extends across several open fields either side of the B4100. The northern parcel of land is located east of the A43 and is bounded to the north and east by a bridleway and a small lane which branches off the B4100. The southern parcel of land borders the B4100 and agricultural land, with Cherwell Valley motorway services nearby to the south.
- 2.2. The fields are in arable use: a site survey has identified the agricultural land quality as Grade 3b, which is not categorised as the best and most versatile. The arable use offers negligible ecological importance whilst the hedgerows and trees that enclose them are of local ecological importance.
- 2.3. The Environment Agency's flood map indicates that the Site is located within Flood Zone 1. It therefore has a 'low probability' of river flooding, with less than a 1 in 1,000 annual probability (<0.1%). A field drainage ditch located on the western boundary of the Site discharges into the Padbury Brook.
- 2.4. There are no designated heritage assets within the Site and it does not contribute to the heritage interest as part of the settings of any designated heritage assets or non-designated heritage assets in the wider landscape.

#### **Local context**

2.5. The Site is located approximately 6 km north-west of Bicester in Oxfordshire, adjacent to the A43 and M40 at Junction 10. The A43 is a dual-carriageway that connects the B4100 to the M40 via Junction 10 to the south of the Site. Junction 10 of the M40 Motorway provides north and south bound vehicle access and is broadly equidistant from Birmingham and London.



- 2.6. The B4100 is a two-way single lane carriageway road with a 50 mph speed limit. Currently there is no footway or cycle route present. To the south-east the B4100 connects to Bicester (5.3 km) and to the north-west it connects the Site to the A43 via Baynards Green roundabout. National Highways is planning to start construction of a scheme to increase the capacity of Baynards Green roundabout in 2022.
- 2.7. Bridleway 367/24/10 borders the northern boundary of the Site and meets the A43 to the west. Bridleway 367/21/10 is located nearby to the south of the site, running in an east-west orientation along the northern boundary of Cherwell Valley Services.



Figure 3. Local context

- 2.8. The landscape context includes a mix of rural features with major vehicular corridors to the north west and south west. The Site itself is generally flat with levels falling gently to the east and is typical of the surrounding area. Within the local context the Site sits on a broad plateau, with land to the south-east being gently undulating and land to the north generally being level. Far reaching views are limited owing to surrounding mature vegetation and blocks of woodland.
- 2.9. Stoke Bushes Local Wildlife Site (LWS) is located approximately 50 m to the north east of the Site. It is



considered in the assessment because of its geographical proximity to the north eastern extent of the Site. The LWS designation is for lowland mixed deciduous woodland (also designated as Ancient Semi-natural and Ancient Replanted Woodland). The closest national designation is the Ardley Cutting and Quarry SSSI, some 2 km south-west of the Site.

- 2.10. Users of the public rights of way and road routes in the locality, along with a residential property near to the Site's eastern boundary and, potentially, those on the north-western fringe of Stoke Lyne have been identified as potentially able to perceive a change because of the Proposals and have been considered in the assessment.
- 2.11. There are a small number of listed buildings nearby: a Grade II listed building on Baynards Green Farm on the western side of the A43 and Grade II and Grade II\* listed buildings in Stoke Lyne.
- 2.12. The nearest surface watercourse is Padbury Brook, which is located adjacent to the south eastern boundary of the Site. Padbury Brook is a tributary of the River Great Ouse. The Site falls within the Great Ouse Nitrate Vulnerable Zone (NVZ) and a Drinking Water Safeguard Zone for surface water.
- 2.13. CDC monitors air quality within the locale of the Site, and within Bicester. The Proposed Development is located approximately 6.5 km north-west of the nearest Air Quality Management Area, AQMA No.4, located within Bicester.

# Other potential development

2.14. The agricultural land adjacent to the western side of the Symmetry Park Ardley Site is subject to two current planning applications for proposed logistics use, registered under CDC references 21/03267/OUT and 21/03268/OUT. An associated planning application for new site access and infrastructure is also under consideration by CDC (reference 21/03266/F). The three planning applications have been submitted by Albion Land (Land at Junction 10, M40).

# 3. The Proposed Development

- 3.1. The description of the Proposed Development is as follows:
- 3.2. Application for outline planning permission (all matters reserved except means of access (not internal roads) from B4100) for the erection of buildings comprising logistics (Use Class B8) and ancillary offices (Use Class E(g)(i)) floorspace; Energy Centre, HGV parking, construction of new site access from the B4100; creation of internal roads and access routes; hard and soft landscaping; the construction of parking and servicing areas; substations and other associated infrastructure.
- 3.3. The EIA has assessed the development of:
  - A site of 83.279 hectares including highway land (79.99 ha not including highways land);
  - A new roundabout junction on the B4100;
  - 300,000 m² of logistics floorspace (Use Class B8) and ancillary offices (Use Class E(g)(i));
  - A compound to be used as an energy centre;
  - HGV parking;
  - Parking for electric cars, accessible parking, bicycles, cars, and motorcycles;
  - Landscaping including landscape mounds;
  - Sustainable drainage.



