

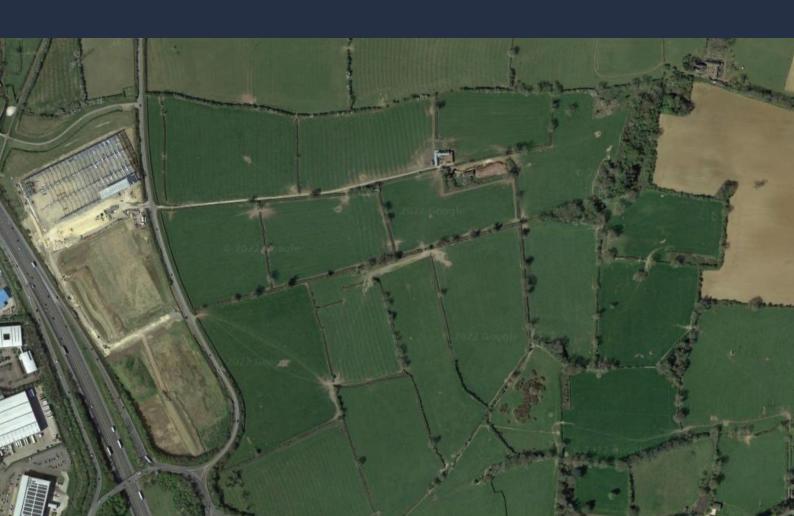
# Land East of J11, M40, Banbury Environmental Statement

Environmental Statement: Non Technical Summary

# Greystoke CB Ltd.

Prepared by Pegasus Group | May 2022 | P21-3302

Environment.





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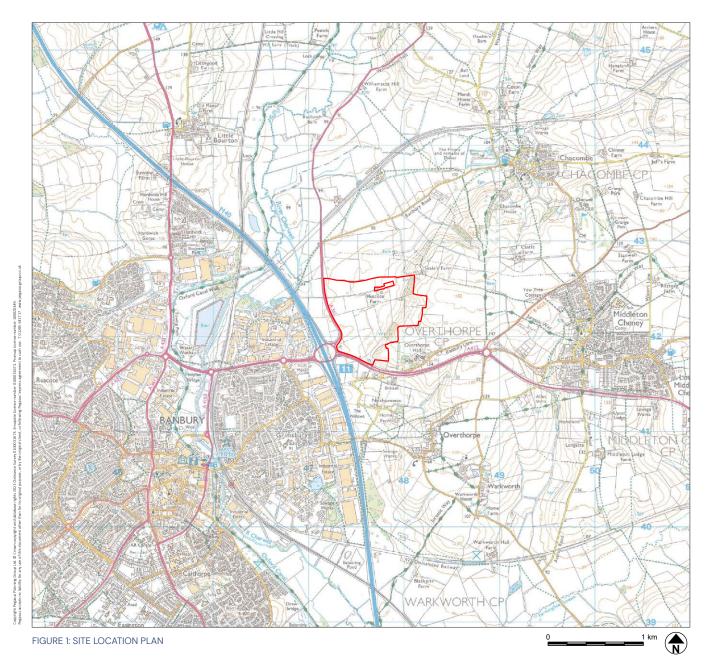
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## INTRODUCTION

This document provides a Non Technical Summary (NTS) of the Environmental Statement (ES) which has been prepared on behalf of Greystoke CB Ltd (the "Applicant") to accompany an outline planning application for a commercial led development on land east of Junction 11, M40, Banbury (the "Application Site").

The Application Site is situated within the administrative area of Cherwell District Council (CDC). A request for a Screening Opinion was submitted to CDC to determine if an Environmental Impact Assessment (EIA) is needed. The Proposed Development falls within Schedule 2 development of the EIA Regulation, which is development likely to have significant effects on the environment by virtue of factors such as its nature, size or location under the category of "Industrial estate development projects" (Schedule 2, 10a) as described in the EIA Regulations. Accordingly, the Applicant has prepared an ES. The **Application Site Location** is shown on **Figure 1**.



## PURPOSE OF THE ENVIRONMENTAL STATEMENT

The ES comprises a series of studies which have been commissioned to address the environmental issues which are considered pertinent to the construction and operation of the Proposed Development, including consideration of cumulative effects. The ES also identifies any alternatives that have been considered and mitigation measures to avoid or reduce significant adverse effects.

The full findings of these studies and planning application documents will be available to view at the Council's offices and via Cherwell District Council's once the planning application has been registered. The contact details are:

Planning Services Department of Cherwell District Council, Bodicote House, Bodicote, Banbury, OXI5 4AA

Telephone: 01295 227001

Website: https://planningregister.cherwell.gov.uk/

Printed copies of the ES documents may be purchased as follows: NTS (no charge) and ES Main Text/ Technical Appendices (£150) are available from Pegasus Group. The complete ES can also be obtained in digital CD format for £10. For copies of any of these please contact:

Pegasus Group
Pegasus House
Querns Business Centre
Whitworth Road
Cirencester
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Telephone: 01285 641717

Email: Cirencester@pegasusgroup.co.uk

When ordering, please quote reference P21-3302

# ENVIRONMENTAL STATEMENT ASSESSMENT SCOPE AND METHODOLOGY

The Environmental Statement (ES) reports the findings of an Environmental Impact Assessment (EIA) which has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended).

No formal scoping exercise was carried out for this ES. The environmental topics that have been included within this EIA were based on professional judgement when considering the scheme with the known baseline environment and Schedule 4 of the EIA Regulations 2017 (as amended). The EIA focuses on the potential likely significant effects of the Proposed Development during construction and operational phases only.

