MAGNA PARK
LUTTERWORTH

IDI Gazeley
Brookfield Logistics Properties

IDI Gazeley UK Ltd

Magna Park Extension: Hybrid Application

Environmental Statement
Non-Technical Summary

Contents

1 Introduction

The Environmental Statement

1.1 This document provides a summary, in non-technical language, of the Environmental Statement submitted in support of a planning application for an extension to Magna Park. The Environmental Statement is submitted for the purposes of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended).

1.2 The Environmental Statement accompanies IDI Gazeley's part outline and part detailed (hybrid) planning application. The application proposals include distribution and warehousing with ancillary office space, the Logistics Institute of Technology and its campus, an Innovation Centre and other small business space, an estate office with heritage exhibition centre and conference facility, related access and works to the A5, sustainable urban drainage system (SUDS), Bittesby Country Park and service facilities (all in outline); and a heavy goods vehicle (HGV) facility and Driver Training Centre and rail freight shuttle terminal (in detail). A detailed description of the existing site and the proposed development is set out in Chapter 2.

1.3 The Local Planning Authority is Harborough District Council and copies of the Environmental Statement and other application documents may be viewed at their offices, at the address below, and during their normal working hours:

Harborough District Council
The Symington Building
Adam and Eve Street
Market Harborough
Leicestershire
LE16 7AG

Open Monday/Tuesday/Thursday/Friday: 8.45am to 5pm.
Wednesday 9.30am to 5pm.
Telephone: 01858 828282.

Structure and Content of the Planning Application

1.4 The application is submitted in full and is supported by the technical documents set out below.

- Agricultural Land Quality Assessment
- Arboricultural Report
- Contaminated Land Statement
- Design and Access Statement
- Draft Section 106 legal obligation heads of terms (HOTs)
- Flood Risk Assessment and Drainage Strategy

- Planning Statement with appendices providing the Economic and Property Market Report, Logistics Institute of Technology Proposals and Options for CO_2 Emission Reduction
- Statement of Community Involvement; and
- Transport Assessment and Travel Plans.

1.5 The Environmental Impact Assessment (EIA) has been conducted with regard to a number of plans and drawings, which are submitted as part of the application. The drawings and plans are provided in Appendix A.1 to the Environmental Statement.

Structure of the ES

1.6 The Regulations stipulate that an Environmental Statement must contain the information specified by Part 2 of Schedule 4 and such relevant information set out in Part 1 of the same Schedule as is reasonably required to assess the effects of the project. Table 1.1 addresses these requirements and identifies the relevant parts of the Environmental Statement.

Table 1.1: Location of information within the ES

	Specified Information	Location in the ES
1	Description of the development, including in particular:	
	(a) A description of the physical characteristics of the whole development and the land-use requirements during construction and operational phases	Chapter 2 (The Proposed Development) Chapter 3 (Planning Policy)
	(b) A description of the main characteristics of the production process	Chapter 2 (The Proposed Development)
	(c) An estimate, by type and quantity, of expected residues and emissions (air pollution, noise, vibration, light, heat, radiation etc) resulting from the operation of the proposed development	Chapter 7 (Noise & Vibration); Chapter 8 (Hydrology); Chapter 9 (Landscape & Visual Effects); Chapter 10 (Air Quality).
2	An outline of the main alternatives studied by the Applicant and an indication of the main reasons for his choice, taking into account of the environmental effects	Chapter 2 (The Proposed Development)
3	A description of the aspects of the environment likely to be significant affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors	Chapter 5 (Socio-economic Effects); Chapter 6 (Traffic & Transport); Chapter 7 (Noise & Vibration); Chapter 8 (Hydrology); Chapter 9 (Landscape & Visual Effects); Chapter 10 (Air Quality); Chapter 11 (Heritage & Archaeology); Chapter 12 (Ecology); Chapter 13 (Summary & Impact Interactions).
4	A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium	

	Specified Information	Location in the ES
	and long-term, permanent and temporary, positive and negative effects of the development, resulting from:	
	(a) the existence of the development;	Chapter 5 (Socio-economic Effects); Chapter 6 (Traffic & Transport); Chapter 7 (Noise & Vibration); Chapter 8 (Hydrology); Chapter 9 (Landscape & Visual Effects); Chapter 10 (Air Quality); Chapter 11 (Heritage & Archaeology); Chapter 12 (Ecology); Chapter 13 (Summary & Impact Interactions).
	(b) the use of natural resources;	
	(c) The emissions of pollutants, the creation of nuisances and the elimination of waste,	
5	A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment	Chapter 5 (Socio-economic Effects); Chapter 6 (Traffic & Transport); Chapter 7 (Noise & Vibration); Chapter 8 (Hydrology); Chapter 9 (Landscape & Visual Effects); Chapter 10 (Air Quality); Chapter 11 (Heritage & Archaeology); Chapter 12 (Ecology); Chapter 13 (Summary & Impact Interactions).
6	A non-technical summary of the information	Non-Technical Summary (ES Volume 1)
7	An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information	Chapter 4 (Assessment Methodology) and individual subject chapters.

2 The Site and the Development

Description of the Proposed Development

2.1 The application proposals are for two sites, one in outline and one in detail, that together total c 239 ha. The development proposals comprise the following uses and maximum quanta:

Zone 1 (outline, c 232 ha):

- distribution warehousing and ancillary office space (Use Classes B8 and B1): up to 427,200 sq m (including 100,844 sq m for DHL Supply Chain that is also the subject of Application Reference 15/00919/FUL that was submitted in June 2015):
- the "hub", containing
  - Logistics Institute of Technology (Use Class D1): up to 3,700 sq m together with its campus and playing field
  - Magna Park estate office, with marketing suite, heritage exhibition centre and conference facility (Use Class D1): up to 300 sq m
  - Innovation Centre (Use Class B1): up to 2,325 sq m
- expansion building for Holovis (Use Class B1a, B1b): up to 7,000 sq m
- Bittesby Country Park and meadowland: c 70 ha
- structural landscape on site perimeter and linking to Magna Wood: c 35 ha
- access corridor, SUDS systems, bio-discs and reed beds and other landscape works
- formation of access road from Magna Park, creation of roundabouts, partial realignment of Mere Lane, upgrading of A5 to dual carriageway, creation of roundabout access on A5.
- Demolitions: 4,818 sq m (B1 4,129 sq m and C3, two dwellings, 689 sq m)

Zone 2 (detailed, c 7ha):

- railfreight shuttle terminal
- HGV Parking (134 spaces) and electric charging points
- HGV Driver Training Centre (0.427 ha)
- fuel island (including LPG and CNG) and vehicle washing facility
- access from A4303
- gatehouse
- associated landscape works and SUDS systems.

2.2 In Zone 1, IDI Gazeley is seeking **outline** planning permission for the principle of the development, the means of access and the parameters specified by Parameter Plans 1 and 2: the siting, extent and use(s) proposed in each parcel defined by the Parameter Plans; the maximum floorspace quantum and building heights within parcels with buildings; the orientation of yards within the parcels proposed for warehouse distribution buildings; and the demolition of the existing buildings.

2.3 In Zone 2, IDI Gazeley is seeking **detailed** planning permission for the uses

specified, the quanta of each use, the layout of the site, the details of the gatehouse building, the compressed natural gas fuel island, vehicle wash, fencing, lighting, landscaping and sustainable urban drainage facilities and the layout of the site and the creation of an access from the A4303 via Magna Park. Zone 2 already benefits from detailed planning consent to provide similar facilities, the same site layout and building and the same access from the A4303 via Magna Park (Application 12/00851/FUL).

Magna Park Now

2.4 Magna Park Lutterworth was established in 1988 and is the largest dedicated distribution park in Europe and IDI Gazeley's flagship development. The park is located in the far south west of the administrative area of Harborough District and lies on the A5 between the M1, M6 and M69 motorways. The A5 marks the boundary between the Rugby Borough (in Warwickshire) and Harborough District administrative areas; the administrative boundary of Daventry District Council (Northamptonshire) lies just under 10 km to the south.

2.5 Magna Park accommodates the logistics operations of 25 blue chip companies in 31 separate distribution warehouses totalling 771,750 sq m together with the 8,185 sq m headquarters for George (the clothing division of Asda). Of the 31 distribution buildings, 17 (68% of the park's warehouse floorspace) are operated as national distribution centres (NDCs – i.e., the whole of the UK is served from the single operation) and 14 (32% of the warehouse space) as regional distributions centres (RDCs). The 25 companies together employ about 9,300 people – and account for about a quarter of all the jobs located in Harborough district – with a still higher number during peak seasons.

