



Quod

Environmental Statement: Non-Technical Summary

Land at Junction 10,
M40

September 2021

Q210325



Quod

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1. Introduction

Background

- 1.1 This Non-Technical Summary (NTS) presents a summary of an Environmental Statement (ES) that accompanies three planning applications for redevelopment on land adjacent to Junction 10 of the M40 motorway, collectively referred to as the 'Site'. The Site comprises two parcels of land to the east and west of the A43, referred to as the Eastern Site and the Western Site respectively.
- 1.2 The three planning applications have been submitted to Cherwell District Council (CDC) as the local planning authority by Albion Land (the 'Applicant'). Figure 1.1 overleaf shows the location of the Site and identifies the extent of the three planning applications.
- 1.3 The planning applications are as follows:
- **Development at the Eastern Site ('Eastern Development')** – outline application for development at the Eastern Site up to up to 93,000 square metres (Gross Internal Area (GIA)) of commercial logistics floorspace (Class B8 use) and up to 7,000 sqm (GIA) of associated office space (Use Class Eg(i)), including hard and soft landscaping. Full permission is sought for access off the B4100.
 - **Enabling Works at the Western Site** – Site clearance, construction of new site access from the B4100, permanent and temporary internal roads, an internal roundabout and a foul drainage station, diversion of an existing overhead power cable and public right of way, and soft landscaping.
 - **Development at the Western Site ('Western Development')** – outline application for up to 170,000 sqm (GIA) of commercial logistics floorspace (Class B8 use) and up to 10,000 sqm (GIA) of associated office space (Use Class Eg(i)), including hard and soft landscaping. Full permission is sought for a new roundabout off the B4100, internal access works and necessary drainage works.
- 1.4 Collectively, the Enabling Works, Eastern Development and Western Development proposals are referred to as the 'Development'. A description of the proposed Development is provided in Section 5: Description of the Development. A description of the Site is provided in Section 2.

What is an Environmental Statement?

- 1.5 An ES is a document which reports the findings of an Environmental Impact Assessment (EIA) which is a process required by UK legislation^{1,2,3} for certain development projects which are likely have significant impacts on the environment. The purpose of EIA is to identify any likely significant effects that may arise from the development project and to identify measures to prevent, reduce or offset any adverse effects and enhance beneficial effects ('mitigation measures'). The ES forms part of a suite of other documents submitted with the planning applications for the proposed Development to inform the decision making process. The

purposes of the ES is to ensure that planning decisions are made with full knowledge of the likely significant environmental effects of a proposed development.

1.6 The proposed Development was subject to an EIA which was carried out by a team of competent experts who also prepared the ES. The ES was prepared in line with UK legal requirements (the EIA Regulations¹ (as amended)^{2,3}) and good practice. The ES comprises the following documents:

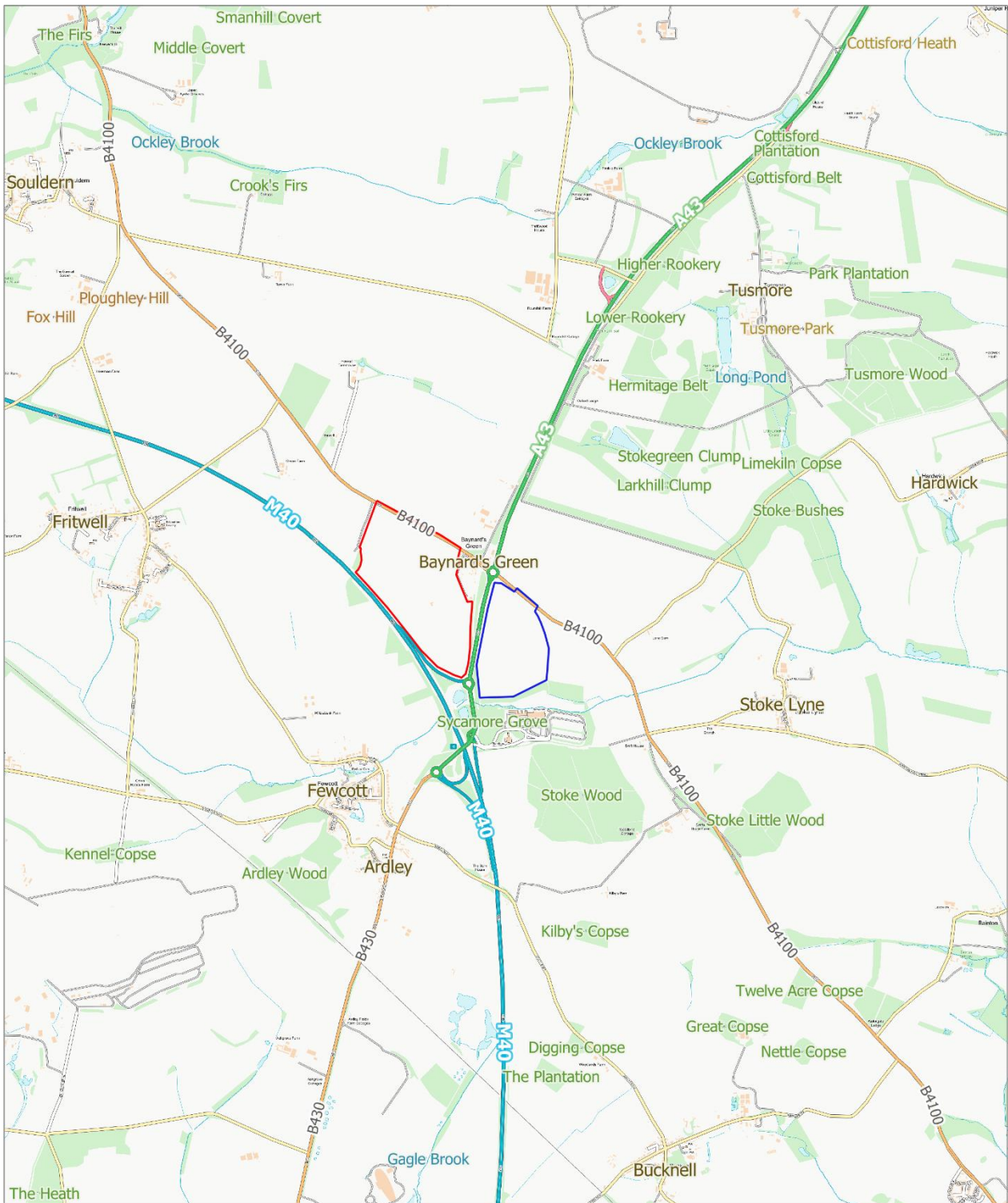
- **ES: Non Technical Summary (NTS)** – This document, which provides a summary of the proposed Development and the findings of the ES in non-technical language
- **ES Volume I: Main Document** – This presents the findings of the EIA and is divided in a number of background and technical chapters supported figures; and
- **Volume II: Appendices** – Technical reports and survey data which provide supporting information on the technical assessments which form part of Volume 1.

Commenting on the Planning Application

1.7 The ES and all other documents relating to the planning applications are available to view online at <https://planningregister.cherwell.gov.uk/>

1.8 Copies of the ES can also be purchased from Quod. Please email reception@quod.com quoting Reference No. Q210325 for further details or contact 020 3597 1000.

Figure 1.1: Site Location Plan



- Western Site boundary and Enabling Works boundary
- Eastern Site boundary

Site Location Plan

0 0.5 1 km

Scale: 1:30,000 @ A4 | September 2021

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2. Site and Setting

Where is the Site?

- 2.1 The Site is in Oxfordshire, within the administrative boundary of CDC. It lies approximately 6.5km north west of Bicester and 1.2km north east of Ardley. The Site comprises two parcels of undeveloped land – the Eastern Site and Western Site (Figures 2.1a and 2.1b respectively). Collectively, the Site extends to approximately 67 hectares (ha).
- 2.2 The Site is in an area dominated by agricultural land, with sparsely located residential and commercial development. Both the Eastern Site and Western Site are currently in agricultural use (arable) and include a small number of old farm buildings, dry ditches and hedgerows.

What does the Site include?

- 2.3 The Western Site extends to circa 43.45ha and is bound by the B4100 (a single carriageway road which runs between Bicester and Banbury) to the north, the A43 (linking the M40 and the M1 at Northampton) to the east, the M40 to the south and agricultural land to the west; this neighbouring field includes an area of hardstanding adjacent to the south west corner of the Site. A small farm building, used for storage, is located in the centre of the Western Site. A small number of residential properties (Baynard House, Baynard Barn, The Cottages and associated outbuildings, and Medkre) are located in close proximity to the north east corner of the Western Site, bound by the A43 and B4100 on other sides. Access to these properties is from the B4100. An overhead power line crosses the Western Site, running a north east – south west trajectory.
- 2.4 The Eastern Site is the smaller of the two parcels and extends to circa 23.18ha. It is bound by the B4100 to the north; agricultural land to the east; a tree belt (designated as Priority Habitat) that acts as a buffer to Cherwell Valley service station complex (comprised of a motorway service area, Travelodge hotel and parking) to the south; and the A43 to the west.
- 2.5 Vehicular access to both the Western Site and Eastern Site is currently gained via the B4100 on the northern Site boundary. The B4100 connects to the A43 at a roundabout adjacent to the north of the Site boundary.