3.4. The outline planning application seeks approval for a maximum of 300,000 m² floorspace. The development would comprise logistics (Use Class B8) floorspace and ancillary office floorspace (Use Class E(g)(i)). Overall, the amount of development for Zone A to the north of the B4100, and Zone B to the south of the B4100 is set out in the Parameters Plan shown below (and drawing at the back of the NTS). Overall, the main built structures would be up to a maximum height of 140.350 m AOD in Zone A1; 137.350 m AOD in Zone A2; and a maximum of 134.415 m AOD in Zone B;

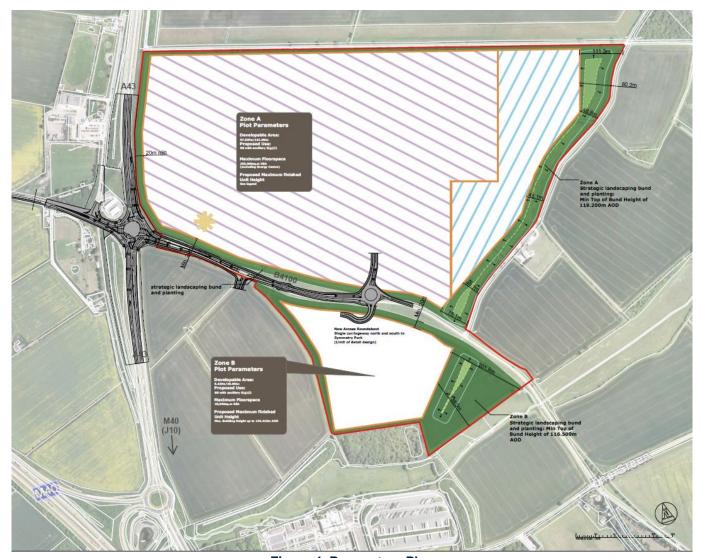


Figure 4. Parameters Plan

3.5. The Parameters Plan is submitted to the Council for approval. It establishes the 'developable areas' within the Site and the maximum building heights (provided in relation to Ordnance Datum). The extent of the application site area includes the land needed to undertake construction and landscaping including earth mounds. Detailed design would need to approved by the Council through subsequent planning applications for reserved matters.



#### Climate Change and Energy Use

- 3.6. Carbon emissions will be reduced as much as feasibly possible. Tritax Symmetry has in place a commitment that all new commercial buildings delivered will implement Embodied Carbon minimisation procedures, following Net Zero Carbon principles.
- 3.7. For the Proposed Development, the focus of the design would limit the energy consumption and carbon dioxide (CO<sub>2</sub>) emissions through optimising the building performance together with energy efficiency measures following the steps of the energy hierarchy: using less energy / demand reduction; supplying energy efficiently; and, using renewable energy.
- 3.8. Planning permission is sought for photovoltaics (PV) to cover 100% of the useable roof area (i.e. omitting the space taken by roof lights, safety equipment and any signage). The amount of PVs installed will be subject to individual occupier requirements or technical issues relating to the export of electricity generated by the PV array into the National Grid. This is to prevent installation of PV panels that would then not produce energy, and allows the most up to date technology to be fitted when required. PV would be installed over a minimum of 16% of the useable roof area. This will provide the normal base load of electricity prior to including any occupier specific requirements.

#### Highways and access

- 3.9. The proposed access is to form a new junction on the B4100 that would provide access to both development parcels.
- 3.10. As part of the development proposals, new bus stops would be provided to improve accessibility by public transport for future employees and visitors to the site.
- 3.11. The proposals will include HGV, staff, and visitor car parking areas (including disabled car parking spaces, electric charging point spaces and car share spaces), motorcycle parking spaces and cycle spaces.

## Drainage

- 3.12. A sustainable drainage system would manage the surface water runoff via a combination of infiltration, attenuation basins and/or swales, with discharge into an existing drainage ditch restricted to existing runoff rates. The size of attenuation storage has been calculated to have the capacity for the 100 year rainfall event, including a 40% increase in rainfall intensity that is predicted to occur as a result of climate change.
- 3.13. In landscaped areas, the majority of rainwater will soak into the ground. Surface water runoff would be directed to the drainage system through drainage gullies located around the perimeter of the buildings and through contouring of the hardstanding areas.