2.6 Magna Park's first buildings were completed in 1988 and the last in 2007 – a delivery rate that averaged 38,600 sq m of distribution warehouse space per annum (although delivery in each of 2006 and 2007 totalled almost double that average).

2.7 Only Plot 2110 – the site of the former of the George HQ (a two storey 3,515 sq m office building) – had, until recently, remained undeveloped but solely because of its small size. In 2015, IDI Gazeley was able to add to Plot 2110 an area of land on an adjoining plot to create a site large enough to accommodate a marketable-sized warehouse. A planning application for a 17,196 sq m distribution warehouse was approved in September 2015 and construction is underway. With the exception of Plot 2110, Magna Park has been fully developed since 2007.

The Site and its Surroundings

Zone 1

2.8 Zone 1 comprises c 232 ha to the north and west of, and linked to, Magna Park. Its boundaries are created by the A5 to the west, Mere Lane to the east and the ridgeline hedgerows following the parish boundary to the north. The nearest local settlement to Zone 1 is Willey which is 0.85 km away, beyond the A5. To the north are the villages of Ullesthorpe and Claybrooke Parva which are located, at the closest point from the Site, 1.0 km and 1.3 km distant. Bitteswell is located 2.0 km to the east of the Site and the market town of Lutterworth is located 2.2 km to the

east. Access to Zone 1 is currently provided by Mere Lane, which in turn connects to the A5 and the wider strategic highway network.

2.9 Zone 1 comprises large open arable fields, smaller enclosed fields, some mature hedgerow boundaries and mixed native tree belts. Water courses in Zone 1 are marked by hedgerows and riparian trees that form field boundaries to the large, predominantly arable fields. Wet woodland tree species and woodland blocks punctuate the valley bottoms whereas broadleaf spinneys and hedgerows mark the ridgelines of Zone 1.

2.10 Other landscape features in Zone 1 include the wooded embankments of the dismantled Midland Counties railway that follows the Upper Soar valley at the centre of the site and the tree lined avenue of Bittesby House. Built elements of the original Bittesby Estate include Bittesby House, Lodge and Emmanuel cottages adjacent to the A5. Only the two cottages are in residential use, but are in the control of IDI Gazeley. Bittesby House (occupied by Creative Bridge), Bittesby Business Barns and a pair of more modest cottages nearby are all in office use (occupied by Holovis) .The horizon to the east of the site is dominated by the existing built environment of Magna Park and the trees and hedgerows along Mere Lane.

2.11 To the north east of the site, the Mere Lane Lagoon (an attenuation feature for Magna Park) has previously been used as a fishing lake. Public Rights of Way Bridleways and Public Footpaths cross the site connecting the village of Willey (across the A5) to Ullesthorpe and Claybrooke Parva and the Lutterworth Road. These rights of way intersect and connect with the permissible routes that currently allow a variety of walking and riding itineraries around the site.

2.12 Included within the application boundary are the Magna Park services farm and its associated amenity pond and reed beds and existing areas of grassland and plantation woodland.

2.13 Zone 1 of the site also contains, in the centre of the site, the Scheduled Monument of Bittesby Deserted Medieval Village (reference 1012563). Zone 1 does not include, nor is it adjacent to, nor is it within a 2 km radius of, any statutory designated sites for wildlife such as SSSIs, SPA/ SAC/ RAMSAR, AONB, all of which are areas defined in Regulation 2 of the EIA Regulations.

2.14 Habitat enhancements on the site executed under the current Natural England Higher Level Stewardship scheme (which expires in October 2017) includes mixed native broadleaf woodland plantations, hedgerow enhancements, set-aside wildflower beaches, grazing pasture and wetland scrapes. Also associated with the stewardship scheme are a network of permissible bridleways, bridleway gates and orientation signage.

Zone 2

2.15 Zone 2 forms part of the developed southern edge of Magna Park, approximately 1.6 km from Willey to the northwest, 1.6 km from Lutterworth to the east and 2.5 km from Cotesbach to the south east. Access to Zone 2 is via the southern arm of the roundabout on Coventry Road (the A4303), which to the north also provides the main point of vehicular access to Magna Park. Zone 2 benefits from an extant

planning permission for a HGV parking facility which was granted by HDC in November 2012 (reference 12/00851/FUL).

2.16 Zone 2 consists of two fields, neither of which are currently in agricultural use. Zone 2 does not accommodate any designated or non-designated heritage assets. Nor is Zone 2 subject to any international or domestic statutory wildlife designations and there are none adjacent, nor within a 2 km radius of its centre. There are no Public Rights of Way Bridleways or Public Footpaths crossing or abutting Zone 2.

The Development Concept and Proposals

2.17 The proposals adopt the principles of place-making to extend the existing Magna Park to create a single, integrated logistics park that is open to the wider community via the extended park's new community "hub". The hub contains the Logistics Institute of Technology and campus facilities which are to be shared with the community, the Innovation Centre, and the estate office with its heritage exhibition centre and the conference facility that is also to be shared with the community. The hub adjoins the new 42 ha Bittesby Country Park. The Country Park itself adjoins c 28 ha of meadowland and a further c 33 ha of structural landscape and accessible open space. The whole of the open space is accessible via the network of existing and enhanced footpaths, bridleways and cycleways that are linked to the network in the wider area, including a proposed splitter island in the A5 to ease access to the site from Willey.

2.18 IDI Gazeley at Magna Park was one of the early pioneers of the eco-system approach to landscape design. With the extension, IDI Gazeley is pioneering the concept of a distribution park as a place – using landscape design and the concept of a "heart" (the hub) for Magna Park – to create a place that is as valuable to the well-being of local people and Magna Park's employees as it is valuable operationally for the logistics companies and small businesses who will take the space, create the park's further c 5,800 jobs and deliver the other economic benefits that are the development's primary purposes.

2.19 The physical and functional integration of the extension with the existing Magna Park to create a single place is achieved by:

- creating the park-wide hub and focus for the extended Magna Park – with facilities for all occupiers and their employees as well as the wider community and students of the Logistics Institute of Technology;

- linking Magna Wood, with a new foot and cycle path that will connect with the extension site at the existing Mere Lane Lagoon, already a public space which the application proposals enhance with further water bodies, native planting and habitat and the creation of a small public car park to improve accessibility and encourage greater use;

- extending Argosy Way across Mere Lane (via a new roundabout) to encourage HGV access to the extension through the existing park from the A4303 and to

provide the functional links needed support the cluster advantages for existing operators and their employees (e.g., DHL already have four operations in the existing park);

- the landscape proposals which "wrap" the whole of the extended park with deep tree planting belts and other landscape that binds and defines the site (as well as enriches habitat and biodiversity and contains visual intrusion and diminishes noise);

- the heavy landscape content and design approach which will create a visually unified whole with a clear and single identity – albeit with a careful response to the individual character areas and functions of the different parts of the extension site.

The Logistics Institute of Technology (Zone 1)

2.20 The Institute is partnered by IDI Gazeley, Aston University and the South Leicestershire and Coventry & Warwickshire Colleges. It will work closely with industry partners, and cater for up to 400 students, drawn from the same c 45 minute catchment as Magna Park's workforce, providing a range of bespoke training and qualifications across all NQF levels 2-7 as well as linked professional accreditations. The Institute has five broad objectives:

- contributing to the rising skills needs of the industry;
- raising the awareness of people at school, college and university levels of the career opportunities in logistics;
- collaborating with the industry to contribute to its needs for applied research to drive innovation, productivity and increased environmental sustainability in the industry;
- creating new small businesses that will apply commercially the research output of the Institute and its collaborating university and college partners; and
- providing Harborough District with a flagship further and higher education institution – taking advantage of IDI Gazeley's commitment to driving this pioneering concept for the extension to Magna Park and what it is to achieve, socially as well as economically and environmentally, Magna Park's pre-eminence in the logistics property market and Magna Park's location in Lutterworth at the heart of the UK's logistics industry.