Figure 2.1a: Indicative Planning Application Site Boundary – Eastern Site

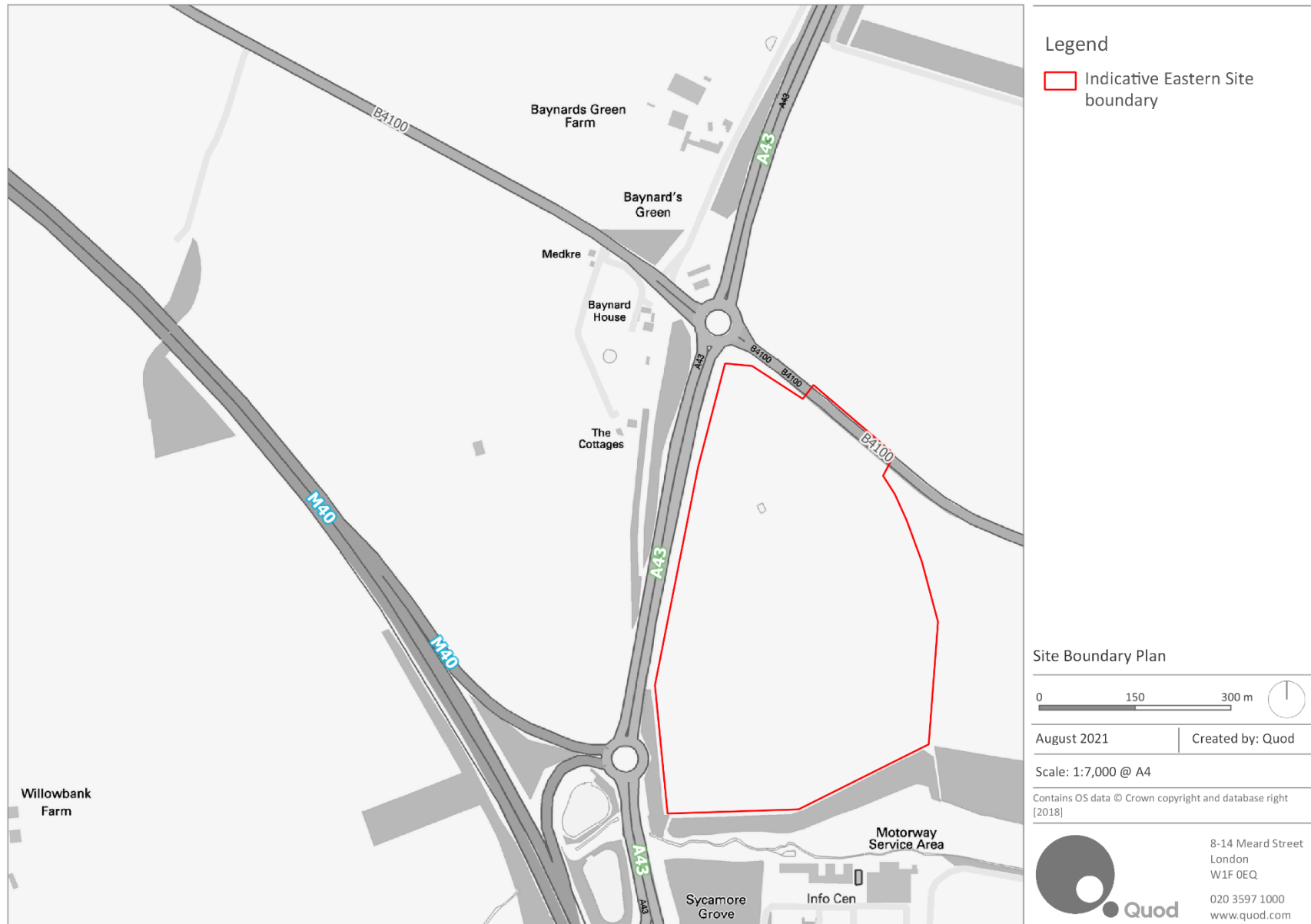
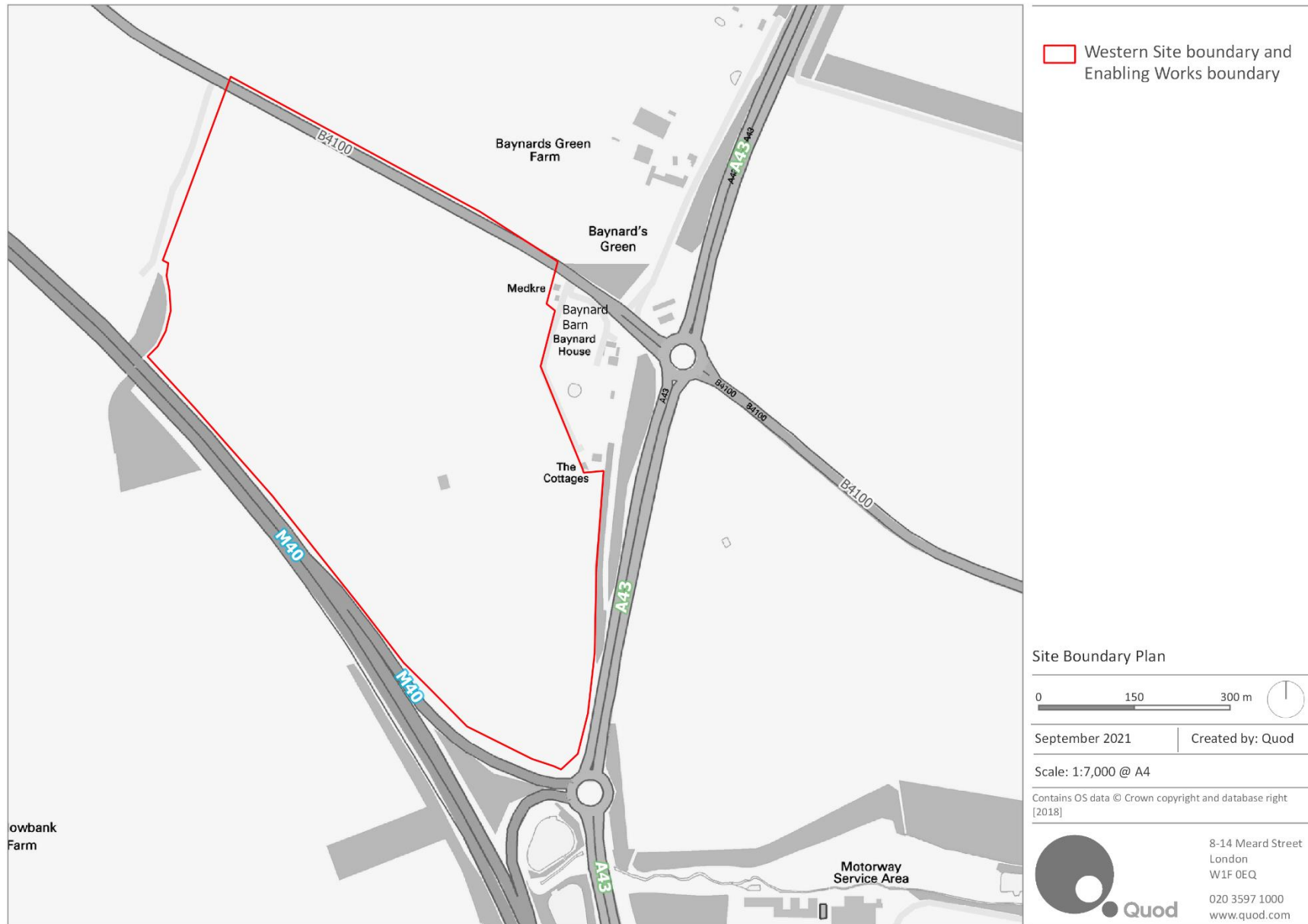


Figure 2.1b: Indicative Planning Application Site Boundary – Western Site (including Enabling Works)



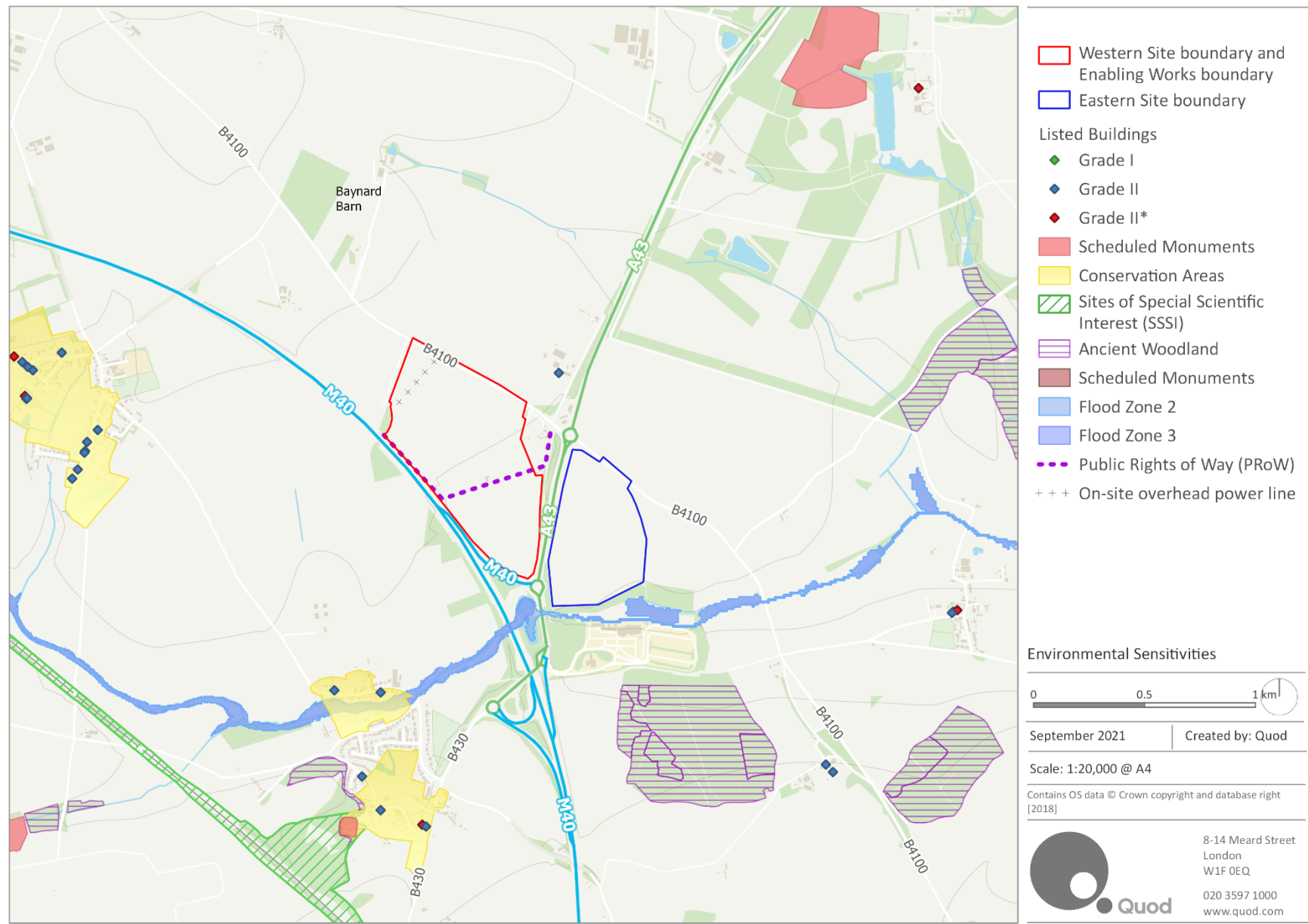
What is the planning context for the Site?

- 2.6 The Site is unallocated in the Cherwell Local Plan 2016 – 2031 (the ‘Local Plan’) and is not subject to any extant or historic planning permissions.

What are the environmental sensitivities?

- 2.7 Figure 2.2 identifies the environmental designations and key features within and close to the Site.
- 2.8 There are no designated heritage features on the Site. The closest listed building is the Grade II listed barn at Baynards Green Farm located approximately 200m north of the Western Site. No other designated heritage features are located within 800m of the Site. Fewcott Conservation Area and Ardley Conservation Area are approximately 800m south west of the Site. Fritwell Conservation Area is approximately 1.2km west of the Site boundary. The Site is not identified as an Area of Archaeological Potential however, there is potential for archaeological remains to be present.
- 2.9 The Site does not include any nature conservation sites. The closest such designated sites are the Ardley Cutting and Quarry Site of Special Scientific Interest (SSSI) and the Ardley Trackways SSSI (designated because of its geological significance) are approximately 1.3km south west and 1.8km south of the Site respectively. Six non-statutory sites are present within 2km of the Site including one Berkshire, Buckinghamshire and Oxfordshire (BBO) Wildlife Trust reserve and five Oxfordshire Local Wildlife Sites (LWS). Stoke Wood LWS is located 0.34km south of the Eastern Site boundary and includes a pocket of ancient woodland and semi natural woodland.
- 2.10 The Western Site boundary is well-vegetated with native hedgerows and interspersed trees. The Eastern Site boundary comprises a native hedgerow field boundary. Hedgerows also cross the Site.
- 2.11 The Site is not located within or in the vicinity of an Air Quality Management Area (AQMA) which is an area where levels of pollutants are above those required by legislation for health reasons. The closest AQMA is in Bicester, approximately 6.5km south east of the Site, which was declared due to nitrogen dioxide levels.
- 2.12 A Public Right of Way (PRoW) traverses the Western Site.
- 2.13 The Site is at low risk of flooding from rivers and very low risk of flooding from surface water, with the exception of a small part of the southern corner of the Western Site which has a medium risk of flooding from surface water.

Figure 2.2: Environmental Designations and Key Features



3. EIA Methodology

- 3.1 Under the EIA Regulations, the Development falls within the type and scale of development that requires an EIA. The Applicant voluntarily undertook an EIA to assess the effects of the Development on the environment.
- 3.2 The EIA considers impacts during the construction and operational phases of the Eastern Development and Western Developments (including Enabling Works) separately and also together (the 'Development'). The construction phase assessments of the Western Development consider impacts associated with the proposed Enabling Works planning application as well as other construction activity. The assessment of the operational Development considers environmental impacts associated with the completed Development in use.