The planning process in this instance is subject to two stages of development control. The 'outline' planning stage establishes a fixed range of parameters which, if approved, the development must adhere to in terms of the location of different land uses (e.g. employment uses, green infrastructure) on different parts of the Application site and the maximum building heights. The 'reserved matters' planning stage considers the detailed design of the buildings within the parameters set out at the outline stage. To ensure that these applications remain consistent with the Proposed Development as described within this ES, the technical assessments have been completed against a set of Parameter Plans which specify these controls.

Within EIA, cumulative effects are generally considered to arise from the combination of effects from the Proposed Development and from other proposed or permitted schemes in the vicinity, acting together to generate elevated levels of effects. Consideration is given to the following developments as part of the cumulative assessment in the ES:

Land adjacent to M40 Junction 11, Banbury (21/02467/F)- this proposal is for a mixed-use development including a 240- bed hotel, 4 storey office building, roadside services, coffee shop drive-through and petrol filling station with ancillary retail store. The proposal is intended to be determined at an April 2022 Planning Committee. The development was deemed to not need an EIA. This planning application under determination is immediately west to the Application Site. If granted planning permission, it is likely the development will be under construction when the Application Site's development begins.

The location of these cumulative sites in relation to the **Application Site** can be seen on **Figure 2** 

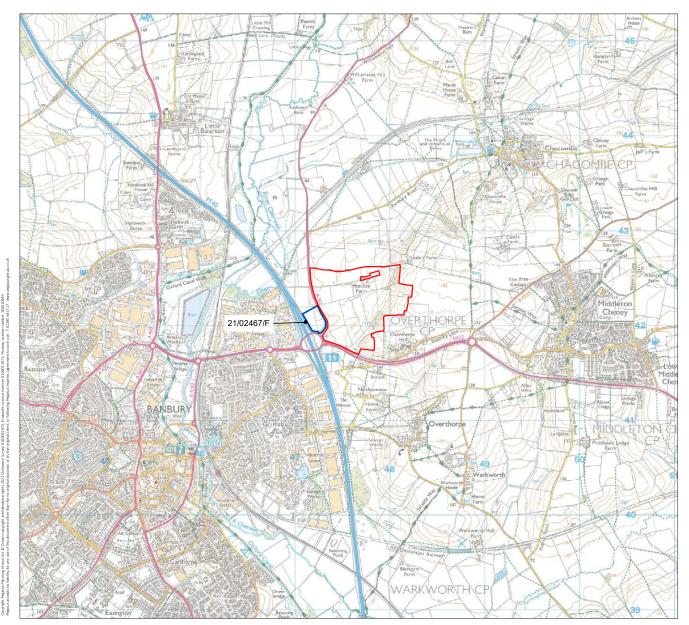


FIGURE 2: APPLICATION RED LINE BOUNDARY PLAN





## THE APPLICATION SITE

The Application Site (or "Site") covers an area of approximately 66.15 hectares (ha) of land, located on land east of Junction 11, M40, Banbury. The Site lies approximately 1.8km to the north-east of the town centre of Banbury with the suburban edge of Banbury running parallel to the M40. The village of Middleton Cheney is circa 1.8km to the east of the Application Site.

The Site is a singular, greenfield parcel of land bounded by the A422 to the south, and the A361 to the west. To the north and east of the Site lie further agricultural fields. To the west of the A361 and opposite the Site is the recently consented commercial development of Frontier Park, which is currently under construction. The Site is bordered by a line of mature trees, woodland copses and hedgerow around the existing field pattern. The internal areas of the fields consist of permanent arable and pastoral land. There are five, small waterbodies within the Site according to OS Maps.

The Site is well related to and will be accessed from the A361, with direct access to Junction 11 of the M40. There are no Public Rights of Way within or in close proximity to the Site.

The Site is not subject to any statutory or non-statutory ecological designations. The nearest statutory designation is the Neithrop Fields Cutting Site of Special Scientific Interest (SSSI) which is located at a distance of around 3.1km to the west of the Site. The Application Site is adjacent to the southern edge of Environmentally Sensitive Area, Upper Thames Tributaries.

The north-east part of the Site contains a NERC Act S41 Habitat site (as per the Adopted Cherwell Local Plan 2011-2031 (Part 1) Partial Review- Oxford's unmet Housing Need, September 2020). This part will remain undeveloped with a substantial buffer around it, providing opportunities for habitat and biodiversity enhancements.

The Site has been carefully selected to exclude any heritage assets and is not located within any statutory/ non-statutory designated heritage sites. The Site is not located within a Conservation Area and there are no Listed Buildings within or in close proximity to the Site boundary. The closest Conservation Area is Overthorpe circa. 690m south and the closest Listed Building is Grade II Listed Building, Home Farmhouse (reference: 1200143) circa.490m south of the Site. The closest Scheduled Monument is Former World War I National Filling Factory, Banbury (reference:1409811) circa.1km south from the Site.

The Site is not covered by any current national or local landscape designations. The Proposed Development lies within the gently rolling, limestone hills and valley landscape of the 'Northamptonshire Uplands' National Character Area 95 (NCA). At a county level the Site is across the 'Clay Vale' and 'Upstanding Village Farmlands' landscape character type, as set out in the Oxfordshire Wildlife and Landscape Study. The Clay Vale landscape is associated as a flat, low-lying landform with small pasture fields, many watercourses and hedgerow trees and well-defined nucleated villages. The Upstanding Village Farmlands landscape is associated with elevated landform, with a strong patter of hedgerows and nucleated villages; this is consistent with the western part of the Site where the topography rises to form a slope.