# Landscape

- 3.14. The landscape strategy aims to strengthen key strategic landscape corridors around the Site, contribute to the treed character of the local landscape, and serve to reduce adverse effects arising from the proposed development. Existing boundary hedgerows and trees will be retained where possible and be reinforced with additional planting, with landscaped bunds and native tree planting on the eastern boundary of the Site. This is designed to fragment views of the Proposed Development for receptors in close proximity to the boundary.
- 3.15. The landscape design principles include:
  - Existing boundary hedgerows and trees would be retained where possible (with buffers to the



- proposed development), reinforced and brought into regular, long-term management.
- Creation of a landscaped buffer from proposed development zones to protect and enhance retained boundary features of landscape and ecological interest.
- Provision of landscape screening, in the form of landscaped bunds and native tree planting, to properties and PRoW in close proximity to the Site.
- Native heavy standard tree planting is proposed within landscape buffers to fragment views of the proposed development, particularly for receptors in relatively close proximity to the east of the Site;
- Additional structural landscaping proposed to the eastern boundary would provide a new landscape corridor that would provide a connection between existing woodland blocks within the local landscape context.

#### Soils

- 3.16. The primary measures to mitigate the impacts on soil resources during the site preparation, earthworks and construction activities will be to store and re-use surplus soils in a sustainable manner (for an after-use appropriate to the soil's quality) in accordance with best practice for the Sustainable Use of Soils on Construction Sites (DEFRA). This approach will ensure that the quality of soils retained on-site and exported off-site (if required) is maintained by good soil handling and storage, particularly to avoid compaction and biodegradation of soils that are in storage.
- 3.17. The majority of the Site is readily developable. Ground levels will be regraded to accommodate the proposed development with a cut/fill balance to maximise the sustainability of the enabling works. A preliminary desk-based investigation has identified a potentially infilled former quarry in the south east of the Site. A detailed site investigation would be carried out to confirm the ground conditions. A remediation strategy would be prepared in the event that contaminated material is identified.

#### Lighting

3.18. External lighting would be designed to limit the light pollution in the vicinity and in particular the eastern boundary of the Site. Lighting would be operational every day of the week, including public holidays. All external lighting could be operated via photocells with each zone of lighting having its own time switch override control. Similarly, roadway lighting will be photocell controlled.





Figure 5. Illustrative masterplan

## Construction

- 3.19. The assessment has been prepared on the basis that the Proposed Development would be delivered from 2025 and become fully operational in 2028.
- 3.20. Construction work would be managed in accordance with a Construction and Environment Management Plan (CEMP), secured via planning condition to control and minimise the impacts of the work, including the effects of noise, dust, and traffic. Trees that are identified for retention that lie within or adjoining the working area would be physically safeguarded using tree protection fencing and guarding to avoid harm to the trees.
- 3.21. A framework CEMP has been submitted with the planning application and will be expanded with more detail to control construction activities on site. The detail of the CEMP would be agreed with the Council prior to commencement of works at the Site.
- 3.22. In order to minimise the volume of waste generated, a Site Waste Management Plan (SWMP) would be



- prepared. The implementation of this would ensure that significant adverse effects from the management of waste would be unlikely.
- 3.23. An indicative level of traffic movements has been developed based on the likely construction activities and previous experience from similar projects. HGV movements would be principally associated with the delivery of plant and materials, and the removal of construction waste.
- 3.24. For the construction phase of the Proposed Development it is considered that an average daily peak could total 100 HGV movements per day. In addition, there would be the arrival and departure of construction personnel and visitors to the Site.
- 3.25. All construction traffic for the Proposed Development would be expected to route along the A43 to/from the M40 J10, which provides the most direct access to the strategic road network.
  - Illustrative masterplan
- 3.26. An illustrative masterplan has been prepared to demonstrate one way in which the proposed parameters could be interpreted.

#### **Cumulative assessment**

- 3.27. A number of schemes have been considered for potential cumulative effects in the assessment. The closest scheme to the Site is the logistics development proposed by Albion Land Land at Junction 10, M40, either side of the A43 (CDC Planning References 21/03266/F, 21/03267/OUT & 21/03268/OUT). Other schemes considered are: Heyford Park (CDC Ref. 18/00825/HYBRID), Great Wolf Lodge leisure resort (CDC Ref. 19/02550/F), Axis J9 (CDC Ref. 20/03199/OUT), Land north west of Bicester (CDC Ref. 21/01630/OUT).
- 3.28. The following sections provide a non-technical summary of the environmental assessments undertaken for the Proposed Development.