Innovation Centre (Zone 1)

2.21 The Innovation Centre will provide high quality serviced office space, co-located with the Institute and the concentration of logistics employers, on easy-in, easy-out licenced terms for small businesses. The Innovation centre will follow the model of the Harborough Innovation Centre (which is full) and plug a significant gap in Lutterworth's commercial property market. The building will be up 2,325 sq m in size (broadly the size of Harborough Innovation Centre) – and, like the Institute, will be designed to high standard, visually and environmentally, and tucked into the landscape. There are cluster advantages of co-location with the Institute and Magna Park's occupiers in providing a stimulus to the development of spin-out and supplier opportunities and the growth locally of small and medium enterprises.

Estate Office – with conference facilities and heritage exhibition centre (Zone 1)

2.22 The proposed estate office will contain a marketing suite; an IT-equipped conferencing facility that will be available for community use; and a "heritage centre" – a living exhibition space that will account the history of the Magna Park site – and exhibit and interpret its Scheduled Monument, its other archaeology, its built development including the historic record of Bittesby House and the other buildings on the site, and the Bitteswell Aerodrome. It will also include exhibition space to educate people on the logistics industry and, if partners wish, the business operations of the site.

Bittesby Country Park and Meadowland (Zone 1)

2.23 The proposed c 42 ha Country Park, centred on the rail embankment at the heart of the Zone 1, performs a number of functions: informal recreation open space – with its own system of tracks and paths connected to the wider network on the Site and beyond – for the health and wellbeing of employees, students, faculty and the wider community – and a means of bringing these communities together; enriched habitat and biodiversity; the sustainable water management of the whole site, including the preservation of the archaeological resource and the maintenance of the water regime for Claybrooke Mill;; the protection in perpetuity of the Deserted Bittesby Village Scheduled Ancient Monument and the setting for it; a very large physical, visual and noise buffer between the settlements around the extension site; and a centrepiece for the whole of the extended Magna Park.

2.24 The c 28 ha adjoining meadowland provides a means of managing the Country Park's landscape, both of which will be grazed from time to time.

HGV Driver Training Centre and the HGV Park (Zone 2)

2.25 The HGV Park will be for Magna Park HGV drivers only – both those for the existing park and for the extension. The HGV park will be equipped with electric charging points – electric traction units are one of the options for the Railfreight Shuttle – and the fuelling station includes for a carbon-free compressed natural gas fuel option (CNG) and, if needed, also, low-carbon, liquid petroleum gas (LPG). The HGV industry is rapidly moving to lower and no emission vehicles, and these options anticipate and provide for those trends. Electric and CNG-fuelled engines are also quieter than their petrol and diesel counterparts. The HGV Driver Training Centre is a facility for training and testing HGV drivers on site, helping to address the now chronic shortage of HGV drivers in the sector.

Railfreight Shuttle Terminal (Zone 2)

2.26 The Railfreight Shuttle Terminal will provide a dedicated low- or zero-carbon shuttle to Daventry International Railfreight Terminal (DIRFT) – where 16% of all rail movements already originate at, or are destined for, Magna Park. The recent opening of new facilities at DIRFT mean that capacity is now available for additional volume and DIRFT offers a wide range of daily services to/from the major ports, Europe via the Channel Tunnel and to UK destinations in England, Wales and Scotland.

2.27 The shuttle will employ LPG, CNG or electrically powered vehicles, which would largely eliminate carbon emissions from the road leg and put Magna Park on a level playing field with rail-connected locations from an environmental perspective.

2.28 It is estimated that converting existing movements between Magna Park and DIRFT to the Shuttle would save around 200,000 miles a year of diesel emissions. Further, assuming the Railfreight Shuttle enabled 50 loads a day to be moved by rail, instead of road, to/from Southampton, Felixstowe and Scotland, over 4 million HGV miles a year would be saved, with consequent reductions in carbon emissions and motorway congestion.

3 Construction

3.1 The Environmental Statement has been based on the assumption that construction phasing of Zones 1 and 2 of the development would be carried out over a period of 10 years commencing in 2016.

3.2 The road widening works along the A5 are anticipated to take a year to complete and is envisaged to commence at the same time as the main development. The indicative construction programme is shown in Table 3.1.

Table 3.1 Indicative Construction Programme

Development Area	Programmed Commencement Date	Programmed Completion Date
Submit Planning Application		September 2015
Parcel G – DHL Construction	January 2016	January 2017
Parcel F - Holovis	February 2017	March 2018
Parcel E – The 'hub'	May 2018	July 2019
HGV Park and Railfreight Terminal	August 2019	September 2020
Parcel H	August 2019	September 2020
Parcel I	November 2020	December 2021
Parcel J	February 2022	March 2023
Parcel K	May 2023	June 2024
Parcel L	August 2024	September 2025
Parcel M1, A1 & B	January 2016	May 2026
Parcels C & D	January 2016	May 2026

3.3 The commencement of construction activity would be preceded by a full review of the development and all background information would be undertaken, including dialogue with relevant key stakeholders. The output of the review would be the preparation of an outline method statement for the construction phase(s) which would form the basis of the on-going discussions with the various parties. This would be incorporated into the Construction Environmental Management Plan (CEMP), a framework of which is included as Appendix A.2. In addition, prior to the commencement of construction all necessary ecological licences would be applied for. Mitigation would be put in place to ensure minimal disturbance to ecological receptors during construction.

3.4 The routes taken by construction traffic on the local highway network would be the subject of discussions between the developer, planning and highway authorities, and would also be subject to the existing physical and legal restrictions on movements of large vehicles.

4 Embedded Mitigation and Alternatives

Embedded Mitigation

4.1 The Environmental Impact Assessment has been an iterative process: scheme design has been assessed and then amended to address any potential environmental effects and where necessary, operational phase mitigation has been incorporated into the scheme design.

4.2 The key measures relate principally to landscape and visual impact, ecology, heritage and transport/highways. Full information is provided in each of the topic assessment chapters of the Environmental Statement.

4.3 The key embedded mitigation measures are summarised in Table 4.1 below.

Table 4.1 Embedded Mitigation

Embedded Mitigation	Impact reduction/avoidance objective
Traffic and Transport (ES Chapter 6)	
▪ The realignment and widening of Mere Lane section ▪ A new roundabout at the A5/ Mere Lane junction ▪ Extension of the dual carriageway on the A5 from Emmanuel Cottages to the new roundabout ▪ Maintenance/creation of access arrangements for Bittesby House ▪ The relocation of the existing weight restriction to the north east of the new roundabout on Mere Lane ▪ Capacity improvements are proposed at the A4303/ A426 roundabout ▪ New roundabout on the A5 at the northern end of the development approximately 260 metres south of White House Farm ▪ The creation of new permanent footpath and bridleway connections to facilitate access to the countryside	▪ Driver journey time and delay; ▪ pedestrian and cycle journey time, delay, accessibility and amenity; and ▪ public transport.
Noise and Vibration (ES Chapter 7)	
▪ Orientation of the proposed building and location of development elements in contributing to the control of noise from the unit to the nearest noise sensitive locations ▪ Noise limits have been set for all fixed plant items such that this impact would not be increased.	▪ Construction noise; ▪ operational noise, and: ▪ road traffic noise.

Embedded Mitigation	Impact reduction/avoidance objective
Hydrology and Flood Risk (ES Chapter 8)	
▪ Development of a surface water management scheme (the SUDS). ▪ Most of the site is situated within Flood Zone 1, and has a Low Probability of flooding (less than 1 in 1,000 annual probability of river or sea flooding in any year (<0.1%)).	▪ Water quality in the watercourses from (severe) spillages.
Landscape and Visual (Chapter 9)	
▪ Development of a surface water management scheme (the SuDS) (to maintain water quality, manage runoff and enhance wet land habitat). ▪ New spinneys and wet woodland are incorporated alongside parts of the tributary valley, to provide visual containment, restore the landscape pattern and habitat connectivity. ▪ Design and siting of buildings and infrastructure has been informed by an appraisal of local opportunities and constraints, including topography, location of settlement, heritage asset appraisal, ecology, recreation areas, land use etc. Guided by a landscape strategy vision, key design measures include: **(Zone 1)** ▪ Restrictions on building heights. ▪ The siting of road infrastructure low in the scene. ▪ the lowering of buildings through landform modification including alongside the A5. ▪ The sensitive siting of yards, offices and parking areas. ▪ Use of new buildings and structural planting to shield operational activities from adjacent communities. ▪ An aim of achieving a cut and fill balance and positively reuse site won topsoil. ▪ Reinstate a meadow area to protect buried archaeology in the vicinity of the Bittesby Deserted Medieval Village Scheduled Monument ▪ Colouring of the new building façades in a cladding which is tapered from light blue to off white to aid	▪ Lutterworth Lowlands and Upper Soar Landscape Character Areas; indirect effects on the adjacent Borough of Rugby Local Landscape Character Area of the High Cross Plateau (judged to be of medium sensitivity), to the west of the A5; ▪ deterioration of day time views; and ▪ deterioration of existing night time views.