The Site is located entirely within Flood Zone 1 which is considered to be the zone with the lowest risk of flooding by the Environment Agency.

The Site does not lie within an Air Quality Management Area (AQMA).

The Application Site and surrounding context is shown on the **Environmental Designations Plan** at **Figure 3** 

### KEY Site Boundary Local Authority Boundary ---- SUSTRANS National Route ---- SUSTRANS Regional Route ♦♦♦ Long Distance/Recreational Route ---- Public Right of Way ---- Other Routes with Public Access Grade I Listed Building Grade II\* Listed Building Grade II Listed Building Country Park Battlefield Scheduled Monument Conservation Area Environmentally Sensitive Area (ESA) Site of Special Scientific Interest (SSSI) Ancient Woodland NERC Act S41 Habitats (Previously UKBAP) (as per the Adopted Cherwell Local Plan 2011-2031 (Part 1) Partial Review - Oxford's Unmet Housing Need, September 2020) EA Flood Zone 3 EA Flood Zone 2

## PROPOSED DEVELOPMENT AND ALTERNATIVES

The planning application seeks outline planning consent with matters of landscaping, access layout, scale and appearance reserved for future determination. The Proposed Development comprises:

"Outline planning application for the construction of up to 140,000 sqm of employment floorspace (use class B8 with ancillary offices and facilities) and servicing and infrastructure including new site accesses, internal roads and footpaths, landscaping including earthworks to create development platforms and bunds, drainage features and other associated works including demolition of the existing farmhouse. All matters of detail reserved."

The assessment has been carried out with regards to a range of development parameters to ensure that the Proposed Development as assessed represents the maximum (i.e. worst-case) scenario, whilst providing some limited flexibility for changes that may arise as the scheme evolves with the benefit of subsequent planning approvals and/or reserved matters, see Figure 4 showing the Parameter Plan.

#### LAND USE AND BUILDING HEIGHTS

It is proposed that in any final detailed design there will be up to ten new buildings no higher than 23m creating up to 140,000m² of new employment floorspace, across a series of development zones within the Site. Within these development zones associated highway and drainage infrastructure would be provided, together with zonal landscaping. Details of the final locations has yet to be determined and depends on the needs of the users of the buildings. The built form will provide storage and distribution warehousing with ancillary offices and facilities. The eastern section of the site will retain existing greenfield land and woodland to be maintained

and managed. Figure 5- Illustrative Site Layout, has been prepared to demonstrate one way in which the development could be achieved in accordance with the Development Parameters.

#### **GREEN INFRASTRUCTURE**

Green infrastructure, landscaping and surface water drainage attenuation will be provided as part of the Proposed Development. A comprehensive network of proposed Green Infrastructure is shown on Figure 6– Illustrative Landscape Strategy, prepared to demonstrate how Green Infrastructure could be achieved in accordance with the Development Parameters. Natural features are retained where possible including 'green corridors' of mature hedgerows and trees to conserve and expand existing habitats.

#### SURFACE WATER DRAINAGE

The Proposed Development will result in an increase of impermeable surfacing within the Application Site, with the presence of buildings, access and other hard surfaces. Sustainable Drainage Systems (SuDS) will be provided to manage surface water run-off.

#### **ACCESS AND MOBILITY**

Access to the Site would be via the A361 through two principal means and is likely to involve the creation of a primary site access roundabout and a secondary ghost island right turn priority junction to the west. There will be provision of pedestrian and cycle links through the Site, and car parking provision. The Site will be compliant with EVI 8 of the Oxfordshire Electric Vehicle Infrastructure Strategy (adopted in 2021) which requires 25% of all new parking areas to be provided with EV Chargers A circular access route within the Site will allow for buses to enter the Site and that will support the provision of a new bus route between the site and Banbury Town Centre / Railway Station.