How was the content of the EIA approached?

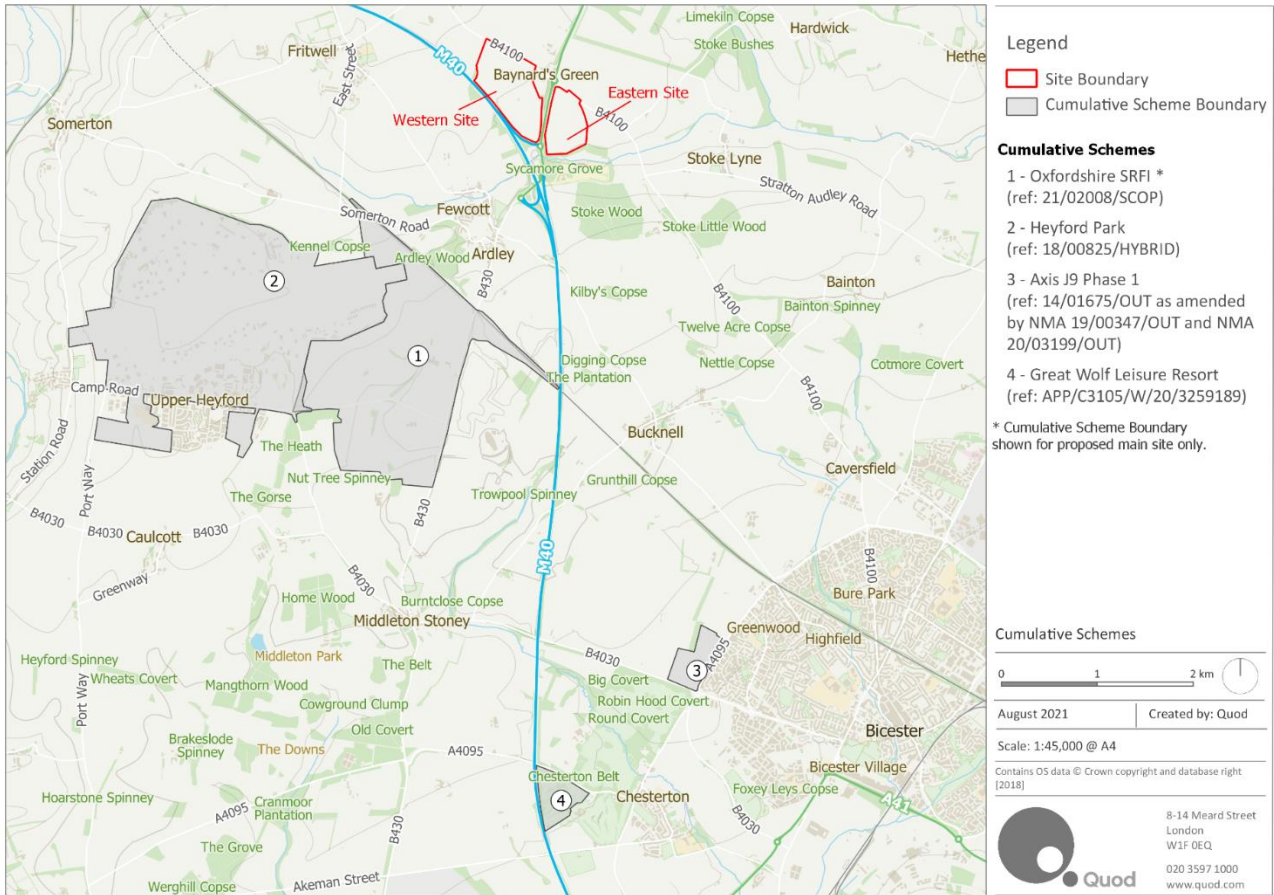
- 3.3 The first stage of the EIA process was to undertake a scoping study to determine the context and extent of the information to be included within the ES. This study was informed by surveys and desk-based studies to understand the existing environmental conditions within the Site and the surrounding area (the 'baseline conditions').
- 3.4 The Applicant requested an EIA scoping opinion from CDC in June 2021. An EIA scoping opinion is the relevant planning authority's view on the content and extent of matters which should be covered in the ES. The scoping opinion request was accompanied by an EIA Scoping Report which identified the proposed topics and approach to the assessments during the EIA process. The Scoping Report also included justification for 'scoping out' certain topics from the EIA, where the Development would have either no influence on these environmental aspects or it is unlikely to result in significant effects.
- 3.5 CDC provided a Scoping Opinion in July 2021 which broadly agreed with the proposed scope of the EIA as set out by the EIA Scoping Report. In addition, CDC requested that assessments of Built Heritage and Water, Flood Risk and Drainage were included within the ES. Assessments of the following topics are therefore included within the ES:
- Socio Economics;
 - Transport and Access;
 - Air Quality;
 - Noise and Vibration;
 - Cultural Heritage (archaeology and built heritage);
 - Ecology and Biodiversity;
 - Landscape and Visual Impacts;
 - Climate Change and Greenhouse Gases; and
 - Water, Flood Risk and Drainage.

- 3.6 Agriculture and Soils, Land Contamination, Wind Microclimate, Daylight, Sunlight and Overshadowing, Lighting, Waste and Accidents and Disasters were scoped out of the ES.

How were significant effects identified?

- 3.7 For each of the topics scoped in above, the ES provides a description of the current environmental conditions (the 'baseline'), as well as a description of how the environment may change in the future without the Development (the 'future baseline'). Each assessment identifies receptors which could be sensitive to impacts of the Development such as local residents, designated sites, habitats and species, communities, road users and the local economy.
- 3.8 The ES predicts the environmental effects of construction activities and once the Development is complete and operational for each application individually (i.e. the Enabling Works, Eastern Development and Western Development) and for the Development as a whole. Subject to securing planning permission, construction of the developments is expected to take around three years with completion assumed in 2025 (see Section 6 for more details), and these years were taken as the assessment scenarios for the EIA.
- 3.9 Environmental effects were identified and evaluated using a variety of methods, including computer modelling and calculations. Effects were then assessed as being significant or not significant. The significance of effects was determined using best practice and published standards and typically reflect the relationship between the scale of change taking place compared to the baseline (magnitude of the impact) and the sensitivity or value of the resource or receptor being affected. The nature of effects is expressed as being either adverse (negative), negligible or beneficial (positive). Each assessment attaches a level of 'significance' to the effects that were identified, i.e. either major, moderate, minor or negligible. Effects considered of a 'moderate' significance or greater are deemed as 'significant' effects.
- 3.10 The assessment of environmental impacts are based on likely worst-case assumptions. The ES is based on parameters which have been fixed for the outline planning applications which set a framework for the detailed design of the Development. These parameters (defined by the Parameter Plans and the Development Specifications) allow some flexibility as to how the detailed design of the Development will come forward whilst ensuring that the EIA is robust and compliant with the EIA Regulations.
- 3.11 The EIA was undertaken in parallel with the design process and, environmental specialists and the project team worked together to avoid, reduce or offset where possible, adverse environmental effects. These measures were built into the Development where possible. Where adverse effects are identified, additional measures ('mitigation measures') are proposed by the Applicant to reduce the significance of the effect where possible. 'Residual effects' are those that remain after additional mitigation measures have been implemented.
- 3.12 The assessments also consider 'cumulative' effects which are those that can arise from individual effects of the Development interacting, such as traffic and air quality on the same receptor (intra-project effects). The ES also considers cumulative effects which could result from the Development in combination with other development schemes in the vicinity of the Site (inter-project effects). Figure 3.1 shows the other schemes considered by the ES. Due to the lack of information on the Oxfordshire Strategic Rail Freight Interchange (SRFI) to enable assessment, only qualitative commentary is provided.

Figure 3.1: Cumulative Schemes



4. Alternatives

Introduction

- 4.1 This section provides a summary of the reasonable alternatives to the Development that were considered by the Applicant.

The Site does is not allocated for development in the Local Plan. The proposals will therefore be considered with regard to relevant planning policy (Policy SLE 1: Employment Development) that directs new employment development to existing employment sites and main urban settlements unless exceptional circumstances are demonstrated. Development has already commenced or completed at most of the strategic employment sites allocated in the Local Plan and there are no other suitable sites within the urban areas that are capable of accommodating the Development. The Site also benefits from a location with excellent access to the highway network which this scale and type of development requires. As such, no alternative sites have been identified by the Applicant as being reasonable alternatives.

What if no development where to come forward on the Site?

- 4.2 The “do nothing” scenario of no development would result in the Site remaining in its existing use, primarily being managed to produce crops.
- 4.3 In the absence of development, adverse environmental effects related to construction would not occur, for example some habitat loss and biodiversity impacts, construction traffic, air quality, dust, noise and landscape and visual effects. However, these effects have been found by the EIA process to be not significant. Adverse environmental effects associated with the completed Development would also not occur, including landscape and visual, transport, noise and vibration, biodiversity and air quality impacts.
- 4.4 The ES identifies that the proposed Development would result in significant socio-economic benefits with the creation of between 2,840 to 3,840 jobs. These jobs are likely to benefit the local / regional area. If the Development does not come forward in this location, it is likely that these jobs would be displaced to a location outwith Cherwell District along the M40 corridor.

What alternative designs have been considered and how have they been informed by environmental considerations?

- 4.5 The project has evolved over several iterations since early 2021 through consultation with potential end users, CDC and Oxfordshire County Council (OCC) during pre-application discussions. Environmental baseline studies and initial assessments were used to inform the Parameter Plans on matters including access, drainage, noise, landscape and biodiversity.
- 4.6 The main alternatives to the submitted scheme were as follows:
- **April 2021 Concept Scheme** - based on four warehouse units being across the Site. An initial suite of Parameter Plans were developed for land use (Development Zones and No Build Zones), building heights, vegetation removal and retention, and site access across the Site;

- **July 2021 Scheme** – the ‘Development Zones’ of the April 2021 Scheme were reduced in scale and refined to allow greater habitat retention and landscape buffer along the Site boundary within the No Build Zone. The Development Zones were also further refined by being split into a ‘Build Zone’ (where construction of the warehouse units) could be located and ‘Hard Landscaping Zone’ (areas of internal access, car parking and servicing). This demonstrated ecological and landscape & visual benefits; and
- **September 2021 (Preferred Scheme)** - the proposals were amended to fit the operational requirements of the potential occupiers, whilst also considering the environmental capacities of the Site and surrounding area. As a result, the number of Build Zones were increased from 4 to 5, but the amount of floorspace was reduced from 11,712m² to 265,54m²). This was to accommodate a landscape buffer around the Site boundary and a central landscape corridor for the diverted PRow. These were represented on the Parameter Plans by the replacement of a No Build Zone with a two defined landscaping zones – the Existing and Enhanced Areas of Landscaping Zone and the Soft Landscaping Zone. Noise mitigation measures were also incorporated to reduce the potential noise impacts on the properties adjacent to the Western Site; these included acoustic screening within the Western Site and proposals for an off-site acoustic barrier on the southern side of the B4100 between the Western Site access and the A43 roundabout. The site accesses were also shifted away from the A43 roundabout to optimise traffic flows.

5. Description of the Development

What would the Development deliver?