Embedded Mitigation	Impact reduction/avoidance objective
visual integration with the sky and in places with the light coloured existing building backdrop. ▪ A sensitive lighting scheme in the built areas to avoid obtrusive lighting effects. ▪ The establishment of new woodland spinneys along the Ullesthorpe parish boundary. ▪ The restoration of former field boundaries, in the vicinity of the Scheduled Monument and alongside new roads to aid visual integration, reinforce the existing landscape pattern and to enhance ecological connectivity. **(Zone 2)** ▪ An earth bank with native woodland planting (with some evergreen trees) set inside and above the level of the existing tree and hedge lined southern boundary to reinforce the visual containment (summer and winter) of the existing boundary vegetation, particularly in views from Moorbarns and the A5. ▪ Siting container storage areas at the bottom of the site and restricting their stacking height. ▪ Tree planting and shrub planting on the northern and north east boundary to filter views towards the site, its access road and its entrance building from the A4303. ▪ A native planting belt along the western boundary to strengthen the existing boundary tree containment along the edge of the A5. ▪ A sensitive lighting scheme to avoid obtrusive lighting effects.	
Air Quality (Chapter 10)	
▪ Design and siting of buildings and infrastructure has been informed by an appraisal of local opportunities and constraints, including topography, location of settlement, heritage asset appraisal, ecology, recreation areas, land use etc. ▪ Measures to reduce pollutant emissions from road traffic are principally being delivered in the longer term by the introduction of more stringent emissions standards, largely via European legislation. The Council's Air Quality Action Plan will also be helping to deliver improved air quality.	Impacts on amenity: ▪ due to dust emissions; and ▪ emissions from vehicles.

Embedded Mitigation	Impact reduction/avoidance objective
Heritage and Archaeology (Chapter 11)	
▪ Design and siting of buildings and infrastructure has been informed by an appraisal of local opportunities and constraints, including topography, location of settlement, heritage asset appraisal (including non-intrusive and intrusive survey), ecology, recreation areas, land use etc.	▪ Scheduled Monument Bittesby Deserted Medieval Village (Reference 1012563) (indirect, visual impact); ▪ archaeological remains (direct impact); ▪ Conservation Areas and Listed Buildings (indirect, visual impact); and ▪ non-designated heritage assets (direct and indirect).
Ecology and Nature Conservation (Chapter 12)	
▪ There will be no lighting on the northern areas of Zone 1 which are designated as habitat enhancement areas. ▪ Adherence to best practice methodology with regards to pollution and impacts on water courses and affected ponds. ▪ Habitat enhancements have been made for bat species at the site, including landscape planting to encourage a range of invertebrate species, which will increase foraging opportunities for bats. Bat boxes will be installed on mature trees along linear foraging and commuting corridors to replace any lost roosting sites as a result of the proposals, and to enhance the site for roosting bats. In addition, two of the tunnels beneath the dismantled railway line will be enhanced for roosting and hibernating bats. ▪ The landscaping proposals will increase foraging, sheltering and nesting opportunities for passerine bird species at the site. A range of bird boxes will be installed on trees to be retained at the site to enhance nesting opportunities for a range of bird species. Berry rich tree, shrub and hedgerow species and the marshy grassland will also improve foraging opportunities for badger, known to be present within the local area, but not inhabiting the site. ▪ clearly marked and accessible footpaths coupled with dense hedgerow and shrub planting alongside	▪ Non statutory sites by pollution events, impacting upon water quality and the survival of both floral and faunal species; and ▪ non statutory sites due to increased noise and anthropogenic activity; and ▪ protected species.

Embedded Mitigation	Impact reduction/avoidance objective
it will limit trespass and, therefore, disturbance to wildlife.	

Alternatives Considered

4.4 Section 5 of the accompanying Design and Access Statement and ES Chapter 2 both provide an outline of the main alternatives studied and the main reasons for design and siting choices that have been made, taking into account the environmental effects. The Design and Access Statement also provides other information on the design and access arrangements for the site, and explains how these were formulated using a framework of sustainable design principles, including a landscape framework developed in the concept design stage. The application proposals are the result of a careful analysis of the identified constraints and opportunities, discussions with Harborough District Council and input from the public consultation process.

5 Assessment of Environmental Effects

Methodology

5.1 The potential environmental effects have been considered against a pre-development baseline and the potential effects are measured on the basis of the extent to which they deviate from this baseline, their significance and the potential for avoiding or ameliorating such effects. These mitigation measures have been identified and incorporated in the application**.**

Scoping

5.2 IDI Gazeley agreed with Harborough District Council that an Environmental Impact Assessment scoping report would not be submitted to the authority and that there would be no requirement for the authority to adopt a Scoping Opinion. Instead, it was agreed that IDI Gazeley should secure scoping agreements with each counterpart consultee.

5.3 IDI Gazeley provided Harborough District Council with an Environmental Impact Assessment Scoping Information document on the 28th August 2015. The document summarises the outcomes of the scoping exercise and confirms the scope and assessment methodology for each aspect of the application proposals that has the potential to give rise to significant environmental effects during either or both the construction and operational phases. These are summarised in Table 5.1:

Table 5.1: Scoping Outputs

Subject	Potential significant environmental effect	ES
Landscape and Visual Amenity	Potential for significant visual and landscape character effects, including lighting effects (such as light spill and glare), on sensitive receptors, including residents and ecology. Further information on the scope of the agreed assessment is provided in Chapter 9 and Technical Appendix A.3 (EIA Scoping Information document, Appendix H)	Chapter 9
Traffic and Transport	Potential for significant effects on the local highway system. Further information on the scope of the agreed assessment is provided in Chapter 6 and Technical Appendix A.3 (EIA Scoping Information document, Appendix E)	Chapter 6
Nature Conservation	Potential for significant effects on protected species and local habitats. Further information on the scope of the agreed assessment is provided in Chapter 12 and Technical Appendix A.3 (EIA Scoping Information document, Appendix G)	Chapter 12
Noise and Vibration	Potential for significant construction and operational noise and vibration effects on surrounding receptors.	Chapter 7

Subject	Potential significant environmental effect	ES
	Further information on the scope of the agreed assessment is provided in Chapter 7 and Technical Appendix A.3 (EIA Scoping Information document, Appendix F)	
Archaeology and Cultural Heritage (above and below ground)	Potential direct and indirect effects on Bittesby Deserted Village, a Scheduled Ancient Monument (SAM), Bittesby House a non-designated heritage asset and potential impacts on a wider area of potential archaeological interest. The potential for significant environmental effects on other designated heritage assets, including listed buildings and conservation areas. Further information on the scope of the agreed assessment is provided in Chapter 11 and Technical Appendix A.3 (EIA Scoping Information document, Appendix J)	Chapter 11
Water Management and Flood Risk	The potential for significant effects on local hydrology, including surface water, drainage conditions, water courses and flood risk. Further information on the scope of the agreed assessment is provided in Chapter 8 and Technical Appendix A.3 (EIA Scoping Information document, Appendix K)	Chapter 8
Socio-economics	The potential for significant effects on employment, labour market effects, education and the distribution and warehousing market. Further information on the scope of the agreed assessment is provided in Chapter 8 and Technical Appendix A.3 (EIA Scoping Information document, Appendix D)	Chapter 5
Air Quality	The potential for significant effects on sensitive receptors arising from construction and operational phase activities, including dust and vehicle generated particulates. Further information on the scope of the agreed assessment is provided in Chapter 10 and Technical Appendix A.3 (EIA Scoping Information document, Appendix I)	Chapter 10
Cumulative Effects	The potential for significant cumulative effects, taking into account other projects.	Chapter 13

5.4 The agreements reached on the scope of each impact assessment and methodology with the appropriate Harborough District Council consultee, as follows:

- Harborough District Council:
  - The Landscape Partnership for landscape and visual impacts
  - Environmental Health Officer for air quality, noise and vibration and ground conditions
  - Business Development Manager for socio-economic

- Leicestershire County Council Highway Authority, Highways England and Warwickshire County Council Highway Authority for traffic and transport
- Heritage England and Leicestershire County Council Conservation for heritage, above and below ground
- Leicestershire County Council Ecology and Natural England for ecology
- Leicestershire County Council Lead Local Flood Authority and Environment Agency for hydrology, including flooding.