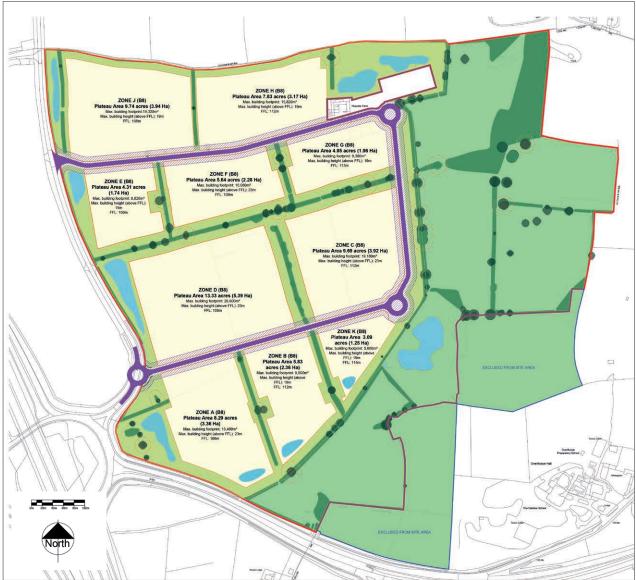


FIGURE 4: PARAMETER PLAN



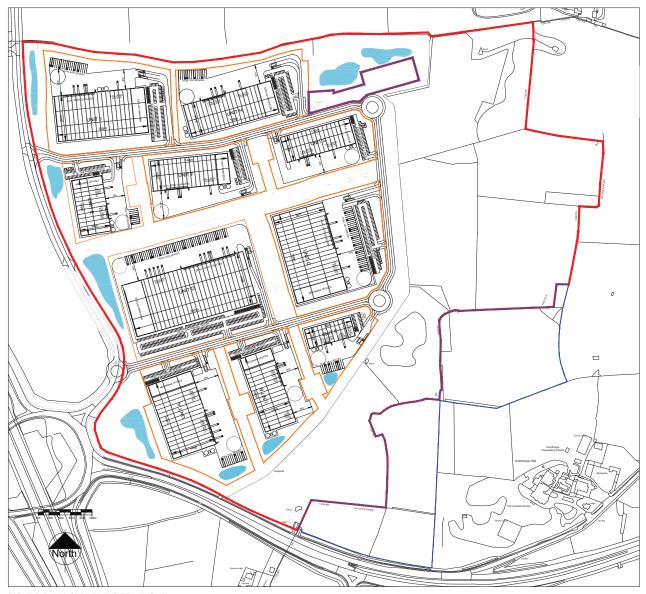


FIGURE 5: ILLUSTRATIVE SITE LAYOUT



FIGURE 6: ILLUSTRATIVE LANDSCAPE STRATEGY

#### CONSTRUCTION

The planning application seeks outline permission for the Proposed Development and therefore development of each parcel would be subject to approval of detailed design under Reserved Matters applications.

The Applicant would prepare Construction Environmental Management Plans (CEMPs) that set out the agreed methods and procedures for construction, and standard measures and adoption of construction best practice to ensure that the risks to the environment are avoided and/or appropriately managed for each development parcel. The details of each CEMP would be agreed with the Council and monitored throughout the construction phase.

Cconstruction is expected to span up to May 2028 (circa 4 years). Construction would be phased, although details of phasing are not known at this stage.

#### **ALTERNATIVES**

The Applicant has considered a 'No Development' and many alternative designs to the Proposed Development. The 'No Development' Alternative refers to the option of leaving the Application Site as it currently is, which would be for mainly arable purposes which would miss an opportunity for the expansion of employment opportunities within Cherwell District.

The constraints and opportunities presented by the Application Site have been used to inform the design principles, which in turn have helped to refine and structure the Proposed Development. The design of the Proposed Development has considered various environmental factors which include the local ecology; cultural heritage; flood risk; the local road network and the visual implications of this proposal. The survey information for these environmental factors has informed the overall location and layout of different

land uses within the site area to respond to existing landscape features, protecting existing features such as trees, hedgerows and water courses as well as including new planting and wildlife habitats.

There have been multiple revisions to the Parameters Plan, with edits being made to: building size/height and layout, internal/external access, Green Infrastructure areas and car parking before being finalised. The Parameters Plan has been subject to consultation with the technical team and responds to environmental and technical constraints emerging from the EIA and other studies.

Notwithstanding this, the Illustrative Site Layout is provided to demonstrate how the Proposed Development could be delivered on the Application Site. The Illustrative Site Layout shows how the development might be laid out to respond to constraints and opportunities on the Site, including those identified in the ES Chapters and technical reports submitted as part of the planning application.

The following sections provide non-technical summaries of the various studies which have been undertaken as part of the EIA.

## LANDSCAPE AND VISUAL

An assessment has been made of the landscape and visual impacts for land located east of junction 11 on the M40, to the east of Banbury. The assessment commenced in October 2021 identifying the landscape and visual constraints to inform an iterative design process, an iterative, consultation and design refinement. It was completed in April 2022.

#### **BASELINE CONDITIONS**

The Site consists of open, agricultural land with field hedges and trees that contribute to its rural character. The land has no rare or valuable attributes and does not form part of a valued landscape with reference to National Planning Policy Framework paragraph 174. The change in topography from west to east is a feature of the Site and marks a transition from the settled vale adjoining Banbury to the more deeply rural landscape to the east. The landscape of the site reflects published characteristics of the local landscape character types

but the immediately adjoining urban edge, employment land and highway infrastructure are also key features of the local landscape, reflecting the Site location on the edge of the wider urban area. The Site creates a transitional area of land between the present urban edge and this more deeply rural landscape to the east.

The sensitivity of the site has been assessed in the Cherwell District Council Banbury Landscape Sensitivity Assessment prior to the construction of the Frontier Park employment land to the immediate west of the site. The assessment identified a generally medium sensitivity to the landscape and medium high sensitivity to the visual sensitivity. This baseline has now been changed due to the influence of the adjoining employment development. Even without this change in baseline, the assessment found capacity for employment development. This published assessment has been confirmed by this landscape and visual impact assessment.



FIGURE 7: LANDSCAPE & VISUAL IMPACT ASSESSMENT VIEWPOINT 1

The development proposals are in outline and consist of a number of large scale-built forms to accommodate employment uses. These are set within a layout that retains structural hedgerows and trees and avoid the ascending landform found to the east of the land parcel. This approach incorporates inherent mitigation that assists with limiting the potential for significant landscape and visual harm.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The introduction of the Frontier Park employment land development has reduced potential views from the wider Banbury area and limited views towards the site from the motorway corridor. Where views remain the new built form of the development has potential to be seen over and through foreground vegetation but where seen it will generally appear as an extension of the existing employment land. This reduces the potential magnitude of change that will be seen in views from confirmed visual receptors. As the value of local views is generally lower because of the influence of the urban edge and highway infrastructure, effects on views are assessed to be limited and less than significant. A significant effect is identified to users of the A361 immediately adjacent to the site before mitigation measures are established.