Enabling Works (Western Site)

- 5.1 The Applicant is seeking full planning permission for Enabling Works to facilitate development at the Western Site. These would comprise the following:
- Clearance of existing vegetation and structures and new landscape planting;
 - Construction of a new access roundabout on the B4100, internal roundabout, roadway, bus layby and footpaths;
 - Diversion of the existing PRow within the Western Site;
 - Construction of a foul drainage station and swales for surface water drainage; and
 - Utility connections and diversion of an overhead electricity cable.
- 5.2 The Enabling Works do not involve earthworks associated with the creation of development platforms.

Eastern Development and Western Development

- 5.3 Outline planning applications are submitted for both the Western Site and Eastern Site with full details of access to each provided. All other matters, such as the appearance of buildings and landscaping, would be reserved for future planning approval.
- 5.4 In total, the Development will provide up to 265,542 square metres (sqm) Gross Internal Area (GIA) of warehouse floorspace (Use Class B8). This would be provided as follows:
- Eastern Development - up to 167,747 sqm GIA for logistics use (Use Class B8) and ancillary office (Use Class E(g)(i)) floorspace.
 - Western Development – up to 97,795 sqm GIA for logistics use (Use Class B8) and ancillary office (Use Class E(g)(i)) floorspace.
- 5.5 The new buildings would be occupied by warehouse and logistics businesses, and it is assumed that they would operate 24 hours/7 days a week. Figures 5.1 and 5.2 show the Parameter Plans for both Development sites. Figure 5.3 provides an illustrative indication scale and massing of the Development.

Figure 5.1: Land Use: Eastern Development

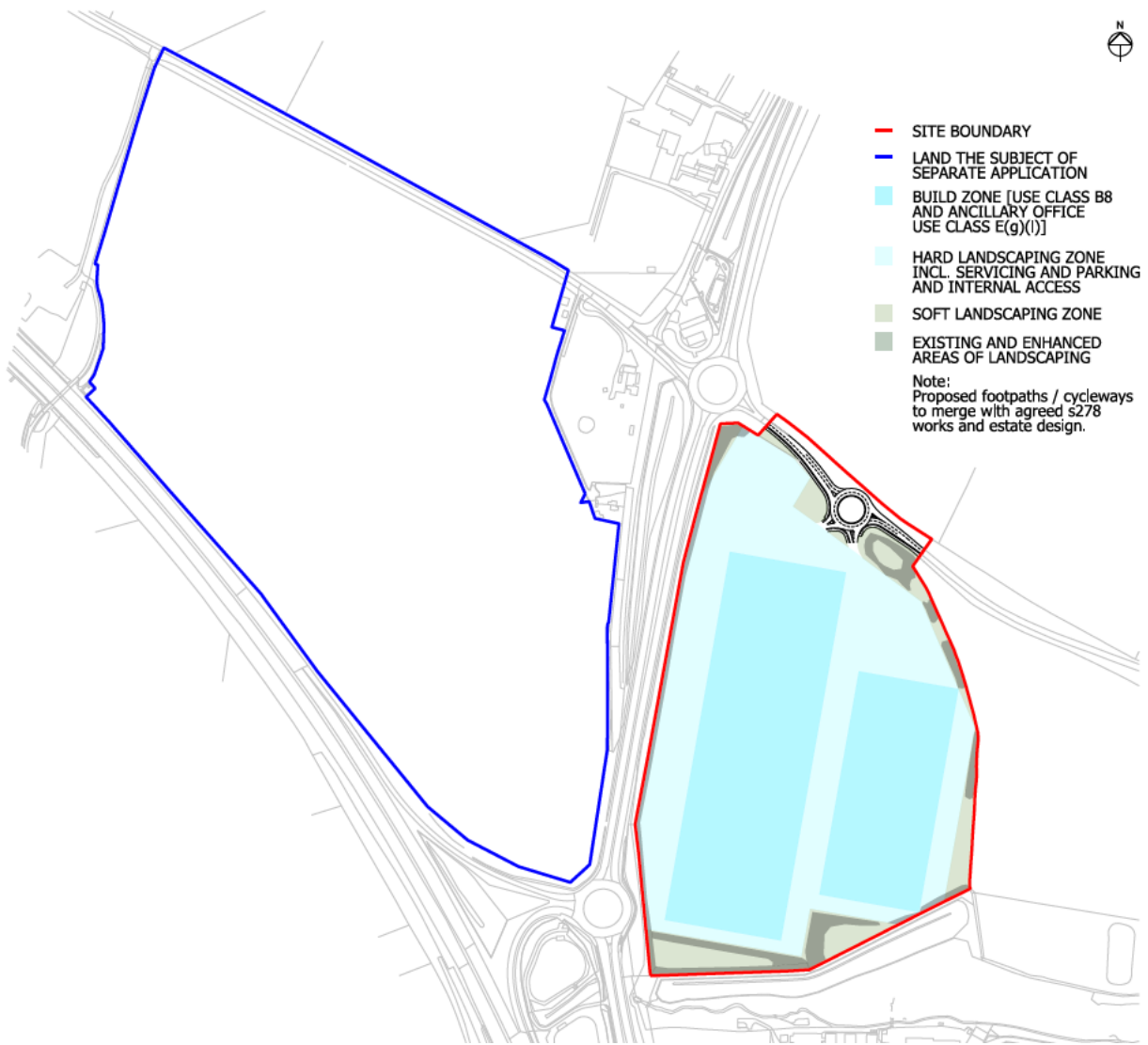


Figure 5.2: Land Use: Western Development

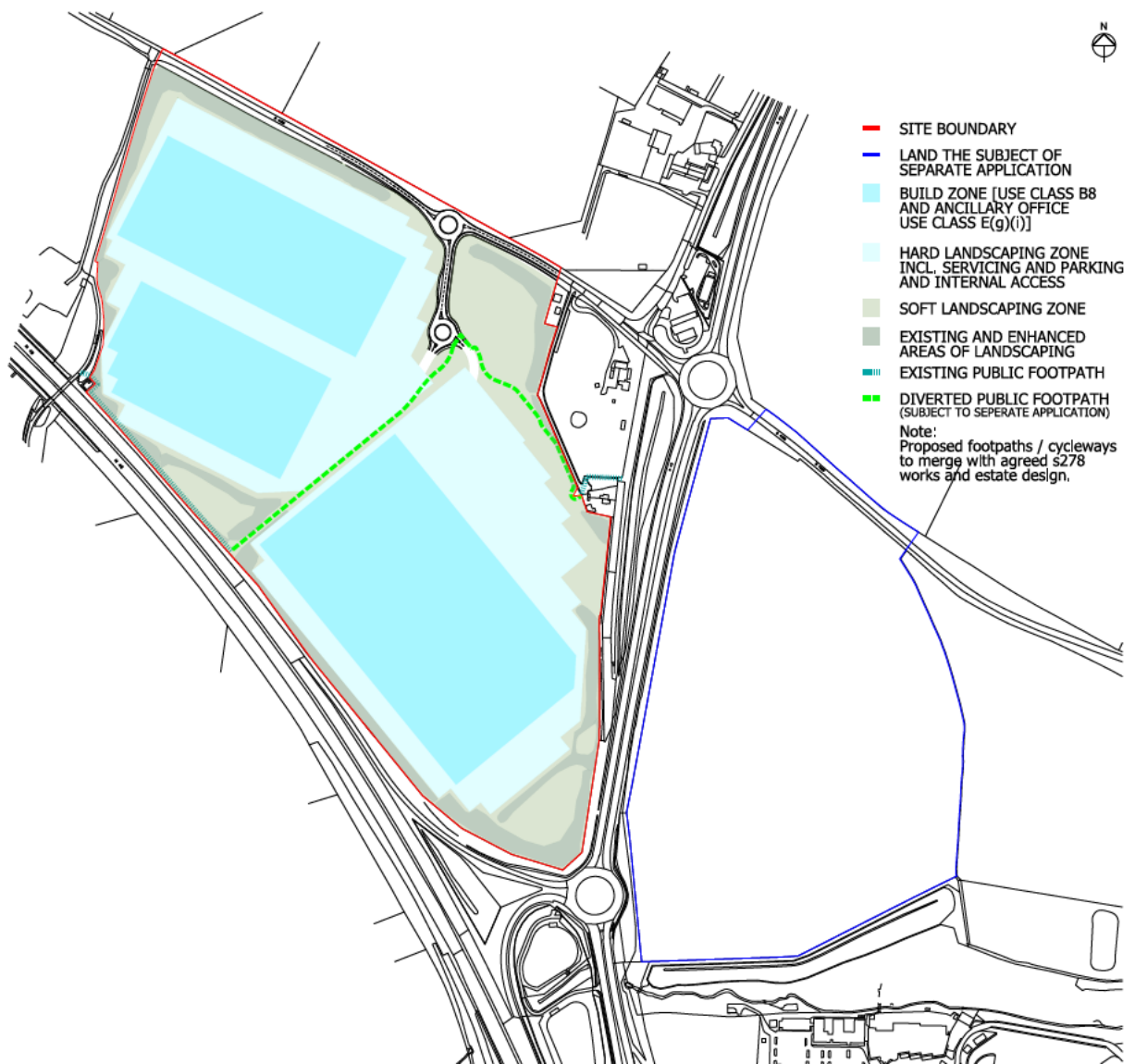


Figure 5.3: Illustrative Images of the Development



Development Zones and Building Heights

5.6 The Development will be carried out within four primary zones across Site, as follows:

- Build Zone – area designated for construction of commercial units (B8 Use);
- Hard Landscaping Zone – area designated for internal Site access, substations, parking, loading, servicing and ancillary uses;
- Soft Landscaping Zone – area designated for soft landscaping, including green infrastructure, sustainable drainage systems (SuDS), structural and soft planting and open space; and
- Existing and Enhanced Areas of Landscape Zone – area designated for retention and strengthening of existing vegetation.

5.7 Two Build Zones are defined for the Eastern Development, with Hard Landscaping Zones surrounding these areas and encompassing the majority of the Eastern Development. Existing and Enhanced Areas of Vegetation are located along the Eastern Site boundaries, with Soft Landscaping Zones comprising the remainder of the development area.

- 5.8 Three Build Zones are defined for the Western Development, with Hard Landscaping Zones surrounding these areas. Existing and Enhanced Areas of Vegetation are located along the Western Site boundaries, with Soft Landscaping Zones comprising the remainder of the development area.
- 5.9 The Building Heights Parameter Plan sets a maximum building height of 23.00m from the foundation slab across the Development.

What landscaping and improvements for wildlife are proposed?

- 5.10 A variety of soft landscaping will be provided within the Site in the Soft Landscaping and Existing and Enhanced Areas of Landscape Zones. Local species will be used as far as possible. New native tree and shrub planting will help establish and enhance green corridors within and outside of the Site (particularly taking into account the Site's surrounding agricultural habitats); improve and enhance biodiversity; and screen the proposed built form, for example visual and acoustic landscape screening will be provided along the north-eastern boundary of the Western and Eastern Sites to nearby properties.
- 5.11 Hedgerows within the Site will be retained where possible. Within the Eastern Development, three sections of hedgerow would be removed to facilitate the Development. Other hedgerows on the boundaries of the Eastern Site would be retained and enhanced through planting. Six sections of hedgerow would be removed for the Western Development. Existing hedgerows on the northern and eastern Western Site boundary would be retained and enhanced. Existing vegetation on the north eastern and southern Western Site boundaries would also be strengthened through planting.
- 5.12 Alongside these ecology and landscape design measures, an enhancement programme is proposed of a circa 20 hectare off-site compensation plot owned by the Applicant in Piddington to the south east of the Site. This will contribute towards a positive Biodiversity Net Gain (BNG) target for the Development.

What access and parking provision is made?