5.5 A Statement of Community Involvement also accompanies the application and details the public consultation that informed the proposed development.

Committed Development

5.6 IDI Gazeley agreed with HDC (on the 15th July 2015) the schemes that are permitted, but not yet implemented, which need to be accounted in the assessment of the prospective cumulative environmental impact of the application proposals.

5.7 Although the EIA Regulations require only approved projects to be considered, IDI Gazeley agreed with HDC (15th July 2015) to consider the symmetry park proposal (application reference 15/00865/OUT) in "sensitivity" terms (i.e. an assessment of the cumulative impact should symmetry park as well as the application proposals be granted planning permission).

Assessment Methods and Significance

Sensitive Receptors

5.8 Sensitive receptors may be affected by elements of the development, such as construction, or by the completed scheme, or a combination of the two. Table 5.2 below identifies the key receptors but is not exhaustive and other receptors may be identified in the technical chapters.

Table 5.2: Sensitive Receptors

Category	Sensitive Receptor
Transport	Car users
	Cyclists
	Pedestrians
Existing and future residents	Residents of existing properties
	Future residents
Visual and Landscape	Long distance views
	Local views
	Conservation Area
Site workers	During the construction phase
Water resources	Groundwater

Category	Sensitive Receptor
	Surface water bodies
Ecology	Individual species and habitats
Heritage	Archaeological remains
	Listed Buildings
	Conservation Area
	Undesignated Heritage Assets

Significance

5.9 The significance of a particular residual impact, which could be adverse or beneficial, have been characterised in accordance with the criteria set out in Table 5.3.

5.10 In some instances, to comply with topic-specific standards or methodologies, the generic significance criteria may need to be adapted. Where this is the case, the adapted significance has been detailed and explained in the relevant chapter.

Table 5.3: Generic Significance Criteria

Significance Level	Criteria
Severe	Only adverse effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively associated with sites and features of international, national or regional importance. A change at a regional or district scale site or feature may also enter this category.
Major	These effects are likely to be important considerations at a local or district scale but, if adverse, are potential concerns to the project and may become key factors in the decision-making process.
Moderate	These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource. They represent issues where effects will be experienced.
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless they are of relevance in enhancing the subsequent development
Not Significant	No effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error.

Planning Policy & Context

5.11 The purpose of ES Chapter 3 is to provide the overall policy context for the assessment of the potential for significant environmental effects. The policy account is factual and contains no interpretation or weighing in line with EIA best practice.

5.12 The individual topic assessment chapters presented in the ES are all prefaced by relevant development plan and national policies specific to their topic.

5.13 ES Chapter 3 sets out the statutory development plan and the relevant planning policies and the material considerations that bear on the determination of the application proposals, including the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (PPG) and their relevant provisions, the National Policy Statement for National Networks (NPS), the District Council's Supplementary Planning Documents and the up-to-date evidence that bears on the determination of the Application Proposals.

Assessment Methodology

5.14 Chapter 4 describes the methodology used for undertaking the EIA, how the scope of the assessment was defined and the assessment of significance in respect of the residual environmental effects. The EIA is based on the schedule of application drawings set out at paragraph 1.4, ES Chapter 1. The scope of the EIA and the methodologies used to undertake it, were agreed during a pre application submission scoping process described in paragraph 4.5 of ES Chapter 4.

Assessment of Effects

Socio-economic Effects

5.15 Chapter 5 describes the anticipated socio-economic impacts of the proposed development. It is set against a background of support in national and local planning documents as well as Strategic Economic Plans of the three Local Enterprise Partnerships that cover the surrounding area.

5.16 A baseline study of the local economy finds that that Harborough District is a very open labour market (after residents working from home are excluded, only 38% work within the district, with 62% commuting out for work), with a large proportion of in-commuting from neighbouring districts to take up logistics jobs at Magna Park. The District's population is ageing, with a relatively high proportion of the population entering retirement age, generating replacement demand for labour by employers.

5.17 Logistics is a major sector that is vital to the economic health and employment prospects of the Harborough economy. Given the District's location within the logistics sector's Golden Triangle, its optimality as a location for the sector, the current and projected growth of the logistics sector and the rising skills levels of careers in logistics, there is significant demand for employers for warehousing space and labour at e ach skill level.

5.18 The proposed development responds to the District's demographic and employment challenges. The extension would create operational efficiencies for occupiers; create employment opportunities at each skill level; provide employment opportunities that will attract a diversely skilled and economically active population to the District; and in particular attract highly qualified and younger age cohorts to satisfy replacement labour demand and result in sustainable growth in the sector.

5.19 The extension proposals create on site a total of 5,800 permanent full time jobs; and the construction phase would create a further 1,634 construction jobs. On current shares, c1,088 of the permanent jobs and 287 of the construction jobs would be likely to go to Harborough residents, a share that could increase with pro-active measures to do so, and with 3,360 operational and 924 construction jobs to residents of Leicestershire.

5.20 The employment opportunities are created at each skill level and result in beneficial impacts to the local labour market. On typical industry averages, 28% of the 5,342 logistics jobs (out of the 5,800 total jobs) would be in professional and managerial occupations and a further 25% in mid-level and skilled occupations. The variety of occupations matches those sought by the resident labour market.

5.21 The number and range of occupations created would, over the longer term, help encourage the District's resident population of highly qualified young people to remain and take up these opportunities rather than commute out of the district for work. This will benefit the district's economy in a number of ways, including through a higher proportion of workers' retained in the district.

Highway and Transport Effects

5.22 Chapter 6 of the Environmental Statement presents an assessment of the effect of the proposed development on the surrounding road network.

5.23 The assessment has considered the change in the following conditions on the highway network:

- Driver journey time and delay;
- Pedestrian and cycle journey time, delay, accessibility and amenity; and
- Public transport.

5.24 With the exception of the short section of Mere Lane between the A5 and the site access where a short term major adverse impact on pedestrian and cyclist amenity is expected, no significant environmental effects have been identified during the construction, both with and without the identified cumulative schemes.

5.25 This section of Mere Lane is currently subject to a 7.5 tonne weight restriction, and as such the number of HGVs is very low (5 in the AM peak and 3 in the PM peak). A relatively small increase in the number of HGVs therefore appears to have a very significant impact, albeit the actual increase as a result of the construction phase is only an additional 9 HGVs in both peaks. During the operational phase of the proposed development, the maximum average delay at any individual junction is approximately 23 seconds (M69 J1), and the maximum increase in journey time on the selected routes is 89 seconds (A5(N) to M1(S)). Based on the significance criteria set out in ES Chapter 6, the impact on users of the local highway network is considered negligible.

5.26 A significant amount of mitigation is proposed to offset the effects that could result from the additional traffic that would be generated by the proposed development.

5.27 Roundabouts junctions with the A5 are proposed at the northern end of the site and at the junction with Mere Lane, as is the extension of the dualling of the A5 from Emmanuel/ Lodge Cottages to the new roundabout with Mere Lane The A5/ Mere Lane roundabout both provides the additional capacity needed to accommodate the proposals and provides a safer connection with the A5.

5.28 A further benefit of the proposed highway improvements is that some traffic from the existing Magna Park will use the new access route via Mere Lane and Argosy Way thus avoiding the Cross In Hand roundabout completely. This helps to mitigate the impact of the proposed development traffic on this junction, with average delay per vehicle increasing by just 1.2 seconds (s) in the AM peak and 0.6 seconds in the PM peak.

5.29 Highway improvements are also proposed at the A426/ A4303 roundabout and these are predicted to significantly reduce delay at the junction. During the AM peak, the average delay per vehicle at this junction will reduce from 25.2 s without development to 6.6s with development and with improvements. The corresponding reduction in average delay per vehicle in the PM peak is 7.2s to 4.2s

5.30 The proposed development is expected to generate an additional 52 trips by bus during shift changeovers. The existing bus service provides one bus per hour, and therefore additional demand would lead to overcrowding. The impact on Public Transport is therefore expected to be of major adverse significance.

5.31 Discussions with Leicestershire County Council regarding improvements to the existing bus service are ongoing. Depending on the improvements agreed, the impact on Public Transport will be reduced, with potential benefits to existing employees at Magna Park as well as new employees of the proposed development.