The introduction of the Frontier Park employment land in association with the existing highway infrastructure and urban edge similarly inform the local landscape character. Whilst the development proposals have been assessed to have a detrimental effect on landscape receptors, these effects are limited in the context of the scale of development. A substantial adverse landscape effect is assessed on the site character itself due to the high magnitude of change that development would cause. However, with mitigation measures established this landscape harm is recued to moderate.

#### MITIGATION AND ENHANCEMENT

Figure 6 highlights the Landscape Strategy for the Application Site and shows the use of retaining natural features to create corridors of green infrastructure which contribute to both landscape and visual mitigation as well as provide a distinct sense of place to the future development. The green corridors also conserve exiting habitat and provide an opportunity for expansion of this habitat. In landscape and visual terms both the inherent and proposed mitigation measures reduce the scale and massing of the development structures and reduce visual prominence of new built form from confirmed visual receptors.

#### CONCLUSION

Overall, the residual landscape and visual harm arising from the development is assessed to be less than significant due to the landscape strategy for mitigation and its potential to contain detrimental effects to the site.

## ARCHAEOLOGY AND CULTURAL HERITAGE

An assessment has been undertaken to consider potential effects upon the significance of archaeology and cultural heritage receptors. This includes buried archaeological remains, earthworks, buildings / structures, and all other aspects of the historic environment.

#### **BASELINE CONDITIONS**

Heritage assets considered to be potentially sensitive to development within the Site comprised Romano-British archaeological remains (low value), ridge and furrow earthworks (low value), buildings at Huscote Farm (low value), the Grade II Listed Seale's Farm (medium value) and the non-designated Overthorpe Grange (low value). Figure 8 identifies Designated Heritage Assets within lkm of the Site.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

One potentially significant effect, if unmitigated, was identified, which was a potentially moderate adverse significance of effect on the Romano-British remains.

#### MITIGATION AND ENHANCEMENT

Proposed mitigation measures comprise a programme of archaeological recording for the potential Romano-British remains, topographic earthwork survey for the ridge and furrow earthworks and building recording for Huscote Farm. Such works will provide a record of the assets, and the information gained will reduce the impact, although as such remains cannot be directly replaced, a residual lower impact will remain.

#### **CUMULATIVE AND IN-COMBINATION EFFECTS**

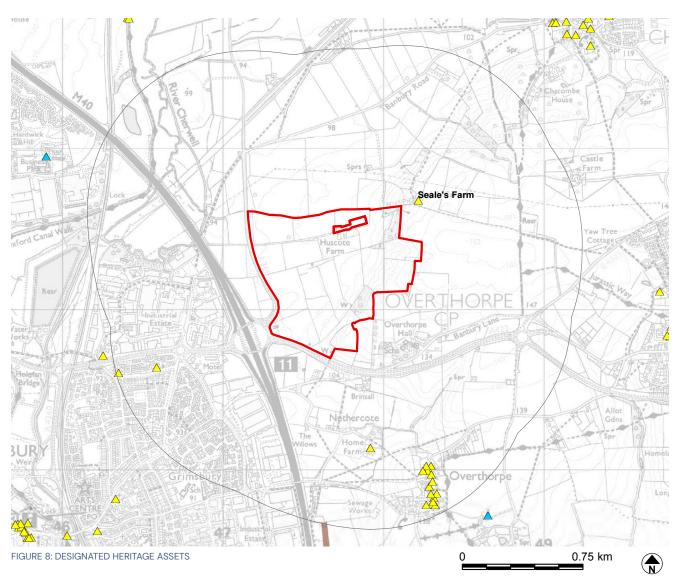
No cumulative effects would be anticipated to result from the Proposed Development in respect of cultural heritage. No in-combination effects would be anticipated to result from the Proposed Development in respect of cultural heritage.

#### CONCLUSION

This chapter has identified no significant residual effects in respect of cultural heritage that would arise from development of the nature and on the scale proposed within the Application Site. The Proposed Development would be acceptable in respect of cultural heritage.

# KEY Site Study Area (1km) Scheduled Monuments

- Listed Buildings
- Grade I
- Grade II\*
- △ Grade II



## **ECOLOGY**

An Ecological Impact Assessment has been undertaken in line with current best practice guidance (CIEEM, 2018). A desk-based assessment was undertaken to identify records of protected and/or notable habitats and species, and designated nature conservation sites in the vicinity of the site. Field survey data was collected in 2021 for the following species or species groups; amphibians, reptiles, birds, badgers, hazel dormice and bats. Information relating to badgers is provided under a separate confidential appendix in the ES due to the risk of persecution.

#### **BASELINE CONDITIONS**

The Site is dominated by heavily grazed grassland fields which have been modified through re-seeding and the effects of cattle grazing. The fields are typically bounded by species poor hedgerows with scattered mature trees. There are small field ponds within the Site that have been poached by cattle and are of low ecological value. A former farmhouse and outbuildings are present onsite. Pockets of woodland and gorse scrub are present along the eastern edge of the Site.

Surveys to determine the presence/absence of hazel dormouse were undertaken and no hazel dormice were recorded. Pond sampled to determine the presence/absence of great crested newts were negative for this species and remaining ponds in the local landscape were considered to be poor habitat for this species although common amphibians such as frogs and toads could utilise these habitats. Reptile survey did not record the presence of any reptile species. A variety of farmland and urban birds use the site for foraging and nesting typically associated with the hedgerows and trees and low numbers of ground nesting birds recorded, likely due to the high levels of cattle grazing. Brown long-eared bat and common pipistrelle bat roosts

was recorded in two buildings within the farm complex and bats use the hedgerows for commuting and foraging into the local landscape. **Figure 9** identifies the habitats on-site.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

Based on the data gathered the Proposed Development during the construction phase and without mitigation there is potential for negative effects significant at Site to Local level in relation to pollution events, loss of habitats and effects on species such amphibians, reptiles, birds, bats and small mammals and invertebrates.