- 5.13 The Site benefits from a strategic location in close proximity to Junction 10 of the M40 motorway, via the A43. The Eastern Development will be accessed from the B4100 from a new roundabout east of the Baynards Green roundabout which will connect to internal roads. A new roundabout will also be constructed for the Western Development on the B4100, west of the Baynards Green roundabout.
- 5.14 Levels of car parking will be dependent on the exact nature of the end users of the Site but will be in-line with OCC policy. 10% active and 15% passive electric vehicle (EV) provision is provided in accordance with OCC policy. The Illustrative Masterplan for the Development makes provision for 1,354 car parking spaces, of which 5% will be blue badge spaces. Cycle parking would also be provided in line with CDC policy.
- 5.15 As part of the Enabling Works on the Western Site, a Public Right of Way that extends on a south westerly trajectory across the Western Site will be diverted through the central landscape corridor.

How will flood risk and drainage be managed on the Site?

- 5.16 The Development is designed to operate safely and without increasing flood risk elsewhere. The surface water drainage strategy includes sustainable drainage systems which would manage surface water runoff, including swales and infiltration basins. New tree planting and soft landscaping on Site will also help soak up surface water.

How will the Development address climate change and sustainability?

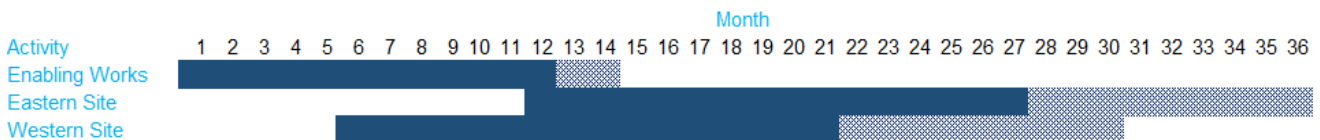
- 5.17 The Development will meet BREEAM 'Very Good' standards, with aspirations to meet 'Excellent' standard. Measures to minimise energy consumption would include the potential use of pre-fabricated materials, photovoltaic solar energy panels, energy efficient lighting, installation of heat pumps, water efficient fixtures, and provision of electric vehicle charging points. Travel Plans will also be in place to encourage sustainable travel measures to/from the operational Development. Energy and Sustainability Statements have been prepared for the Development alongside the planning applications.
- 5.18 The Development will include measures aimed at adapting to potential climate change effects including soft landscaping and sustainable drainage design to enhance biodiversity and tackle risks from storm water.
- 5.19 Waste and recycling storage for the Development will be designed to adhere to the principles of the CDC Planning and Waste Management Design Guide⁴. Adequate waste storage provision will be made for future occupiers with waste and recycling areas.

6. Construction

How long will construction of the Development take?

- 6.1 Construction of both Sites is anticipated to take approximately 3 years, including the Enabling Works. Following completion of Enabling Works, it is proposed that construction will begin on the Western Site and then commence on the Eastern Site. An indicative construction programme is provided in Figure 6.1.

Figure 6.1: Indicative Construction Programmeⁱ



- 6.2 The prescribed hours of work would be agreed with CDC. It is anticipated that the core working hours for the Development will be as follows: 07:00 – 18:00 hours weekdays; 07:00 – 13:00 hours Saturday; and No working on Sundays or Bank Holidays. Approval from CDC will be required for works that need to be undertaken outside of these hours.

What works will be carried out during the construction phase?

Enabling Works

- 6.3 The Enabling Works will be completed before construction of the main Development commences. Starting in early 2022, the Enabling Works are expecting to take approximately 9 months to complete.

Western Development

- 6.4 Development of the Western Site will commence following completion of the Enabling Works. A period of circa 16 months is expected for construction of the proposed warehouse units with completion in early 2025, subject to the grant of detailed planning consents.

Eastern Development

- 6.5 Development of the Eastern Site is expected to commence after the Western Site, potentially in mid-2023. Construction works are expected to last circa 17 months with completion in late 2025, subject to the grant of detailed planning consents.
- 6.6 Overall, construction works would likely include ground / drainage / utilities works, followed by the erection of hoarding or safety fencing around the boundary of construction areas, with fencing to protect sensitive features (e.g. vegetation to be retained, heritage assets, watercourse buffers). General civil engineering groundwork activities would follow to achieve the required Site levels. Construction of the units would then include external structure and

ⁱ The solid blocks indicative expected core programme; hatched blocks indicate provisional contingency should works take a longer duration than expected.

fabric, cladding and fit out. Drainage works and construction of internal roads would be integrated and works related to landscaping and open space would occur in parallel to works on the Units.

- 6.7 Occupiers of neighbouring properties will be informed in advance of works taking place. Site boards outlining information on the scheme and forthcoming works will be erected at the entrance to the Site. Site contact numbers will be displayed as appropriate, along with a complaint procedure.

What environmental management and mitigation measures will be in place?

- 6.8 Environmental effects associated with construction of the would be minimised and controlled through Construction Environmental Management Plans (CEMPs) which will be agreed with CDC prior to works taking place. These will set out the strategy, standards, control measures and monitoring procedures that will be implemented to manage and mitigate any adverse environmental effects of the construction process in accordance with industry standards, good practice and guidance. CEMPs will be in place at both the Eastern and Western Developments during enabling and construction activities.
- 6.9 The principal contractor(s) will be registered with the 'Considerate Constructors Scheme' (CCS)⁵ ensuring contractors carry out their operations in a safe and considerate manner with due regard to passing pedestrians, road users and surrounding properties.

How will material be managed and reused?

- 6.10 Waste produced during all construction activities on-site will be subject to relevant legislation and it will be the responsibility of the Principal Contractor to ensure that waste produced on-site is disposed of in accordance with legislation. Where possible, excavated materials (e.g. soil and hard core) would be placed in stockpiles for reuse on the Site, such as for landscaping purposes.

What measures will be in place to manage construction traffic?

- 6.11 A Construction Transport Management Plan (CTMP) will be incorporated into the CEMPs. These will be prepared to minimise traffic related disruption associated with the construction works and would be agreed with the relevant highway authorities. The CTMPs will include agreed routes and access arrangements for Heavy Goods Vehicle (HGVs) and would seek to minimise disruption to local residents through careful planning of works. No permanent road closures are anticipated for the main construction activities although construction of the roundabouts on the B4100 would require some temporary traffic lights.

7. Socio Economics

Introduction

- 7.1 The ES chapter provides an assessment of the likely effect of the Development on the baseline economic and social conditions with the local and wider area. The key areas of potential impact that been considered as part of this assessment include the creation of new jobs during construction and once the Development is complete.
- 7.2 The Site is in Fringford and Heyford ward within the district of Cherwell and comprises two parcels of agricultural land adjacent to the M40 (the Eastern Site and Western Site). Levels of unemployment are low in the local area surrounding the Site, compared to the averages for Cherwell district and Oxfordshire. Nearby Bicester and Cherwell as a whole have low levels of deprivation and a low unemployment rate compared to the average in the region.

What are the potential effects during Enabling Works and construction?

- 7.3 It is estimated that the construction of the Development will generate an average of 385 Full Time Equivalent (FTE) jobs (1,185 person years' worth of labour). The Enabling Works are estimated to require 30 person years' worth of labour, the Eastern Development is estimated to require 415 person years' worth of labour and the Western Development 740 person's years' worth of labour. This is considered a negligible effect at the Regional level, for the Enabling Works, respective two Sites, and the Development as a whole.

What are the potential effects of the completed Development?

- 7.4 The new warehousing floorspace which could accommodate 2,830 – 3,840 FTE jobs comprising:
- 1,050 – 1,420 FTE jobs within the Eastern Development; and,
 - 1,790 – 2,420 FTE jobs within the Western Development.
- 7.5 Assuming a worst-case (the lower end of the employment range associated with the proposed floorspace and land uses), the Development would have a moderate beneficial effect at the local and district levels. The Development would also generate economic benefits for the local economy through indirect spending by employees, although this is not expected to be significant.

What would be the cumulative effects with other developments?

- 7.6 The four identified cumulative schemes are expected to generate 9,500 to 13,000 FTE jobs. Considered alongside the Development as a whole, and in isolation, the creation of these jobs are expected to have a major beneficial at the local and district levels and minor beneficial at the Regional level.
- 7.7 Overall, cumulative socio-economic effects are expected to be negligible to major beneficial.

8. Transport and Access

Introduction

- 8.1 The ES includes a study of the effects of the proposed Development on traffic flows and traffic conditions on the highway network. In particular, the assessment considers the effects of the change in traffic levels on drivers in terms of delay and on pedestrians and cyclists in terms of amenity and fear assessed. The assessment considers the transport effects associated with the proposed Development together with those from identified consented development schemes in the local area, as agreed with CDC. The ES is accompanied by a Transport Assessment (TA) report and a Framework Travel Plan (FTP).
- 8.2 Highway and access conditions surrounding the Site were assessed for the baseline year of 2021, the busiest construction year (2024) and 2025 (the expected year of opening). Junction capacity assessments were also carried out for the Site accesses in 2031. The assessment was informed by baseline traffic surveys at the A43/B4100 roundabout and on the B4100 in June and July 2021 as well as historic modelled data from OCC on the B4100/A4095 junction.
- 8.3 Industry standard databases (TEMPRO and National Transport Model) were used to determine growth factors which were applied to forecast future baseline year traffic for the modelling area. An Industry standard database (TRICS) was also used to obtain appropriate and representative trip rates which were applied to the Development floor area. This allowed the level of trip generation for the Development to be forecast.
- 8.4 The Site is located approximately 6.5km north west of Bicester. The Western Site and Eastern Sites are located adjacent to the A43 and the B4100. Junction 10 of the M40 is in close proximity to both the Western Site and the Eastern Site. The majority of roads assessed experience accident rates which are equal or lower than typical accident rates. A PRoW traverses the Western Site.
- 8.5 The A43/B4100 roundabout junction is in need of improvement to address existing congestion concerns and the A43/B4100 roundabout is the subject of a funded scheme to be delivered by National Highways (due for completion in 2024 and referred to as a 'Growth Fund Scheme'). Concept drawings of this Growth Fund Scheme have been used to inform the Eastern Development site access designs, however the assessment of the Growth Fund design is dependent on a more definitive design being made available and use of an OCC/National Highways traffic model. Given the uncertainty on its delivery at present, an interim highway improvement scheme has been developed by the Applicant's team to allow the proposed Development to come forward regardless of the Growth Fund Scheme. The effects of the Development in terms of capacity and safety have been assessed before and after these improvements are implemented. Further traffic modelling will be carried out at a later date that to assess the Growth Fund Scheme and the operation of M40 Junction 10 in more detail.

What are the potential effects during Enabling Works and construction?

- 8.6 Construction HGV traffic will approach and leave the Site via the strategic road network, using the B4100 and A43. Construction traffic during the busiest periods of construction is predicted to result in a small change in traffic flows on the surrounding roads.

- 8.7 Construction staffing and HGV traffic would fluctuate through the construction phase, however at peak it is estimated that there would be approximately 160 construction personnel present on the Development, of whom 75% are estimated to drive to the Site. There are therefore likely to be in the order of 100-120 vehicles parked on the Site at any one time. For HGVs, it is considered that an average daily peak could total 80 two-way movements which creates a 0.0008% increase in HGV movements on the A43.
- 8.8 The Principal Contractor(s) will be required to implement measures to manage construction phase traffic through Construction Management Plans (CTMP) which would be secured by planning condition. These will control matters such as HGV delivery scheduling to avoid peak times, routing agreements and matters such as wheel-washing.
- 8.9 With these good practice measures in place and given that the predicted peak levels of construction traffic movements represent a very small percentage of typical hourly flows surrounding the Site, the construction traffic effects of the Development would be negligible.