5.32 The redundant section of Mere Lane will be stopped-up and reclassified as a public footpath, providing an informal link to an existing public footpath on the west side of the A5. The new section of public footpath will be approximately 500m long. Therefore the residual impact on pedestrian and cyclist amenity along this section of Mere Lane is considered to be major beneficial.

5.33 Pedestrian and cycle facilities will be incorporated into the proposed development including a new footway and safe crossing points linking the proposed bus stops on Argosy Way to the extension site, a shared bridle/ pedestrian crossing of the access road serving the proposed development and secure, covered and well-lit cycle parking facilities within the car park of the proposed development.

5.34 Overall, pedestrian amenity will improve with the proposed development. Although there are several roads that will experience increases in HGV traffic of more than 30%, including sections of the A5, A4303 and the A426, this will in part be balanced by the proposed pedestrian and cycleway facility improvements, and the residual impact on pedestrians and cyclists is considered to be negligible.

5.35 Consideration of the effects when the cumulative schemes are included resulted in impacts of minor adverse significance on the M69 J1, with an increase in average delays at the junction of up to 137 seconds, and negligible impacts elsewhere on the network.

5.36 Cumulative scheme traffic will result in an increase in PM peak hour HGV traffic of 42% on Coal Pit Lane, and is therefore expected to have a minor adverse impact on pedestrian and cyclist amenity. Elsewhere on the network impacts are below 30% and are therefore considered negligible.

5.37 The impact of the cumulative schemes on Public Transport is expected to be negligible.

Noise and Vibration Effects

5.38 ES Chapter 7 examines the potential noise effects of the proposed development on existing noise sensitive locations. The assessment considers the effects on existing noise sensitivities arising from:

- Road Traffic Noise
- Operational Activity Noise
- Construction Noise

5.39 A noise survey was undertaken to help establish the existing baseline noise levels at the nearest and most exposed noise sensitive locations to the proposed development site. These levels were used to set noise criteria at each of the assessment positions, which were chosen represent the most exposed noise sensitivities.

5.40 An assessment was then undertaken of the impact of the operational and associated noise upon the assessment positions. It was established that worst case operational noise from the proposed developments is expected to be Negligible for Zone 1, Minor/Moderate for Zone 2 and Not Significant. In order to achieve this it is necessary to introduce some acoustic screening to the north west of the Zone 1 site. Noise limits have been set for all fixed plant items such that this impact would not be increased.

5.41 Changes in road traffic noise due to the development and operation of these units have been found to be Negligible and Not Significant in both the Short Term and Long Term cases.

5.42 Construction noise which is temporary in nature is expected to be controlled such that any impact is limited to Negligible and of Minor Significance in the short term at worst.

Hydrology and Flood Risk Effects

5.43 Chapter 8 identified the likely significant environmental effects of the proposed development with respect to water resources and flood risk.

5.44 An assessment of construction effects from the proposed development identified potential significant effects to water quality, biodiversity, recreation, amenity and heritage arising from construction activities (where no mitigation measures were implemented). Following the implementation of mitigation measures, significant effects remained for water quality and biodiversity. Mitigation measures specified include, but are not limited to:

- Standard construction practices should be utilised to manage the generation and release of sediments;
- Standard construction practices should be utilised to manage the use, storage and release of hydrocarbons and chemicals; and
- If works adjacent to a watercourse take place, then an Ordinary Watercourse
- Consent will be required from the Lead Local Flood Authority.

5.45 An assessment of operation effects from the proposed development identified potential significant effects to water quality, conveyance of flow and materials (surface water) and recreation, amenity and heritage arising from the operation of the proposed development (where no mitigation measures were implemented).

5.46 Following the implementation of mitigation measures, all effects were considered not significant. Mitigation measures specified include, but are not limited to:

- Storage of hydrocarbons and chemicals away from surface water sources in appropriately designated locations and with strict procedures to manage the operation of such facilities;

- Surface water runoff from the property not to exceed the Greenfield runoff rate, and to maximize the use of sustainable urban drainage systems to the greatest extent feasible; and
- Redirected ditches and the new culvert should be designed for hydrological conditions during the detailed design phase; to ensure the existing flow regime will be maintained with only a minor loss of vegetation at the culvert locations.

5.47 The significant residual effect of the proposed development during construction and operation arises from the risk to water quality in the ditches and watercourses from (severe) spillages and the risk of flooding, particularly in the land classified as Flood Zone 3. There is little opportunity to implement further mitigation measures (to those outlined above) to reduce the effects of accidental spillages other than undertaking risk and site specific emergency planning such that the effects of major spillages can be managed with as little impact on the water environment. The likelihood of such a sever spillage is low.

- A Flood Evacuation Plan should be developed to mitigate the risk of flooding to site users in during a flood event.

Landscape and Visual Effects

5.48 Chapter 9 considers the landscape and visual impacts of the proposed development. The assessment involved desk and field study to identify the landscape value and susceptibility of the site to the proposed logistics development and to identify its potential visibility in the surrounding area.

5.49 The principal landscape and visual impacts arising from the proposed development, during construction, include: some vegetation removal, demolition works, earthworks (including top soil re use), building installation works (including cranes), fit out works, new road construction, landscape infrastructure installation and from construction phase compounds, traffic and temporary lighting. During operation, landscape and visual impacts include those arising from: the new logistics buildings, service yards, the A5 road widening and improvement works, new access roads, new lighting within the site, including at new junctions, along the extended Argosy Way and through the Site, together with a the incorporation of a country park and meadow land as part of a comprehensive and visionary landscape, biodiversity and land drainage, logistic park scheme.

5.50 The scheme incorporates sustainable urban drainage features to maintain water quality, manage runoff and enhance wet land habitat. New spinneys and wet woodland are incorporated alongside parts of the tributary valley, to provide visual containment, restore the landscape pattern and habitat connectivity; Also, incorporated into the design, is a lighting strategy which is responsive to the Institute of Lighting Engineers 'Guidance Notes for the reduction of intrusive light, 2005' through a compliant lighting scheme and further measures to reduce spill and sky glow from within the existing Magna Park. These measures would be delivered and monitored through implementation of approved drawings, planning conditions, Section106 agreements, and a conditioned Construction and Environmental Management Plan.

5.51 All of the proposed design measures are delivered within the context of a landscape masterplan vision. The scheme that is the subject of this application specifically aims to further the objectives of the 'Statement of Environmental Opportunities' published in the Leicestershire Vales National Landscape Character Area Profile and the principles of sustainable development through its landscape masterplan and a scheme that integrates with the local Soar valley tributaries to deliver some positive environmental gains associated with recreation, landscape management, heritage and biodiversity, in combination with the proposed development.

5.52 In Zone 2, in the detailed scheme, embedded landscape design measures include: tree protection fencing during construction to safeguard boundary trees, an earth bank with native woodland planting (with some evergreen trees) which would be set inside and above the level of the existing tree and hedge lined southern boundary. This boundary treatment is incorporated to reinforce the existing visual containment (in summer and winter), provided by the existing boundary vegetation, particularly in views from Moorbarns and the A5. Container storage areas are set at the bottom of the site and are restricted in stacking height to aid visual assimilation. Tree planting and shrub planting on the northern and north east boundary has been incorporated to filter views toward the site, its access road and its entrance building from the A4303. A native planting belt has also been incorporated along the western boundary of the Site to strengthen the existing boundary tree containment afforded to the site along the edge of the A5, in views from the Lutterworth Road, to the west. A sensitive lighting scheme has also been submitted to avoid obtrusive lighting effects.

5.53 During construction, the residual landscape effects arising from the works proposed on the Zone1, part of the site, to the south east of Mere Lane, within the Lutterworth Lowlands landscape character area, are anticipated to be, over a medium term, and minor adverse on the site and negligible on the locality. The construction effects arising from the detailed application Site works, proposed within the Zone 2 part of the application site, to the south of Magna Park, also in the Lutterworth Lowlands, would be short term and has been judged to be minor adverse. These effects would not be significant. The construction effects, arising from the Zone 1 parts of the scheme to the north west of Mere Lane, which would take place over the medium term, are anticipated to cause moderate to major adverse effects on the low lying clay vale farmland, at a site level and moderate effects on the locality. The construction effects arising from this part of the site, at a site level, are considered to be significant. The construction effects arising from the Zone 1, within the Soar tributary valley parts of the application site are anticipated to be medium term and to be moderate adverse at a site level and moderate to minor adverse on a 0.5km locality. These effects would not be significant. Indirect construction effects are also anticipated to arise on the High Cross Plateau landscape character area, to the west of the A5. The levels of effect predicted, over the medium term, arising from the Zone 1 part of the application site is considered to be moderate adverse.