At the operation stage the Proposed Development will have established newly created habitats including enhanced grassland, species-rich hedgerows, native trees, new ponds, native woodland and an orchard all of which would be positive, permanent and of significance at up to a Local level.

Ecological receptors determined as effected below District level, i.e., Site and Local level, are considered not significant under the EIA Regulations overall.

#### MITIGATION AND ENHANCEMENT

The Proposed Development includes retention of green corridors and enhancement of habitats to deliver a measurable biodiversity enhancement at the reserved matter(s) stage which would be secured via a Landscape and Ecological Management Plan (LEMP) via planning condition. The LEMP would provide species-specific enhancements including details on bat and bird box provision, amphibian and reptile refugia and appropriate pond design within the final layout. These measures will enhance the site for amphibians, reptiles, birds, badgers, and bats and invertebrate species at a site to local level.

Site management during construction would include pollution prevention, biosecurity and good environmental site measures to minimise ecological impacts to local wildlife sites and on site wildlife should be set out within a CEMP to be agreed with the LPA. The CEMP will include the requirement for precommencement surveys for nesting birds (if vegetation is removed during the breeding season) and amphibians and reptiles under a Reasonable Avoidance Method Statement, badgers and lighting which could affect bats. Appropriate mitigation should be put in place to comply with legal obligations including where necessary obtaining a European Protected Species Licence in respect of bats identified within buildings. It is not know which trees would require felling until final design at the reserved matters stage has been complete and a condition should be imposed to ensure all necessary bat surveys are undertaken of tree prior to felling to determine whether they support roosting bats and any necessary mitigation/licensing put in place. Impacts from construction and operational lighting on bats should be controlled via ecologically sensitive lighting plans secured via planning condition.

#### **CUMULATIVE AND IN-COMBINATION EFFECTS**

With the above mitigation put in place, together with proposed embedded enhancements the Proposed Development is anticipated to deliver new, goodquality habitat and no significant negative impacts to ecology are anticipated to occur from the proposed development alone or in-combination with other schemes.

#### **CONCLUSION**

Overall, the Proposed Development with embedded and additional mitigation will have very few residual effects and none anticipated to be significant under the EIA Regulations. The Proposed Development would be acceptable in respect of ecology.

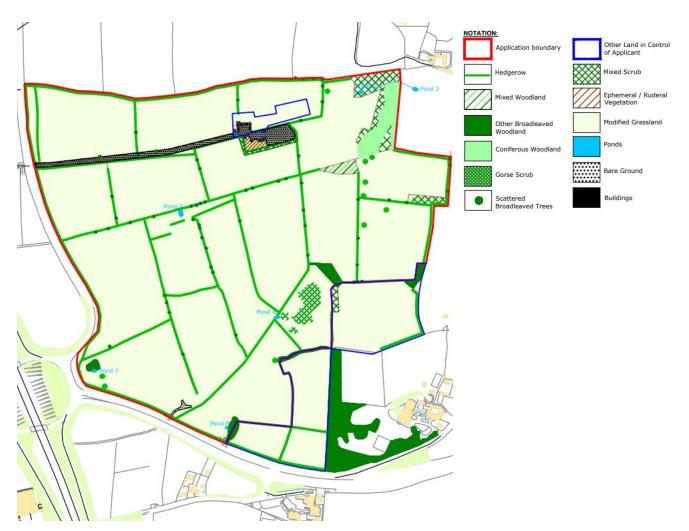


FIGURE 9: HABITAT MAP

## TRANSPORT AND ACCESS

This chapter considers the potential traffic and transport implications of the development proposals both during the construction period and once the site is fully operational.

#### **BASELINE CONDITIONS**

The Site is well connected to the local and wider road network with the M4O Junction 11 approximately 500m south. There are currently no significant accident issues within the study area that would require intervention as part of the Proposed Development.

At present, all forms of public transport are over 1km from the Proposed Development, but bus stops are to be built along the A361 adjacent to the western boundary as part of the Frontier Park site which would improve accessibility.

At present there are no pedestrian footways along the A361. As part of the Frontier Park development a footway is being built to allow pedestrian access to the new bus stops. There is a pedestrian/ cycle link provided via the Motorway underpass beneath the M40 which gives access to Banbury Gateway Shopping Centre and the main facilities which will be accessed from the Proposed Development.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

It is estimated there will be 250 car and HGV movements per day generated during peak construction. The vast majority of HGV and car movements generated during the construction period would be expected to route to/ from the M40.

Overall, the residual effect of the proposed development on highways during the construction phase is concluded to be negligible. Once operational, the development site could generate around 6,300 two-way trips over a 24-hour weekday period, of which approximately 2,200 would be HGVs. The highest number of vehicle trips would route through the A40 north and south.

#### MITIGATION AND ENHANCEMENT

The primary mitigation during the construction phase will include initial temporary access to the Site to enable preparation for construction and the construction of the new site access roundabout.

A Construction Management Plan would be prepared and the mitigation measures within it implemented throughout the construction phase. The aim of this will be to ensure the contractors meet the requirements of all relevant environmental legislation, agreements, authorisations and commitments.

The primary mitigation during the operational phase will include offsite improvements to J11 to improve capacity.

The site layout can incorporate direct connections to the adjacent existing and proposed bus infrastructure to facilitate public transport to and from the Site. An internal bus loop can be provided as part of the scheme.