What are the potential effects of the completed Development?

- 8.10 Using industry standard databases for trip generation, the completed Development could generate in the order of 7,487 daily vehicle trips (Eastern Development – 2,674 trips; Western Development - 4,813 trips).
- 8.11 Both the Eastern and Western Developments will be served by new roundabout junctions on the B4100, both designed fully in accordance with relevant technical standards. The designs have been subject to independent road safety audits and found to be safe and require lighting.
- 8.12 Car and cycle parking will be provided in accordance with OCC standards. Electric vehicle charging will comprise 10% active spaces and 15% passive spaces, leading to over 350 charging points representing a major commitment to more sustainable travel. The Development will also deliver the following transport mitigation package:
- Off carriageway pedestrian/cyclist link adjacent to the B4100 connecting the Development to Bicester;
 - Commitment to fund a regular scheduled bus service linking the Development to key locations within Bicester;
 - Convenient diversion of the PRow route through the Western Development;
 - Commitment to deliver a pedestrian/cyclist crossing of the A43 carriageway. The design of this would be subject to change depending upon the final design of the Growth Fund Scheme;
 - A pedestrian refuge crossing of the B4100 to the west of A43/B4100 roundabouts;
 - Interim highway improvement scheme to the A43/B4100 roundabout pending development of the Growth Fund Scheme.
- 8.13 The Eastern Development would lead to significant increases in HGV movements on the B4100 between the A43 and the proposed Eastern Development access, however this is only due to the very low current number of HGVs that use this route. No significant impacts on other road links have been identified. Notwithstanding, in the absence of the Growth Fund scheme but the interim improvement scheme in place, there would be moderate adverse effects on driver delay and minor adverse effects on accidents and safety, with negligible effects on

severance and minor beneficial effects on pedestrian delay and amenity. Following implementation of the Growth Fund scheme, the significance of adverse effects of the Eastern Development is likely to reduce.

- 8.14 The Western Development would also lead to significant increases in HGV movements on the B4100 between the A43 and the proposed Western Development access, however this is only due to the very low current number of HGVs that use this route. No significant impacts on other road links have been identified. Notwithstanding, in the absence of the Growth Fund scheme but with the interim improvement scheme in place, there would be moderate adverse effects on driver delay and minor adverse effects on accidents & safety and severance, with minor adverse effects on pedestrian delay and amenity. Following implementation of the Growth Fund scheme, the significance of the adverse effects of the Western Development is likely to reduce.
- 8.15 The Development will be supported by a Travel Plan with the objective of reducing the reliance on the private car to make journeys to work. A Framework Travel Plan is provided as part of the ES.
- 8.16 Following the implementation of mitigation measures and the interim mitigation scheme for the B4100/A43 roundabout and/or Growth Fund Scheme, the only significant residual effects identified for the completed Development are in relation to moderate adverse effects on driver delay. This is being further discussed with OCC/National Highways, including in relation to the provision of more detail and data from these parties in respect of the performance of the Growth Fund Scheme. This may lead to the further provision of mitigation if the assessment of the data provided suggests this is required.

What would be the cumulative effects with other developments?

- 8.17 There is potential for overlap of the construction phase of the Development with construction work occurring on other cumulative schemes. Should this occur, it is expected that mitigation within each separate consent will ensure significant cumulative effects do not arise. In line with measures defined by the CEMP, the Principal Contractor would liaise with nearby operators and other development sites, to avoid conflicts as far as possible and ensure that safe walking and cycling routes are maintained throughout construction.
- 8.18 The cumulative traffic impacts of the completed Development have been inherently assessed within the traffic modelling. Other committed developments have been assessed as part of the TEMPRO growth factors. No significant cumulative effects have been identified. Should the Oxfordshire SRFI come forward it would be supported by further major highway mitigation over and above anything identified in this assessment.

9. Air Quality

Introduction

- 9.1 The air quality impacts associated with construction and operation of the Eastern and Western Developments, and the Development as a whole, have been assessed. Consideration was given to the potential impacts arising from dust and particulate matter during the Enabling Works and construction phase, as well as exhaust emissions arising from construction and operational traffic and on-site machinery.
- 9.2 Baseline air quality conditions were determined based on CDC monitoring data and other publicly available data. The results showed that existing nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) concentrations are below the air quality objectives across the area. The closest Air Quality Management Area (AQMA) to the Site is located in Bicester town centre.

What are the potential effects during Enabling Works and construction?

- 9.3 An assessment of the impacts of construction dust and particulate matter was carried out using industry standard methods. The assessment identified that the Eastern Development will present a 'low' risk of dust impacts, whereas the Western Development was determined to present a 'medium' risk of dust impacts. The Development as a whole was determined to present a 'medium' risk of dust impacts.
- 9.4 Once proposed construction site mitigation measures are implemented and maintained, as set out by the CEMPs, effects on air quality are not predicted to be significant.

What are the potential effects of the completed Development?

- 9.5 An assessment of the impacts of emissions arising from operational traffic on the local road network was carried out using dispersion modelling for the year 2025. This identified that additional operational road traffic arising from the Development will increase pollutant concentrations at nearby sensitive receptors (i.e. residential properties) located adjacent to the local road network.
- 9.6 An assessment of the Eastern Development showed that the potential effects would be negligible at all nearby sensitive receptors for all pollutants.
- 9.7 An assessment of the Western Development showed that the impacts on NO₂ concentrations would be negligible at all receptors, with the exception of one residential property (Medkre, adjacent to the Site) where there would be a minor adverse effect (not significant). The impacts on concentrations of particulate matter would be negligible at all receptors.
- 9.8 For the Development as a whole, the impacts on NO₂ concentrations would be negligible at all but two receptors (Medkre and Baynards House, adjacent to the Site), where there would be a minor adverse effect. The impacts on particulate matter concentrations would be negligible at all receptors.

- 9.9 In all cases, concentrations of pollutants will remain well below the air quality objectives, and the overall effect would be not significant.
- 9.10 The M40 and B430 pass a small section of the Ardley Cutting and Quarry SSSI via a road bridge which is elevated over both the SSSI and the Chiltern Main Line railway. The contribution of NO₂ emissions associated with road traffic from the Development on the M40 and the B430 may lead to a significant adverse effect on Ardley Cutting and Quarry SSSI. However, given that the contribution of NO₂ emissions associated with the Development are small (a maximum change of 2.2% on the B430) and the roads intersect on a very small area of the SSSI (most of which is at height on the bridge over the railway), it is considered the effect of the Development on the Ardley Cutting and Quarry SSSI would not be significant. Notwithstanding, further assessment would be undertaken once OCC/National Highways traffic modelling data is available.

What would be the cumulative effects with other developments?

- 9.11 The assessment demonstrated that cumulative effects on air quality would not be significant. Should there be an overlap in construction phases, it is expected that mitigation within each separate consent will ensure significant cumulative effects do not arise.
- 9.12 Changes in air quality from road traffic emissions are localised to the Development and not expected to lead to significant cumulative effects on the wider road network, although there is potential for significant cumulative effects on the Ardley Cutting and Quarry SSSI. Traffic modelling for the completed Development inherently includes the cumulative schemes where planning applications have been submitted (and hence traffic information is available). For the SRFI, the introduction of additional road traffic on the road network associated with this scheme in the vicinity of the Development, in particular along the B4100 east and west of the A43, does have the potential to increase road traffic air quality emissions (and impact NO₂ levels) at nearby receptors. However, detailed information is not yet available to quantify these cumulative effects. It is expected that a Travel Plan (or equivalent) would be in place to mitigate impacts from road traffic flows from the SRFI development.

10. Noise and Vibration

Introduction

- 10.1 The potential effects of the Development associated with noise and vibration during the construction works, building services and fixed plant noise, and operational traffic have been assessed.
- 10.2 A baseline noise survey was undertaken in July 2021 to inform an understanding of the baseline noise levels at locations representative of the closest residential and non-residential receptors.
- 10.3 To calculate the effects of noise related to the Development, a 3-dimensional noise model was built using computer modelling software. This model utilised existing measured noise data from 2019 to determine the effects of construction noise and operational noise on both existing and proposed sensitive receptors in the vicinity of the Site.

What are the potential effects during Enabling Works and construction?

- 10.4 Construction noise levels have been calculated using industry standard spreadsheet-based noise models, adopting calculation methodologies from British Standards. Likely construction vibration levels have also been informed by formula presented within British Standards.
- 10.5 Given the nature of the Enabling Works and construction works there is the likelihood that during certain periods of the construction phase, noise would be audible at the nearby sensitive receptors. Any impacts would be temporary in nature and adverse. The level of noise and vibration will be dependent on the location of the construction activities on each Site on a daily basis and the equipment being used, with noise and vibration levels being attenuated as the distance between the source and receptor increases.
- 10.6 Without mitigation, significant noise effects from construction plant could occur at two residential dwellings from the Western Development (1 and 2 The Cottages, within 30m of the Western Site boundary). However, through the use of standard noise control measures and managing the location and screening of these activities, as set out in the CEMPs, these potential effects could be reduced to insignificant levels. No significant vibration or construction traffic noise effects are anticipated from the Eastern Development, Western Development and Development as a whole.

What are the potential effects of the completed Development?

- 10.7 An assessment of fixed plant and equipment and operational traffic within the Development has been undertaken in accordance to establish the maximum external noise levels from the proposed Development. This is supported by a noise model developed using the using sound modelling computer software to determine the likely sound emissions at each receptor assuming a 24hr operational working pattern. This demonstrates that the Eastern Development, Western Development and Development as a whole are likely to have a low impact at all residential receptors and no significant effects are expected.

- 10.8 An operational road traffic assessment has been undertaken which compares different scenarios to determine the change in noise levels results from the trips generated from the Development. This assessment demonstrates that there would be a significant noise impact on three nearby dwellings (Medkre, Baynards House and Baynards Barn) associated with traffic on the B4100 from the operational Western Development. The Development would lead to a maximum increase of 3 decibels (dB) in daytime and 1.9 dB during the night. These significant noise impacts are principally due to the existing high noise levels at these locations from existing road traffic.
- 10.9 To mitigate impacts from road traffic noise from the operational Development, the Applicant has explored constructing a noise barrier between the B4100 and the residential properties adjacent to the Western Site. With a noise barrier in place, noise levels would be reduced to acceptable levels with no significant effects identified. Although the preferred form of mitigation, other mitigation options which could be delivered and have been explored by the Applicant include a low noise road surface (which help further reduce noise) and/or a noise insulation scheme should the barrier not be implemented.
- 10.10 Outside the spatial extents of the noise model, an appraisal of change in night-time noise levels has been carried out. This has identified significant noise effects at properties on the B4100 on the northern outskirts of Bicester (see Figure 10.4 in Chapter 10: Noise and Vibration), with increases in noise levels of up to 2.1 decibels (dB) around the morning shift change (at 6am), which is considered a significant effect. The Travel Plan would set out measures to mitigate these effects to acceptable levels, with the specific measures to be determined during development of the detailed design.

What would be the cumulative effects with other developments?

- 10.11 Construction traffic from the Development is expected to lead to a <1dB change in sound at all locations, i.e. negligible effect. Construction traffic flows from committed cumulative schemes are not expected to exceed this threshold and a negligible cumulative effect is predicted.
- 10.12 As the traffic modelling incorporates traffic flows associated with cumulative developments where planning information is available, the effects reported for the operational development inherently include those associated with the cumulative schemes Save for the SRFI. The SRFI will lead to significant volumes of additional road traffic on the road network in the vicinity of the Development, in particular along the B4100 east and west of the A43 which has the potential to further impact receptors close to the Site. However, detailed information is not yet available to quantify these cumulative effects and as a much later development, it will be for the SRFI to consider suitable mitigation measures for any effects that may arise.