5.54 The indirect construction effects anticipated from the Zone 2, detailed scheme for the dedicated Magna Park rail freight shuttle terminal and HGV parking facility, on the adjacent High Cross plateau landscape are considered to be minor adverse, given the limited area effected and extent of intervisibility. These effects would not be significant. The day time, visual effects anticipated, from the Zone 1, part of the application site, during construction, overall, are considered to range from major adverse to neutral across the potential viewers of the scheme. Some significant effects, during construction, are anticipated, on some sections of public footpath and bridleway approaching the A5 and between Chuckey Hall and Willey, within the application site and from sections of the A5. These effects would be short to medium term, in nature. The Zone 2 part of the application site south of Magna Park would during construction, give rise to visual effects that range from moderate to minor adverse. A noticeable deterioration, in views is anticipated from road users on the A5 and visitors to the Liberty Hotel and horse riders on a section of bridleway near Moorbarns and road users and workers in the vicinity of the A4043, Coventry Road. Barely perceptible effects are anticipated from elsewhere. Some of the visual effects of the Zone 1 application site are considered to be significant.

5.55 At night, during the construction stage, artificial lighting effects arising from Zone 1 of the application site to the north west of Magna Park are anticipated to range from moderate adverse to neutral. None of the effects are considered to be significant and the largest level of effect would be on road users on a short section of the A5. The artificial lighting effects anticipated, during construction, from the Zone 2, dedicated Magna Park rail freight shuttle terminal and HGV parking facility, to the south of Magna Park would be moderate adverse on road users on a short stretch of the A5 but no other notable effects have been identified, and none of the impacts are considered significant.

5.56 During the operation stage, the residual landscape effects arising from the works proposed on the Zone1, part of the site, to the south east of Mere Lane, within the Lutterworth Lowlands landscape character Area, are anticipated to be minor adverse at a site level and have a negligible effect on the locality. The operation effects arising from the detailed application work, proposed within the Zone 2 part of the application site, to the south of Magna Park, in the Lutterworth Lowlands, are anticipated to be moderate adverse on the site and minor adverse on the locality reducing to negligible in the mid-term. The effects have been considered against the background of an existing committed HGV Park development on the site. The operation stage effects on the landscape of the Lutterworth Lowlands are considered to be not significant.

5.57 The operation stage effects arising from the Zone 1 parts of the scheme to the north west of Mere Lane are anticipated to cause moderate to major adverse effects on the low lying clay vale farmland, reducing to moderate adverse in the mid-term, at a site level and moderate adverse effects on parts of a 1.5km locality. The operation effects arising from the Zone 1 scheme, within the Soar tributary valley parts of the application site, are anticipated to be moderate adverse at a site level and minor adverse reducing to minor adverse to negligible on a 0.5km locality in the mid-term, once the scheme landscape has established. The effects on the low lying arable farmland within the Zone 1 Site are considered to be significant, at the year of opening and in the shorter term, at a site level.

5.58 The indirect effects, anticipated to arise on the landscape of High Cross Plateau LCA, to the west of the A5 from the Zone 1 part of the application site, during operation, are considered to be moderate adverse, reducing to minor to moderate adverse over up to a 1.5km area, in the mid-term. The indirect effects anticipated from the Zone 2, detailed scheme for the dedicated Magna Park rail freight shuttle terminal and HGV parking facility, on the High Cross plateau are considered to be minor adverse reducing to negligible, over up to a 1km area, in the mid-term, following the establishment of proposed landscape boundary treatments. The above indirect effects on the landscape of the adjacent High Cross Plateau would not be significant.

5.59 The day time visual effects anticipated during operation overall from Zone 1 of the application site are considered to range from major to moderate to neutral adverse across the potential viewers of the scheme. Large effects would be apparent in opening year and in the shorter term from some sections of footpath and bridleway within the application site and from sections of the A5.

5.60 Noticeable effects would be experienced by some residents on Woodway Lane, a resident to the east of White House Farm, horse riders and walkers in the locality (including on the southern edge of Ullesthorpe and on the bridleway between Willey and Chuckey Hall) and visitors on permissive routes/open land within limited parts of the Bittesby scheduled monument site. Visual effects are considered to be significant in the opening year and short term, on the above viewers, but are anticipated to become not significant in the mid-term when the landscape framework for this part of the site has had time to establish.

5.61 The day time residual visual effects anticipated to arise from the dedicated Magna Park rail freight shuttle terminal and HGV parking facility are considered to range from moderate to minor adverse across the potential viewers of the scheme. Noticeable effects would persist in the view from a short section of the A5 until the mid-term. These effects are not considered to be significant in the short or longer term.

5.62 At night during the operational stage residual effects in Zone 1 with design and mitigation measures in place are considered to range from moderate to neutral. Some residents and some road users on part of Main Road, Willey are anticipated to experience some noticeable effects in the short term from the north western part of the application site, but reducing in the mid-term to barely perceptible levels after establishment of boundary vegetation. Road users on the A5 would experience some noticeable effects that would persist, where new street lighting approaching new junctions is introduced. Residents on Woodway Lane and some residents on the southern edge of Ullesthorpe are anticipated to experience barely perceptible effects, with the improvements to the existing Magna Park lighting, whilst neutral effects are anticipated on the community of Claybrooke Parva. The night time, operational stage residual effects of lighting, anticipated from the Zone 2 Site, are considered to be moderate adverse reducing to moderate to minor adverse in the mid-term and principally effecting road users on the A5 and visitors to the Liberty Hotel. The night time operation stage effects arising from artificial lighting are all considered to be not significant on the surrounding communities.

5.63 With mitigation measures in place and secured, the assessment concludes that whilst there are some significant landscape and visual effects arising during construction and in the shorter term, these need to be considered in the planning balance. In the mid-term, no landscape and very few visual effects, arising from this development, are anticipated to be issues that would become key factors influencing the decision making process.

Ecology and Nature Conservation Effects

5.64 Zone 1 of the site is characterised by predominantly arable fields with poor semi-improved grassland field margins, with occasional fields of poor semi-improved grassland and a single field of marshy grassland. These are all bounded by a combination of hedgerows with trees, and drainage ditches. Several sections of broadleaved plantation woodland are situated within the eastern and central areas of the site, and there are four ponds at the site. Running north-south through the site is the dismantled Midland Counties railway line embankment. A range of domestic and commercial buildings with associated infrastructure lie within the south-western extent of the site.

5.65 Zone 2 of the site comprises two fields of poor semi-improved grassland bisected by a field drain, with an embankment colonised by tall ruderals within the north-eastern area, and scrub along the drain and along the eastern edge of the site. Bounding the site to the north and east was a hedgerow, whilst to the south was a row of scattered trees, beyond which, immediately off-site, was a brook. Overall Zones 1 and 2 that comprise the site are considered to be of generally low biodiversity value.

5.66 This report has assessed the value of the habitats within the proposed development and the species associated with them. Whilst an assessment of the trees on Zone 2 was completed for their potential to support roosting bats, no other protected species surveys were deemed necessary. Whilst there are no GCN breeding ponds on-site, the results of the survey works indicate that there is a medium meta-population of Great Crested Newts within the local area around Zone 1, breeding within ponds to the east of the proposed development within Magna Park, and to the north, in field ponds east and west of Mere Lane. Common toad has been recorded in high numbers at Mere Lane Lagoon (Pond 3) and at Pond 1 on-site.

5.67 At least two species of bats have been confirmed roosting in buildings and trees on-site, with a total of three roost sites confirmed within the buildings, and two suspected roost sites, and two confirmed roost sites in trees, and three suspected roost sites. All of the roost sites have been found to support low numbers (lone males or non-breeding females) of widespread bat species. The nocturnal bat surveys have identified six species of bat to be utilising the Site for foraging and commuting purposes, with common pipistrelle bat the most frequently recorded. Heightened foraging activity was recorded along the avenue of trees leading up to Bittesby House, whilst the dismantled railway line was found to be utilised by commuting bats. Overall, bat activity across the site was low.