# 4. Assessment

#### **Transport**

- 4.1. The assessment of the transport-related environmental impacts associated with the Proposed Development uses formal guidance provided by the Institute of Environmental Management and Assessment (IEMA), supported by a general qualitative assessment of the impacts on other sustainable travel modes walking, cycling, and public transport.
- 4.2. As mentioned above, the assessment has established that a range of additional mitigation measures would be required to manage and limit the effects of the Proposed Development during construction, and several enhancements have also been identified for the completed scheme.

#### Construction Traffic

4.3. During the construction phase, it is proposed that the effects of construction vehicles will be managed by a Construction Traffic Management Plan (CTMP). The CTMP will include a range of measures, defining temporary construction vehicle access and limiting lane closures / vehicle movements during peak travel hours. The greatest change in traffic during the construction will be on the A43, to the west of the proposed Site access, with daily flows increasing by less than half of one per cent (if used by all vehicles), and HGVs increasing by approximately two per cent. This represents the 'worst-case' scenario, i.e., should all construction activities take place at the same time. The significance of transport effects from construction



activities is assessed as negligible.

Traffic from operation of the Proposed Development

- 4.4. The assessment has considered the effects in the year 2026, when the development would be operational and indicates that the B4100 and the M40 on-slips and off-slips are where the greatest percentage increase of vehicles associated with the scheme is predicted. It should be noted that the largest percentage change is on the B4100 to the north west of the proposed site access as vehicles move to and from the M40 motorway.
- 4.5. Peak hour operational assessments at a number of junctions on the local network in the future assessment years of 2026 and 2031 show there is no material increase to driver delay on the road network. The effects of the Proposed Development road user safety is predicted to be minor.

Pedestrians, cycling, bus services

- 4.6. It is proposed to create a bus stop and layby in the vicinity of the proposed site access. This will be supported by crossing facilities across the B4100 and dedicated crossing facilities incorporated into an upgraded Baynards Green roundabout junction to cater for pedestrian/cyclist trips to/from local services and bus stops. The Proposed Development will provide a safe environment on footways and cycleways within the Site, with connections to the proposed shared pedestrian / cycle links.
- 4.7. As part of the proposals, a Travel Plan will encourage employees to travel by alternatives to the private car, to facilitate travel by cycling and bus travel, for which the Applicant will provide a financial contribution towards upgrading the existing bus route between Bicester and Brackley. In addition, there are a number of electric vehicle parking spaces proposed. These measures will assist with reducing greenhouse gas emissions in line with the targets set by the government.
- 4.8. The transport impacts with cumulative effects of the other developments identified have been assessed as negligible on users of the pedestrian and cycle networks, those using public transport and upon the adjacent highway network.

#### Air quality

4.9. The Government has established a set of air quality standards and objectives to protect human health. The air quality assessment uses the standards when predicting whether effects might be significant, and also using guidance published by the Institute of Air Quality Management (IAQM).

Potential effects during construction works

- 4.10. Site preparation and construction works have the potential to create dust and produce emissions from use of construction vehicles and machines. A qualitative assessment of the potential impacts of dust and emissions on local air quality has been carried out. Due to the nature of the works and the proximity to potential receptors, the activities represent a 'medium' risk for dust soiling effects on people and property, and 'low risk' in relation to human health and ecological impacts. The IAQM provides guidance on the best practice mitigation measures appropriate for such situations. With standard good practice management in place, the assessment finds that the residual effect from construction activities on site can be reduced to a negligible level, and would be 'not significant'.
- 4.11. If the eastern part of the Land at Junction 10 proposals were in construction at the same time, the dust mitigation measures would also be effective, so that significant cumulative effects associated with



construction phase dust emissions are not anticipated. Given the short-term nature of the construction phase, there is predicted to be an insignificant effect on local air quality from construction-generated vehicle emissions.

#### Human health assessment

- 4.12. Dispersion modelling was undertaken to determine the potential impacts at existing human receptors associated with road traffic emissions generated by the operation of the Proposed Development. The results of the dispersion modelling are inherently cumulative in nature and incorporated conservative assumptions to ensure robust outcomes.
- 4.13. In accordance with the Environmental Policy and Implementation Community (EPIC) (previously EPUK) and IAQM guidance, the overall effect of the Proposed Development alone and together with the Land at Junction 10 proposals on human health is considered to be 'not significant' and additional long-term scheme-specific mitigation measures are not considered to be necessary.