The proposed internal access road will include a 3m wide segregated shared footpath and cycleway along the southern side of the access road.

#### CONCLUSION

The effects of the Proposed Development with regard to the construction and operation phase have been considered in detail including the effect of driver delay, pedestrian delay, fear and intimidation, and accidents and safety. Overall, in transport terms the residual effects are not considered to be significant for either the construction or operational phase of the Proposed Development. The Proposed Development would be acceptable in respect of transport and access.

## FLOOD RISK AND DRAINAGE

This Chapter of the ES has assessed the likely significant effects of the Proposed Development with respect to Flood Risk, Drainage and Water Resources, including the methods used to assess the effects; the baseline conditions currently existing at the Application Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant negative effects; and the likely residual effects after these measures have been adopted.

#### **BASELINE CONDITIONS**

Multiple surface water features are present within the Application Site. The topography of the Application Site indicates flows will travel westwards, leaving the Application Site via two culverts located under the A361.

The River Cherwell is located approximately 250 m west of the Application Site. The River Cherwell generally flows in a southerly direction past the Application Site. Further drainage channels and unnamed watercourses are located to the west, north and south of the Application Site. It was considered that all watercourses / surface water features in a 1 km radius of the Application Site will ultimately drain into the River Cherwell.

The River Cherwell is classified as having 'Moderate' ecological quality but failed the most recent round of chemical testing in 2019. It was considered to be of Medium sensitivity.

No superficial deposits (youngest geological deposits formed during the Quaternary Age) are recorded at the Application Site. The majority of the Application Site is underlain by bedrock deposits of Charmouth Mudstone Formation. The eastern boundary is underlain by Dyrham Formation. These were considered to be of Medium sensitivity.

A historical British Geological Survey borehole record in the south-western corner of the Application Site encountered groundwater at 1.2 m below ground level. No groundwater Source Protection Zones (generally associated with abstraction for drinking water) are present within a 1 km radius of the Application Site.

The Application Site is located in Flood Zone 1, which is considered to be at a low probability of fluvial and tidal flooding. The majority of the Application Site is at Very Low risk of surface water flooding. An area of elevated risk is shown in the south-western corner of the Site associated with flows travelling across the Site and pooling at the lowest point of the Site against the embanked junction of the M40 / A361.

The Application Site is at Negligible to Low risk from flooding from artificial sources. No public sewers are located within the Application Site. There are no designated sensitive ecological areas within 1 km of the Application Site into which surface water run-off could flow

**Figure 10** identifies the level of flood risk within the Application Site and the wider area.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The main potential significant effects at the Site revolve around dealing with surface water risk at the Site and the potential for silt laden runoff, spillages, leaks and pollutants during the construction stage and diffuse pollution contained in urban runoff during the operation phase from a water quality / resource perspective. In addition, from a flood risk perspective, the potential significant effects include mud and debris blockages and temporary increases in impermeable areas during the construction phase and the increase in permanent impermeable area and increase in discharge to local

watercourses and blockages of drainage networks during the operational phase.

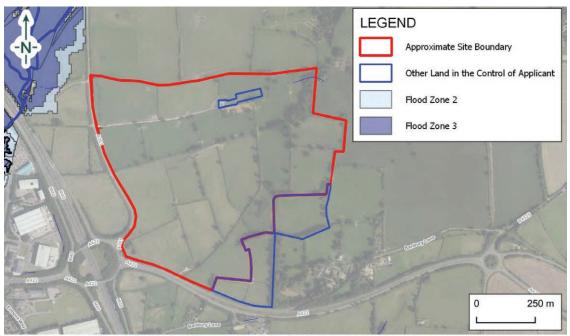
#### MITIGATION AND ENHANCEMENT

Mitigation includes completion of a Construction Environmental Management Plan which will include details of mitigation measures to prevent adverse impacts occurring to controlled waters and SuDS measures to mitigate the surface water risk. Generally, the proposed development is likely to have a low to medium pollution risk and so the management train should normally have one or two treatment stages to mitigate this. Inclusion of detention basins, ponds and/

or permeable paving should in general provide sufficient treatment as well as the attenuation required to maintain greenfield runoff rates. A foul treatment plant will be constructed within the Application Site to treat foul drainage prior to discharge into the local drainage system.

#### CONCLUSION

The Proposed Development at the Application Site is made acceptable with the mitigation measures identified which would ensure there would be no significant residual effects, which is considered acceptable in EIA terms.



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FIGURE 10: EA FLOOD MAP

# **AIR QUALITY**

An Air Quality assessment has been carried out to assess the effects of both construction and operation of the Proposed Development on the Application Site and surrounding area.

#### **BASELINE CONDITIONS**

The Site is located approximately 550m to the east of an existing Air Quality Management Air (AQMA) located along Hennef Way. The main sources of emissions will be from road traffic impacts on the surrounding network.

The most recent Cherwell District Council Annual Statues Report includes 2015–2019 monitoring data from the  $NO_2$  diffusion tube network. There has been a general decline in  $NO_2$  concentrations, especially within the Hennef Way AQMA with concentrations reducing from 74.6 to 72.1 µg/m3. However, this is still in exceedance of annual mean objective and indicative of likely exceedances of the 1-hour mean objective.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

There would be the potential for some temporary effects due to dust emissions during the initial construction phases, most particularly for those existing dwellings located close to the western boundary of the Application Site, but such effects would be mitigated through appropriate controls agreed with the LPA and be limited to minor adverse effects

As a worst-case assessment, the 2025 and 2040 future year has been modelled using the future year traffic flow data, and 2022 background and emissions data, to account for current uncertainty in future year predictions.