11. Cultural Heritage

Introduction

- 11.1 The potential impacts of the Development on archaeological and built heritage assets have been assessed. This has been informed by evidence obtained from the National Heritage List for England, a desk-based assessment, site visit and geophysical surveys undertaken in 2021.
- 11.2 There are no designated archaeological assets within the Site or in close proximity which could be affected by the Development. As the Site is undeveloped, it is likely to have some archaeological potential of a local or possibly regional significance. However, no archaeological remains of high significance have been identified at the Site which could prevent development by needing to be retained in situ.
- 11.3 Only one designated heritage asset – the Grade II listed Barn at Baynards Green Farm – was identified with potential to be affected by the Development. Other heritage designations in the region, including Conservation Areas and Tusmore Park Scheduled Monument were scoped out of the assessment due to a lack of intervisibility with the Site and scheme proposals.

What are the potential effects during the Enabling Works and construction?

- 11.4 Enabling Works and construction activities would result in direct impacts upon archaeological remains if present within the footprint of below ground excavations associated with the construction of the Development. Overall, the Development would result in a permanent Minor/Moderate to Negligible adverse effect upon any archaeological remains that may be within the Site. Although not considered likely, should any receptors of regional importance be present at the Site, the effect of construction activities upon these assets would be Moderate adverse.
- 11.5 Construction of the Development would not give rise any effects on the setting of the Grade II listed barn.
- 11.6 A programme of mitigation measures for archaeology will be agreed with CDC and the OCC County Archaeologist to ensure that archaeological remains within the Site are appropriately preserved by record prior to any construction activities where appropriate. This would be considered a beneficial effect.

What are the potential effects of the completed Development?

- 11.7 It is only during the construction phase that any direct effects on any archaeological assets will occur. No direct impacts are anticipated once the Development is complete and operational.
- 11.8 The operational Development will change the character of the Site and is likely to lead to a higher amount of traffic along the B4100 and A43 intersection in the vicinity of the Grade II listed barn. However, these are not expected to have a material impact on the heritage asset and no significant effects are expected from the completed Development.

What would be the cumulative effects with other developments?

- 11.9 Given the generally isolated, small scale and localised nature of archaeological remains, and the lack of proximity of cumulative schemes to the Site and identified built heritage assets, significant cumulative effects are unlikely.

12. Ecology and Biodiversity

Introduction

- 12.1 The ecological interest of the Site has been investigated through a background data search, a suite of habitat and protected species surveys and examining work carried out on adjacent sites. The evaluation of baseline and impact assessment has been undertaken with reference to published guidance on ecological impact assessments.
- 12.2 The Site does not include any designated wildlife sites. The closest designated site is Ardley Cutting and Quarry Site of Special Scientific Interest (SSSI) located approximately 1.3km south west of the Eastern Site boundary. Five Local Wildlife Sites (LWSs) and a Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT) nature reserve are located within 2km of the Site, with the closest being Stoke Wood LWS approximately 320m south of the Site.
- 12.3 Habitats present within the Site itself includes arable farmland, hedgerows with trees, field margins, ditches and one waterbody which is present within the Eastern Site boundary. The habitats surrounding the Site are mainly arable farmland interspersed with hedgerows. There are also some residential and commercial developments and highways infrastructure present. These habitats are between negligible and local importance. Species present on and in the vicinity of the Site include badger, invertebrates and reptiles (of local ecological importance), farmland birds (of district importance) and foraging bats (of county importance).

What are the potential effects during the Enabling Works and Construction?

- 12.4 No adverse effects are predicted on designated wildlife sites in the study area from either the Enabling Works or construction phase. Effects would largely be confined to the Site and its immediate vicinity and include:
- Habitat loss;
 - Disturbance to wildlife (e.g. from noise/lighting);
 - Fragmentation of wildlife corridors; and
 - Disruption to habitats and species due to dust.
- 12.5 Clearance of the Site has potential to cause some minor adverse effects due to the loss of habitats which include a pond (Eastern Site) and loss of habitat for farmland birds which could be significant at the local level.
- 12.6 Mitigation measures will be out in place during the construction phase to minimise damage and disruption to wildlife and habitats, including controls to minimise noise, lighting and dust disturbance set out within the CEMP. Bird nesting habitat will be cleared outside of the nesting bird season (typically March to July inclusive) or checked by an ecologist prior to its removal.
- 12.7 With the proposed mitigation in place, residual effects on all habitats and species are considered to be negligible, except in relation to birds and bats for which residual minor and moderate adverse effects are anticipated respectively.

What are the potential effects of the completed Development?

- 12.8 The design of the Development has been developed to minimise ecological effects and allow habitats to be retained where possible. A biodiverse landscaping strategy for the Site has been produced which sets out the ecological mitigation measures. Native tree and shrub and replacement hedgerow planting will occur within the Development. In addition, an off-site area for habitat compensation will be created at Piddington to deliver BNG obligations, creating new grassland, hedgerow and pond habitat that will link up with adjacent habitats to form wildlife corridors.
- 12.9 Lighting within the Development would be sensitively designed to ensure the hedgerows are not excessively lit, as set out in the Development Specification. As such, there would be negligible effects on all sensitive ecological receptors in proximity to the Site from the completed operational Development.
- 12.10 The increase in traffic from the completed Development in the vicinity of Ardley Cutting and Quarry SSSI has the potential to lead to a significant effect on the designated site due to increases in nitrogen deposition. However, it is anticipated that the high levels of deposition already occur as a result of existing high traffic volumes on the M40 and the Development would make a very small contribution to this. As such, this is being discussed further with OCC/National Highways. If required, an appropriate mitigation strategy will be informed by further work and discussion with Natural England to minimise effects.

What would be the cumulative effects with other developments?

- 12.11 Given the distance of the Site to the cumulative schemes, no significant cumulative effects are expected on local ecological receptors to the Development. There is potential for significant cumulative effects on the Ardley Cutting and Quarry SSSI from road traffic emissions with other development sites, however this will be considered further in discussion with OCC/National Highways with agreement on an appropriate mitigation strategy, if necessary.

13. Landscape and Visual Impacts

Introduction

- 13.1 A Landscape and Visual Impact Assessment (LVIA) has been undertaken which describes the existing landscape and visual baseline environments and assesses the magnitude and significance of the changes from construction and operation of the Development.
- 13.2 Published landscape character assessments, relevant guidance and policy, computer modelling of the extent of visibility of the Development and field surveys have informed the baseline assessment. The baseline assessment identified include existing landscape receptors (e.g. trees adjacent to the Site) and visual receptors (e.g. users of Public Rights of Way and transport corridors).
- 13.3 The Site is located within a rural area to the north of Junction 10 of the M40 motorway. The Site is not subject to any statutory landscape designations and is assessed to be of medium sensitivity. There are no landscape designations within the study area for the assessment.
- 13.4 The assessment was informed by a desk study and analysis of 15 photographic images overlain with the outline of the massing of the proposed Development as proposed by the Parameter Plans. These photographic images are known as Accurate Visual Representations (AVRs). Photographs were taken from a selection of viewpoint locations, shown in Figure 13.1, selected to be representative of sensitive receptors. Figure 13.2 illustrates a selection of views of the Development.

Figure 13.1: Viewpoint location plan

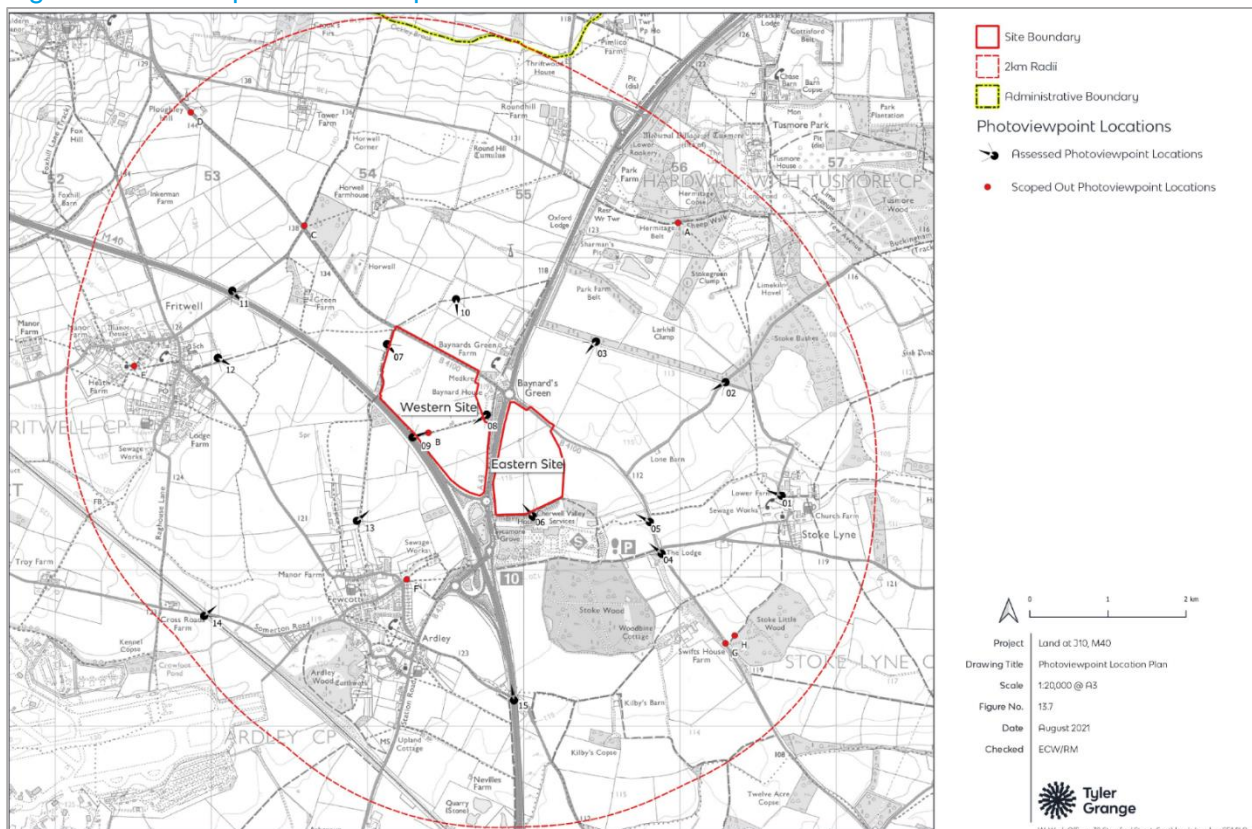


Figure 13.2: Selection of AVRsⁱⁱ

Viewpoint 2 - north east of the Development



Viewpoint 13 – south of the Development



What are the potential effects during the Enabling Works and Construction?

- 13.5 Landscape effects during the Enabling Works and construction phase would result from the loss of hedgerows and trees within the Site and groundworks to create level building platforms. Visual effects would result from views of construction activities and stockpiles of materials and lighting.
- 13.6 Mitigation relating to construction activities would include good construction site practice measures set out in the CEMP, such as hoarding, the protection of trees and hedgerows wherever possible, a sensitive construction lighting strategy, and the use of temporary earth bunds and hoardings around the Site.

ⁱⁱ Blue outline = Eastern Development
Red outline = Western Development

- 13.7 The Enabling Works would lead to negligible effects on landscape and visual receptors. Construction works associated with the Eastern and Western Development would have minor adverse impacts on surrounding landscape receptors (landscape character types and areas and landscape features), with moderate adverse (i.e. significant) effects on the landscape features of the Sites themselves. Of the visual receptors (residents, users of Public Rights of Way and road network) within the study area, moderate adverse effects were identified for receptors using the PRoW to the south of the Site and those to the west and the south west. Effects at other locations would range from negligible to minor adverse.