# Ecological receptors

- 4.14. The dispersion model was also used to determine the likely air quality impacts at the Ardley Cutting and Quarry SSSI adjacent to the B430 and M40, and the Stokes Little Wood & Twelve Acre Wood Local Wildlife Sites.
- 4.15. Predicted pollutant concentration changes at relevant ecological habitats as a result of the Proposed Development were assessed using the IAQM guidance. The maximum predicted changes in pollutant concentrations and deposition rates within the Ardley Quarry & Cutting SSSI (B430 and M40 areas), Stokes Little Wood LWS and Twelve Acre Wood LWS are greater than 1% of the relevant pollutant levels (apart from acidifying nitrogen deposition rates within the LWSs). Accordingly, further assessment has been carried out by an ecologist to consider the overall significance of effects on the vegetation.
- 4.16. In terms of the potential of climate change to influence the assessment, whilst drier summers would potentially influence the dust mitigation requirements during construction operations, this will not affect the overall conclusion on the effects (4.10 above).

#### **Noise**

- 4.17. The assessment has considered noise during both the construction and operation of the proposed development. The study considered representative receptor locations at Baynard's Green, Lone Barn, the Travel Lodge at Cherwell Services, and receptors in proximity to the road network.
- 4.18. Prediction of the effects of construction noise was undertaken for a worst case scenario when all construction activity takes place simultaneously at the closest feasible point to the receptor and in the absence of any mitigation (in reality distances will be greater and construction less intense, therefore actual noise levels for the duration of the construction programme would be lower). In this scenario, the assessment predicted a negligible impact at the representative locations. Mitigation in the form of standard good practice measures implemented through a Construction Environment Management Plan would be used to control noise impacts.
- 4.19. It is possible that the construction phase may overlap with the Land at Junction 10 proposals. It is not considered that the Lone Barn location would be affected by additional noise. At Baynard's Green and the Travel Lodge representative receptors, the construction of Symmetry Park would not result in an



- exceedance of the Land at Junction 10 construction noise thresholds, therefore there is a negligible cumulative effect predicted at these receptor locations.
- 4.20. During operation, sound levels of the noise sources associated with logistics activities have been predicted by the assessment. During the daytime, the noise would be below the background sound level at all receptors assessed, and the effect therefore negligible. During the night-time, noise would be equal to the background sound level at Lone Barn, and below the background sound level at all other receptor positions. The impact and associated effect is predicted to be negligible. Cumulative effects have been considered for the Symmetry Park and the Land at Junction 10 proposals operating at the same time. The study found that noise would be equal to or below the representative background sound level at the receptor locations assessed. Therefore, there would be a negligible cumulative effect.
- 4.21. Road traffic from the proposals may alter noise levels near the affected network. The assessment has used traffic flow data to predict the change in noise levels associated with the Proposed Development at road links on the B4100, A4095, A43, B430, A421 & M40. This found that during the day time, a change of 2.9 decibels is possible for the section of the B4100 adjacent to the site access, and whilst this is considered to be a 'low' impact of change, there are no noise sensitive receptors present along this section of the road. A negligible impact of change (0.1 0.9 decibels) is predicted for the B4100 beyond the vicinity of the site, and also the other road links. Mitigation of road traffic noise upon existing receptor locations is not considered necessary.
- 4.22. During the night-time, a change greater than 5 decibels is predicted for the section of the B4100 adjacent to the site access, where there are no noise sensitive receptors present. A Low impact of change (1.0 2.9 decibels) is predicted for links of the B4100 and A43 in proximity to Baynards Green, and the A421 to the east of Barleymow Roundabout junction. A Negligible impact of change is predicted for other road links.

#### Cumulative assessment

- 4.23. Changes in road traffic noise levels when considered with cumulative schemes have been considered (listed at paragraph 3.27 above).
- 4.24. During the daytime period, the assessment predicted a change of 4.4 decibels at the B4100 just to the west of Baynards Green, which equates to a moderate cumulative impact, which is significant in EIA terms. To the east of Baynards Green, where there are no noise sensitive receptors present along the B4100, the predicted change in noise would be 3.4 to 3.9 decibels. A negligible change is predicted for other road links during the daytime period.
- 4.25. During the night-time period, the assessment predicted a high level of change of 4.4 decibels at the sections of the B4100 in the vicinity of Baynards Green, which equates to a major cumulative impact, which is significant in EIA terms. The Land at J10 M40 proposal proposes mitigation in response to noise environment at sensitive receptors to the west of Baynards Green junction. A low magnitude of change is forecast at the A43, B430 and A421. A negligible change is predicted for other road links during the night-time period.

# **Biodiversity**

4.26. The assessment has been informed by desk studies and a series of detailed ecological surveys by EDP and has been undertaken using professional judgement and experience, and in accordance with industry standard guidance. This identified the Important Ecological Features (IEFs) on the Site for assessment as:



hedgerows and trees, birds, bats, butterflies, Great Crested Newt, and badger.