In this situation, annual mean  $NO_2$  concentration are predicted to not lead to any new exceedances of the

NO<sub>2</sub> objective level and the incremental change due to traffic generated by would not have a significant impact upon current local air quality. With the exception of Hennef Way, the impact due to development is classed as 'Negligible' for all receptors.

For the neighbouring Hennef Way AQMA, annual mean NO<sub>2</sub> concentrations for the 'do-nothing scenario', i.e., without Proposed Development, already exceed the objective level at a number of receptor locations.

Where the ambient concentrations exceed 40  $\mu g/m3$ , the impact due to development is classified as 'Substantial', although this classification is due to the local condition within the AQMA, i.e., baseline concentrations already being above 40  $\mu g/m3$ , rather than any direct impact of development traffic.

The modelled annual mean concentrations of PM<sub>10</sub> are predicted to remain below the objective for all receptor locations and for all scenarios, which would not have a significant impact upon local air quality. The impact significance in accordance with the EPUK/IAQM guidance indicates that for all receptors, PM<sub>10</sub> impact due to development is classed as 'Negligible' at all receptors. With the exception of Hennef Way which is classified as 'Slight'.

#### MITIGATION AND ENHANCEMENT

Mitigation measures have been proposed to minimise the potential effects associated with increased air pollutant concentrations.

#### CONCLUSION

The Proposed Development at the Application Site is acceptable with the mitigation measures identified which would ensure there would be no significant residual effects on air quality, which is considered acceptable in EIA terms.

## **NOISE**

This assessment has been undertaken in order to determine the potential impact on sensitive receptors, with respects to noise and vibration, during the construction and operation phase of the proposed development at J11, M40, Banbury.

#### **BASELINE CONDITIONS**

Baseline sound surveys have been undertaken which have determined the prevailing acoustic environment is dominated by road traffic noise from the strategic road network.

Site notes indicate that noise levels experienced around the Site, including at all identified receptors, are significantly high, this is backed up by relevant measured data.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The assessment demonstrated that noise and vibration during the construction phase was unlikely to have any impact on the nearest sensitive receptors due to the high baseline sound levels and increased distance between the Site and nearby receptors. The significance of the residual effects during the construction phase is determined as 'negligible/ no change'.

The assessment demonstrated that noise during the operation phase was unlikely to have an impact on the nearest sensitive receptors due to the high baseline sound levels and increased distance between the Site and nearby receptors. The significance of the residual effects during the operation phase is determined as 'negligible' no change'.

During all phases of the development that have been assessed (construction and operation), no significant effects have been identified and all are considered to be negligible.

#### MITIGATION AND ENHANCEMENT

As no significant effects have been identified, no mitigation measures are warranted.

#### CONCLUSION

It is considered that due to the significant setback distance between all receptors and the high baseline sound levels that the Application Site is acceptable and there would be no adverse significant residual effects for noise and vibration.

# SOCIO ECONOMICS

The Socio- Economics Chapter has analysed the baseline socio-economic conditions and then subsequently assessing the likely socio-economic effects of the Proposed Development.

#### **BASELINE CONDITIONS**

Cherwell experienced population growth of 6.7% between 2011 and 2020, presenting 9,500 additional people. Relative to the benchmark areas of Oxfordshire Local Enterprise Partnership (LEP), the South East and Great Britain, Cherwell's population grew at a faster rate over this timeframe. Employment growth in Cherwell District over the last five years has been strong, especially when compared to the picture at a LEP, regional and national level. Transport & storage, the sector most likely to see job creation from the Proposed Development, experience strong growth between 2015 and 2020. Cherwell has a net outflow of commuters, while the number of people claiming benefits has started to come down since Covid-19 lockdown restrictions were eased.

# ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The temporary effect associated with the construction phase (in terms of job creation and contribution to economic output) is considered to be significantly beneficial in EIA terms.

The operational effect (permanent jobs, contribution to economic output, business rates revenue and wages of on-site employees) is considered to be significantly beneficial in EIA terms.

#### MITIGATION AND ENHANCEMENT

Due to the beneficial impacts identified in the assessment, no specific additional mitigation measures or enhancements have been identified.

#### CONCLUSION

The Proposed Development would lead to no adverse residual significance effects from a socio-economic perspective. The Proposed Development will result in a moderate to major beneficial effect within the construction and operation period to job creation, gross value added, business rates and wages of receptors and the receiving environment.

## SUMMARY

The aim of this ES has been to assess the 'likely significant effects' of the Proposed Development in accordance with the Town and Country Planning EIA Regulations (2017). Detailed assessments with respect to pertinent environmental topics have therefore been undertaken in accordance with definitive standards and legislation where available. The ES forms part of the planning application documentation submitted to Cherwell District Council and will inform their decision-making process.

The design of the Proposed Development has taken account of the likely significant environmental effects and where necessary, mitigation measures form an integral part of the Proposed Development to ensure that the environment is suitably protected.

The Proposed Development (alone and in-combination with the cumulative sites) is also considered to provide beneficial socio-economic effects and will contribute to the employment needs of the district, providing potentially significant economic benefits.

In conclusion, the ES demonstrates that the design of the Proposed Development and its construction has taken into account the potential environmental effects and where necessary mitigation measures form an integral part of the scheme so to ensure that the environment is suitably protected and any impacts from the Proposed Development are minimised.

It is therefore considered that there are no overriding environmental constraints which would preclude the Proposed Development.

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