What are the potential effects of the completed Development?

- 13.8 Landscape effects resulting from the completed Development would include the introduction of large commercial buildings, areas of parking and hardstanding into a rural landscape. Visual effects would result from views of large commercial buildings lighting associated with the operation of the Development.
- 13.9 Mitigation has been embedded into the proposed Development to reduce landscape and visual effects including the planting of native woodlands, strengthening landscaping on boundaries of the Site and other landscape planting. Details of the appearance of the buildings would be agreed with CDC through reserved matters applications, although the Applicant has committed to sensitive design principles through the Development Specification.
- 13.10 The completed Development would have major adverse impacts on surrounding landscape receptors (landscape character types and areas and landscape features), which would reduce to minor adverse once new planting is fully mature in 15 years' time.
- 13.11 For the landscape features and character of the Western and Eastern Sites, moderate adverse effects are predicted once planting is fully mature due to the introduction of new buildings and the loss of openness on the Site. Of the visual receptors (residents, users of PRoW and road network) within the study area, significant residual effects are identified from the completed Development on the users of the PRoW south of the Site (Photoviewpoint 6), largely due to its close proximity to the Site. At other locations, there would be negligible to moderate adverse visual effects at Year 15 on, with the most significant effects experienced by receptors closest to the Site (i.e. users of the PRoW that traverses the Western Site and locations on the PRoW to the north, east, west and south west of the Site).

What are the cumulative effects with other developments?

- 13.12 Based on the proximity to the Site and potential intervisibility between the scheme, one development was considered in relation to cumulative landscape and visual effects, Heyford Park.
- 13.13 Development at Heyford Park would not significantly affect the defining characteristics or features of the landscape or features of views considered. As such, the landscape and visual effects would remain as identified for the Development in isolation, with the potential for a significant cumulative visual effect for users of the PRoW to the south of the Site.
- 13.14 Upon completion of the Development and should the SRFI come forward, cumulative visual impacts would be limited to users of the PRoW in areas to the west of the Development close to Photoviewpoints 9 and 13.

14. Climate Change and Greenhouse Gases

Introduction

- 14.1 The ES presents an assessment of the likely significant effects of the Development on Climate Change. These are presented separately for four scenarios; Enabling Works, the Eastern Development, the Western Development and considered together for the Enabling Works and Development as a whole. For each scenario the assessment quantifies the greenhouse gas emissions (as carbon dioxide, or CO₂ equivalent (CO_{2e})) resulting from the development scenario and determines their significance in the context of local and national climate change policy. It also examines the resilience of the Development to future climate change.
- 14.2 The Site does not currently generate any greenhouse gas emissions as there are no activities on the Site which result in emissions.

What are the potential effects during Enabling Works, construction and for the completed Development?

- 14.3 The greenhouse gas emissions from the construction phase have been presented as annual figures to allow them to be compared to operational emissions in the opening year of the Development in 2025. Greenhouse gas emissions in the opening year are likely to be at their highest since emissions from all sources are projected to fall over time due to decarbonisation of the economy consistent with the UK meeting its net zero target.
- 14.4 The greenhouse gas assessment has established a net increase in emissions in the opening year (2025) for each scenario as follows:
- Enabling Works = 10 tonnes CO_{2e}/ annum;
 - Eastern Development = 30,211 tonnes CO_{2e}/ annum;
 - Western Development = 53,943 tonnes CO_{2e}/annum; and
 - Development = 84,164 tonnes CO_{2e}/annum.
- 14.5 The figures above take into account a comprehensive set of mitigation measures that apply to each scenario, including implementation of a sustainable drainage strategy and landscape design, use of low-carbon construction materials and efficient design, and use of renewable energy sources and high efficiency fittings.
- 14.6 A range of mitigation measures will be implemented to minimise the greenhouse gas emissions during construction and throughout the lifetime of the Development, however, a net increase in emissions will remain.
- 14.7 Industry guidance makes clear that any increase in greenhouse gas emissions should be considered significant. However, the residual emissions are a small component, on a like for like basis in the context of the local greenhouse gas emissions in the CDC area, equalling;
- Enabling Works = 0.002% of CDC emissions;
 - Eastern Development = 0.4% of CDC emissions;

- Western Development = 0.6% of CDC emissions; and
- Development = 1% of CDC emissions.

14.8 In addition, mitigation provided follows best practice, is in accordance with relevant local and national policy on climate change and the energy strategy for the Development would result in zero energy emissions for office and core areas of buildings.

14.9 It is therefore judged that although the residual effects are described as significant, these have been minimised through an appropriate degree of mitigation consistent with best practice and industry guidance. The cumulative effects of the Development are considered to be the same as for the Development.

14.10 To address future vulnerability to climate change best practice measures have been adopted by the design to ensure the Development is resilient to changes in future climate (e.g. more frequent heatwaves).

15. Hydrology, Flood Risk and Drainage

Introduction

- 15.1 The potential effects of the Development on water resources, flood risk and drainage have been assessed. The assessment is accompanied by a Flood Risk Assessment which includes a drainage strategy for the Development.
- 15.2 The nearest surface watercourse is the Padbury Brook which is located approximately 35m south of the Site boundary and flows to the east. There are many licensed discharges within 500m of the Site, the nearest one being 30m south of the Site of emergency discharges from Cherwell Valley Services into the Padbury Brook. The underlying White Limestone Formation is classified as a Principal Aquifer but the Site is not in a source protection zone for groundwater.
- 15.3 The Environment Agency's flood map for planning shows that the Site lies entirely within Flood Zone 1 (low probability of flooding) with a low risk of surface water flooding (with the exception of a small corner of the Western Site).

What are the potential effects during the Enabling Works and Construction?

- 15.4 Enabling Works and construction activities have the potential to lead to increased surface water runoff with sediments, and contamination from use of vehicles and plant and storage of materials. A CEMP will be implemented to manage and control ground works and potential sources of pollution including the storage of fuels and management of wastewater. With effective implementation of a CEMP, the residual effect on water resources during construction would be negligible.

What are the potential effects of the completed Development?

- 15.5 The completed Development has potential to increase surface water runoff and flooding and affect water quality due the change of use from arable fields to employment uses and hard surfaces. A sustainable drainage system comprising a network of swales and infiltration basins will provide natural filtration processes through features such as reedbeds, etc. where silts can be removed before clean water is released into local watercourses or the ground.
- 15.6 Surface water runoff from new uses within the Development which could lead to water quality impacts (for example service yards, car park areas and internal roads) will pass through oil interceptors being released into drainage features. This will ensure that surface water from the Development does not adversely affect the quality of surface water or groundwater. As such, the residual effects on the water quality of receptors would be negligible.
- 15.7 The Development has been developed with climate change resilience principles embedded in the design. It will lead to a change in the current land surface characteristics by creating large areas of impermeable surfaces associated with car parking and buildings which could lead to an increased risk of flooding elsewhere. However, surface water run-off will be managed through sustainable drainage systems at both the Eastern Site and Western Site to avoid flood risk elsewhere. These drainage systems will be designed for a 1 in 30-year storm event and

discharges will not exceed the greenfield run-off rates across a range of storm events up to and including the 1 in 100-year storm plus an additional 40% to allow for rainfall events on-site. As such, negligible flood risk effects are expected as a result of the Development.

- 15.8 On the basis that Thames Water will implement improvements to meet the increased water demand of new development within Ardley, and through the application of water use efficiency measures secured through planning condition(s), no adverse impacts are predicted on potable water resources, i.e. a negligible effect.
- 15.9 Arrangements for foul water drainage from the Development are to be agreed with Anglian Water in order to provide satisfactory discharge to the local environment and significant effects are not expected. The most suitable option(s) will be defined during the detailed design stage.

What are the cumulative effects with other developments?

- 15.10 Given their proximity to the Site, no cumulative effects are expected with the cumulative schemes.

16. Effect Interactions

- 16.1 This section summarises the likely significant effect interactions of the Development. Effect interactions are where individual effects of the Development affect the same receptor.
- 16.2 No residual effects with a minor significance or greater were identified in the transport and access, air quality and noise and vibration assessments. Only the landscape and visual assessment identifies residual effects up to moderate adverse significance on residents of nearby conurbations and users of the local road and public right of way network. As such, no effect interactions are predicted for the Enabling Works or construction phase of the Development.
- 16.3 Overall, the completed Development is likely to lead to effect interaction on users of the local road network, notably the B4100, A43/B4100 junction and M40 Junction 10. These groups would potentially experience localised adverse changes in views when in close proximity to the completed Development. They would also be subject to a range of adverse effects as a result of increased traffic, including driver delay and impacts from increased greenhouse gas emissions. If they live within the identified noise sensitive properties (see Section 10), they may also be subject to adverse road traffic noise. Should these users be commuters to the Development, there would be a beneficial change through creation of a source of new employment.
- 16.4 However, taking all the proposed mitigation measures into account, it is considered that the overall significance of effect interactions of the Development during the operational phase is minor adverse and not significant.

17. Mitigation and Monitoring

- 17.1 The section summarises the key mitigation and monitoring measures that will be implemented to minimise potential adverse effects during construction and operational phases of the Development.

Construction

- 17.2 The construction works will adhere to the measures set out in a Framework CEMP which form part of the ES. This will be carried forward into site-specific CEMPs and contain a range of procedures and protocols to minimise environmental effects, such as noise, dust and light pollution. These include:
- Adherence to the CEMP, including the erection of construction hoarding, site lighting control, emissions management plans;
 - Construction Traffic Management Plan (CTMP);
 - Acquirement of bat mitigation and appropriate (if required);
 - Timing of habitat/ hedgerow clearance (if required) avoiding seasonal constraints and/or in the presence of a certified ecologist;
 - Scheme of further archaeological evaluation and mitigation works, if required; and
 - Consideration of carbon offsetting during material selection for Site.
- 17.3 Outside standard good practice environmental monitoring requirements, which will be adhered to via the CEMPs, no further environmental monitoring requirements were identified.

Completed Development

- 17.4 Mitigation measures will include:
- Acoustic barrier around car park of Western Site and proposed on B4100 between the B4100/A43 roundabout and the Western Site access³;
 - A site-specific drainage strategy incorporating SuDS;
 - Travel Plan – to encourage sustainable modes of travel by future Site users;
 - Financial contributions to highway and public access network infrastructure;
 - Sustainability and Energy Strategy - to reduce greenhouse gas emissions and improve energy efficiency;
 - BREEAM ‘Very Good’ target - to avoid / minimise natural resource use;
 - Landscaping and scheme management including implementation of a detailed Landscape and Ecology Management Plan, secured via planning condition; and

³ If this mitigation proposal is not agreed, other suitable acoustic mitigation options would be implemented, including the potential for installation of a low noise road surface or compensation.

- Biodiversity offsetting contributions through Applicant ownership of an off-Site compensation site, circa 20ha in Piddington, secured through a legal agreement.

References

¹ HMSO, 2017. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. The Stationary Office. May 2017

² HMSO, 2018. The Town and Country Planning (Environmental Impact Assessment) (Amendment) Regulations 2018. The Stationary Office. October 2018.

³ HMSO, 2020. The Town and Country Planning (Development Management Procedure, Listed Buildings and Environmental Impact Assessment) (England)(Coronavirus) (Amendment) Regulations 2020. The Stationary Office. May 2020.

⁴ CDC, 2009. Planning and waste management design guide. October 2009.

⁵ Considerate Constructors Scheme. Available at: <https://www.ccscheme.org.uk/>