#### Mitigation during construction

- 4.27. The Construction Environmental Management Plan will ensure appropriate management and operational systems are in place to avoid or minimise adverse pollution effects. This document will cross reference with the Ecological Construction Method Statement, and a detailed Arboricultural Method Statement that will set out measures to protect trees and hedgerows during the construction phase. Potential adverse effects on retained habitats relating to damage, deterioration, or disturbance, will thus be avoided, or reduced to insignificant levels. The potential for dust deposition to affect Stoke Bushes Local Wildlife Site will be controlled by best site practice mitigation measures (4.10 above).
- 4.28. The protection of animal species during construction will be ensured through the provisions of the Ecological Construction Method Statement. As a general measure, a suitably qualified ecologist will advise the Developer prior to any enabling works/vegetation clearance, to ensure that the identification and protection of the relevant species and their habitat is understood.
- 4.29. Subject to implementation of the mitigation measures outlined, residual effects anticipated for IEFs during the construction phase are not considered to be significant.

## Effects of the Proposed Development

- 4.30. Whilst the layout of the Proposed Development has been refined through various iterations to minimise ecological effects, existing hedgerows with trees will be removed to make way for built development and as part of the main access from the B4100. The Parameters Plan for the proposal ensures that a minimum of 17.24 hectares, approximately 20% of the Site area, will be devoted to open space and managed specifically for biodiversity. Additional landscaping and open space will also be provided within the Developable Area when the site layout is confirmed at the Reserved Matters stage, further increasing the biodiversity potential of the proposals.
- 4.31. Aspects of the detailed design can be specified through suitably worded planning conditions to secure matters such as: lighting designed to minimise impacts on nocturnal wildlife, the surface water drainage system designed to maintain/improve water quality, maintain existing run-off rates and provide areas of wet habitat; and the soft landscape scheme designed to include new habitats of ecological value within the green infrastructure.
- 4.32. The planting of new native hedgerow, trees and shrubs along the eastern boundary will also serve to connect offsite habitats via new foraging and commuting routes for a range of wildlife. The establishment and long-term management of these habitats will reduce the losses to development and contribute to biodiversity value. Furthermore, the proposed new planting will enhance the connectivity between Stoke Bushes LWS to the northeast and the woodland adjacent to the south of the Site through new tree, scrub, hedgerow habitats, thereby strengthening the integrity of the local ecological network.
- 4.33. With appropriate mitigation, no significant adverse construction nor operational effects are predicted to the Important Ecological Features assessed. Furthermore, the Proposed Development can potentially deliver a long-term beneficial effect at a Local level with respect to hedgerow and scrub habitats.

# Potential impacts at designated sites

4.34. The assessment has considered the potential for vehicle emissions to impact Ardley Cutting and Quarry SSSI; Stoke Little Wood Local Wildlife Site and Twelve Acre Copse LWS (see 4.15). It is considered that



the development is unlikely to result in perceptible changes to the grassland habitats for which the SSSI is designated. Both Stoke Little Wood LWS and Twelve Acre Copse LWS include Ancient Woodland. The ecological interpretation of the air quality results indicate that the increase in pollutant concentrations resulting from the development traffic flows are unlikely to result in a perceptible effect on the LWS and no loss or deterioration of Ancient Woodland is anticipated.

#### Landscape and visual effects

- 4.35. A desktop and field study informed the assessment of landscape and visual effects for the Proposed Development. The Site forms part of a transitional landscape between the major road corridors of the M40 and A43, and a more rural landscape to the east, including the village of Stoke Lyne.
- 4.36. The studies showed which landscape and visual effects could be assessed in the context of the Site and wider area, which led to the primary landscape effects being identified and mitigation designed to minimise those effects.
- 4.37. The assessment considered the effects of the proposed development on the Wooded Estatelands Landscape Character Type and the Plateau Farmland Landscape Character Type and found that the proposed development results in limited impacts and would not cause any significant residual effects on the overall character of this area.
- 4.38. The landscape within the study area is predominantly flat to the north and gently undulating to the east, containing a mix of rural features and edge of urban uses, resulting in limited opportunities for views of the Site. In consideration of the visual amenity of people, views towards the Site are often obscured by mature landscape features within a flat and gently undulating landscape. The assessment found that, due to this visual screening, there would be limited long-term impacts on publicly accessible areas, including highways and public rights of way.
- 4.39. Significant residual impacts are predicted for receptors using public rights of way in close proximity to the Site, as well as residents in close proximity, and where the property may afford a view looking west, as many are well contained by mature landscape features.
- 4.40. In the wider context, the low number of significant landscape and visual effects confirm the extent to which strategic planting incorporated into the proposed development would mitigate views, retaining and reinforcing the characteristic landscape fabric and pattern of the Site and assimilating the proposed development, as far as possible, into the landscape context.
- 4.41. The cumulative assessment identified that some in-combination views of the proposed development and the Land at Junction 10, M40 proposal are predicted, predominantly where receptors are in close proximity to both. However, these effects were found to be not significant in the long-term.

# Heritage

- 4.42. The heritage assessment established that the Site contains no designated heritage assets and that it does not contribute to the heritage interest of any designated heritage assets or non-designated heritage assets in the wider landscape as part of their settings.
- 4.43. It is concluded that the Proposed Development would not result in any adverse effects to any designated or non-designated heritage assets in the wider landscape.



#### **Archaeology**

- 4.44. A baseline assessment identified evidence for the Site to contain previously unrecorded archaeological remains. Geophysical surveys have identified anomalies thought to represent the buried remains of prehistoric or Roman period settlement that are probably of Medium sensitivity, as well as linear anomalies thought to represent boundary or drainage ditches associated with the settlement within the Site, ditches associated with a trackway and possible pits that are probably of Low sensitivity. Anomalies were also identified that represent probable buried infilled furrow related to medieval cultivation, as well as buried ditches and quarry pits of the post-medieval period; all being remains that would probably be of Negligible value.
- 4.45. The assessment considered the evidence for the Site to contain a Bronze Age ring ditch identified from aerial photographs, identifying that no such feature was recorded by the geophysical survey and thus the potential for the feature existing as buried remains within the Site is low.
- 4.46. Effects on unrecorded archaeological remains will depend on their sensitivity and where effects are significant (in EIA terms), they would be appropriately mitigated through archaeological recording to reduce the level of effect, which at most, would be a moderate adverse effect (should assets such as prehistoric or Roman period settlement or a ring ditch be affected).
- 4.47. Trial trench evaluation has been requested by Oxfordshire County Council's Lead Archaeologist to confirm the presence, location, and date of archaeological features within the Site. The requirement and scope of any further archaeological mitigation has been discussed with OCC and would be implemented either in advance of, or during, construction works.
- 4.48. In terms of NPPF, effects on non-designated archaeological remains would need to be considered with reference to Paragraph 203 such that a 'balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset'.

# Hydrology, flood risk and drainage

- 4.49. The assessment has considered the potential impacts on the waterbodies at or near the Site from the Proposed Development. During construction, a range of industry-standard pollution prevention and mitigation measures would adequately manage surface water run-off and water quality/quantity whilst operations take place. The assessment concludes that this would control impacts to a negligible level and would prevent significant adverse effects arising.
- 4.50. A Flood Risk Assessment (FRA) has been prepared which indicates that flood risk to the Site is limited. The Environment Agency's flood map indicates that the majority of the site is located within Flood Zone 1 and therefore has a 'low probability' of fluvial flooding, with less than a 1 in 1,000 annual probability.
- 4.51. A Surface Water Drainage Strategy proposed as part of the Proposed Development takes into account a 40% increase in rainfall intensity due to climate change during the next 100 years. It is proposed that the surface water runoff from the Site will discharge into attenuation basins and/or swales which will allow infiltration of the surface water into the ground. The system will include an overflow into an existing drainage ditch on the Site, which ultimately discharges into Padbury Brook. At times when surface water runoff cannot be removed via infiltration, it will be stored on site and discharged to the drainage ditch via an overflow at Greenfield runoff rates for all events up to and including the 1 in 100 year (+40%) event.



- 4.52. This will ensure that a sustainable drainage solution will manage the surface water runoff from the Site, as well as providing water quality benefits. The overall direction of the movement of water will be maintained within the developed Site and surrounding area. The conveyance routes (flow paths) will not be blocked or obstructed. There will be no increase in the floodwater levels due to the proposed development.
- 4.53. The findings of this assessment have demonstrated that the development would not result in any significant residual adverse impacts on surface waters, groundwater, or flood risk.

#### **Ground conditions and soils**

- 4.54. The ground conditions chapter identified existing soil and ground conditions, evaluates the potential for contamination and assesses the potential effects on ground conditions during construction and operation.
- 4.55. The majority of the Site has been farmland for over 100 years. There is a former well and potentially an infilled small quarry in the southeast. A Preliminary Risk Assessment confirmed that there is potential for contaminants associated with the infilled quarry and localised areas of made ground. A detailed ground investigation is required to confirm whether there is a need for any remedial action. Should that be necessary, following the implementation of any required mitigation measures, the potential for impact on the underlying aquifer or surface water will be significantly reduced. The removal of a potential pathway constitutes a minor beneficial effect.
- 4.56. Temporary construction effects would be controlled through the Construction Environmental Management Plan and safe methods of working to reduce potential impacts on construction workers and site users.
- 4.57. No significant residual effects remain after mitigation during construction or when the development is complete and operating.

# Climate change

- 4.58. The proposed development will result in carbon emissions during construction. However, a Life Cycle Assessment will be undertaken during the design of the scheme to inform material selection to reduce the embodied carbon footprint as far as possible.
- 4.59. The proposed development will result in carbon emissions during operation through both operational energy use and transport. A Whole Life Carbon Assessment will then be undertaken of the final design to calculate the final carbon footprint (kgCO2eq) of the built development. A Travel Plan (Vectos, 2021) will assist in reducing carbon emissions associated with operational transport. These measures include covered cycle parking, pedestrian/cycle routes, and 25% of parking spaces to have electric vehicle recharging facilities.
- 4.60. To mitigate for the anticipated operational energy related emissions, the Proposed Development will use the 'energy hierarchy' to reduce carbon emissions from the built development: by minimising heat losses, reducing air permeability, maximising the use of natural light; maximising the energy efficiency of the fittings and equipment that is incorporated into the development; and to incorporate renewables / low carbon technology. Solar panels would be installed over a minimum of 18% of the useable roof area. This will provide the normal base load of electricity prior to including any specific requirements of the occupier.
- 4.61. Whilst it is likely that additional mitigation may result in the development reducing the carbon emissions, the extent to which this will be achieved cannot be specified until the details have been designed. Therefore, the residual operational energy impact is considered to remain as a moderate significant effect at this stage.



#### Socio-economic effects

- 4.62. The socio-economic effects chapter assesses the effects of the proposed development on employment during the construction and operational stages, and value generated as a result of new economic activity.
- 4.63. Employment and economic activity will be generated during the construction phase of the proposed development. An estimate of the cost of the construction has been used to provide an indication of the construction employment. Over a period of 3 years, the development is expected to support some 500 jobs directly, and another 235 indirectly throughout the supply chain in the construction industry. This is considered to be a minor beneficial short-term effect. If construction were to take place over 2 years, development over the shorter period would require a greater input of resources, some 750 jobs each year, plus the support in the supply chain.
- 4.64. Operational employment is predicted with standard job density ratios, using a floorspace of 95 m² and 77 m² per full-time employee (to represent the lower and higher number of jobs within the range that is likely). This indicates that the proposal would support some 3,060 to 3,780 direct on-site jobs. Once leakage, displacement, and multiplier effects have been considered, the Proposed Development is expected to support some 2,430 to 2,990 on and off-site jobs.
- 4.65. The Council will require an Employment, Skills and Training Plan (ESTP) to be secured as part of a planning permission. The ESTP would enhance beneficial effects of employment generation, through helping local people better access job opportunities arising from the Development, including through providing construction apprenticeships.

# 5. Interaction of effects on receptors

- 5.1. The potential for effects caused by a combination of impacts from the Proposed Development on a particular receptor, acting together, may cause a more significant impact collectively than individually, or potentially, a combination of beneficial and adverse effects may be experienced at a particular location. For interaction between effects to be possible, there would need to be an identifiable residual effect from one or more environmental aspects after considering the mitigation proposed.
- 5.2. None were identified for the construction stage. From the limited range of potential effects identified for the completed development, no change in the assessed residual effects are predicted due to any additional effects on receptors.



# 6. Conclusion

- 6.1. The assessment has considered how the environment would be affected by the Proposed Development. Whilst mitigation measures are included in the scheme design, or have been identified to minimise adverse environmental effects, some residual effects identified as significant in the EIA are likely to remain.
- 6.2. Landscape and visual effects assessed as significant are likely. These are medium-term residual effects in relation to landscape character, and long-term residual effects for landscape features on-site, for people using paths and roads in close proximity to the development, and some residential receptors in Stoke Lyne.
- 6.3. Subject to confirmation of further archaeological evaluation on-site, the worst-case scenario is the potential for significant residual effects on previously unrecorded settlement remains, if they are present.
- 6.4. Carbon emissions associated with operation of the Proposed Development, if they cannot be avoided or off-set, are assessed as an effect of moderate significance.

The Environmental Statement has been submitted as an update to Cherwell District Council in connection with planning application 22/01340/OUT. CDC will consult with statutory advisors and non-statutory bodies to invite comments on the proposals. Members of the public may also make comments on the application during this time. The Environmental Statement can be viewed at: https://planningregister.cherwell.gov.uk/

A copy of the ES on a USB Flash Drive is available at a charge of £25.00. Enquiries in respect of these, or printed copies of the Non-Technical Summary, ES or Appendices should be made to Savills – wimborne@savills.com