5.68 The WBS recorded a total of 49 species to be utilising Zone 1 of the Site, of which two were Schedule 1 species (WCA 1981, as amended) and a total of 10 species were Red list Birds of Conservation Concern and Euro Bird Species. The majority of bird activity was located in the field margins and field boundary hedgerows. Overall the species recorded were found in low numbers and were considered to be commonly occurring locally, and widespread within the county.

5.69 The Breading Bird Survey recorded a total of 56 species to be utilising Zone 1 of the site. Twenty-seven of the species recorded were Red or Amber list Birds of Conservation Concern, or identified as priority species on Section 41 of the Natural Environment and Rural Communities Act 2006. Two Schedule 1 species (Wildlife and Countryside Act 1981, as amended) were recorded on one visit, these were winter migrants recorded early in the breeding bird season. The majority of bird activity was located in the field margins, wetland areas, woodlands and field boundary hedgerows. Overall the species recorded were found in low numbers and were considered to be commonly occurring locally, and widespread within the county.

5.70 Whilst there are disused badger setts within the western and northern extents of the site, there are no active setts on-site. There is an active sett within proximity to the site to the east. Widespread badger activity was recorded across the site to indicate that the site is within the territory of a badger group. No reptiles have been recorded within suitable habitat at the north-eastern extent of Zone 1 around the Lagoon. A single hare has been recorded on-site on one occasion.

5.71 In light of the anticipated impacts associated with the construction and operational phases of the development, mitigation has been put forward to minimise the impacts and level of disturbance relating to the proposed development, such that there are not considered to be any significant residual impacts resulting from the proposals.

5.72 Whilst it is not possible to finalise a mitigation strategy before the details of the design of the application proposals for Zone 1 have been finalised, the habitat enhancements included within the proposed landscaping plans for the site include mitigation measures for Great Crested Newts. These include at least one breeding pond to be included within a proposed temporary receptor area to the north of the proposed DHL building in the north-eastern extent of the site, and further wetland areas in the northern and central areas of the site, such that there is the potential to create a second temporary receptor area, if necessary. Ideal terrestrial habitat, including alder carr, wet meadow, reed bed habitat and species-rich grassland, as well as log piles and creation of hibernacula, in addition to the new woodland and hedgerow planting will be incorporated into the development. Furthermore, amphibian tunnels and permanent amphibian fencing have been included within the proposals, and their locations will be confirmed once the development plans have been finalised. They will be designed to ensure that no amphibians are harmed on the roads, or become trapped in gulley pots.

5.73 Habitat enhancements have been made for bat species at the site, including landscape planting to encourage a range of invertebrate species, which will increase foraging opportunities for bats. Bat boxes will be installed on mature trees along linear foraging and commuting corridors to replace any lost roosting sites as a result of the proposals, and to enhance the site for roosting bats. In addition, two of the tunnels beneath the dismantled railway line will be enhanced for roosting and hibernating bats.

5.74 The landscaping proposals will increase foraging, sheltering and nesting opportunities for passerine bird species at the site. A range of bird boxes will be installed on trees to be retained at the site to enhance nesting opportunities for a range of bird species. Berry rich tree, shrub and hedgerow species and the marshy grassland will also improve foraging opportunities for badger, known to be present within the local area, but not inhabiting the site.

5.75 Lighting at the site has been designed to minimise any impact on wildlife habitats through the use of light emitting diodes throughout the scheme to limit light spillage and to ensure lighting is directional. There will be no lighting onto any wildlife habitats at the site. Whilst public access is to be increased as a result of the proposals through additional footpath provision in the northern and north-eastern areas of the site, it is anticipated that the provision of clearly marked and accessible footpaths coupled with dense hedgerow and shrub planting alongside it will limit trespass and, therefore, disturbance to wildlife.

5.76 Overall connectivity for wildlife both within the site and to off-site habitats will be maintained, and where possible, enhanced through both supplementary planting to hedgerows, and new planting around the perimeter of the distribution warehouse facilities across the site.

5.77 Going forward it will be essential to ensure that both the retained habitats and the significant areas of new habitat creation that have been proposed are appropriately managed and maintained in the long-term.

5.78 These proposed measures will help to achieve Local Biodiversity Action Plan and England Biodiversity Priority Species objectives and compliance with local and national policies, and will enrich the local biodiversity of Harborough District.

Air Quality Effects

5.79 The Air Quality assessment confirms that the construction works have the potential to create dust. During construction it will therefore be necessary to apply a package of mitigation measures to minimise dust emission. With these measures in place, it is expected that any residual effects will be 'not significant'. However, the guidance recognises that, even with a rigorous dust management plan in place, it is not possible to guarantee that the dust mitigation measures will be effective all of the time, for instance under adverse weather conditions. The local community may therefore experience occasional, short-term dust annoyance. The scale of this would not normally be considered sufficient to change the conclusion that the effects will not be significant.

5.80 The operational impacts of increased traffic emissions arising from the additional traffic on local roads, due to the development, have been assessed. Concentrations have been modelled for 16 worst-case receptors, representing existing properties where impacts are expected to be greatest. In the case of nitrogen dioxide, the modelling for the year of 2016 has been carried out assuming both that vehicle emissions decrease (using 'official' emission factors), and that they do not decrease in future years. The proposed scheme will increase traffic volumes on local roads. These changes will lead to an increase in concentrations of PM10 and PM2.5 at all existing receptors, but the impacts will all be negligible. In the case of nitrogen dioxide, assuming that vehicle emissions reduce between 2014 and 2016, the impacts will be Negligible at all receptors. Without a reduction in vehicle emissions over this period, the impacts will remain negligible at most receptors, but slight adverse at Receptor 10, moderate adverse at Receptors 2 and 4, and substantial adverse at Receptor 1. In 2021, the impacts will be negligible at most receptors, but Slight Adverse at Receptors 2, 3, 4, 6 and 10, and moderate adverse at Receptor 1. In 2031, the impacts will all be Negligible.

5.81 The overall operational air quality effects of the development are judged to be Minor Adverse in 2016. This conclusion, which takes account of the uncertainties in future projections, in particular for nitrogen dioxide, is based on nitrogen dioxide concentrations being below the annual mean objective in 2016 at most receptors, but above the objective at two receptors (1 and 2) assuming no reduction in emissions; the proposed development does not cause any new exceedences. In 2021 and 2031 the effects of the scheme are judged to be not significant.

Heritage and Archaeology

5.82 The Zone 1 site contains one area protected through designation as a Scheduled Monument - Bittesby Deserted Medieval Village.

5.83 There are no Conservation Areas, Registered Parks, Registered Battlefields or Listed Buildings within the site. There is one designated heritage asset in the vicinity that is considered to be sensitive to development proposals, the Scheduled Monument of the 'Moat, fishponds and shifted village earthworks at Ullesthorpe.

5.84 The results of geophysical survey and fieldwalking across c 189.5 ha of the Zone 1 site (the vast majority of the site) have identified twenty-three hitherto unknown heritage assets within the site, comprising Prehistoric and Roman settlement sites and enclosures, but largely ditches and trackways thought to date from the Prehistoric to Post-Medieval/Modern periods. These assets are assessed as likely to be of local, local/regional or regional importance. Archaeological Assets A5, A7, A8 and A9 comprise a multi-phase Roman site with limited evidence for Iron Age activity. The Roman ladder type settlement, with associated enclosures and trackways t are likely to be of Regional Importance. These features occupy the north-western extent of the ridge, east of the Scheduled Monument. These features contribute to the significance and setting of the Scheduled Monument and the ridge into which they are cut limits the extent of the setting of the Monument that contributes positively to its significance. These assets have therefore, been removed from the areas of Proposed Development and cultivation and will remain preserved in situ. The impacts on these archaeological assets is therefore deemed to be Large Beneficial. The remaining Archaeological Assets will be subject to further (trial trenching and metal detecting) evaluation. It is unlikely that these Assets will prohibit development.

5.85 This assessment as identified that unmitigated, the Proposed Development is likely to have a Moderate impact upon the setting of the Scheduled Monument. The mitigation measures incorporated in the scheme design will be achieved through tapered light cladding treatments of the buildings, the building parcel siting away from sensitive locations, intervening existing vegetation and landform which screens sensitive views, the use of maximum building height restrictions and appropriate additional planting, which, once mature, will mitigate the majority of the visual intrusion on the Scheduled Monument from the Proposed Development.

5.86 There is no mitigation proposed to mitigate the impact upon the setting of the buried archaeological features occupying the ridge between the application area and the Monument. The significance of these features is not vested in their setting, but they do make a positive contribution to the setting of the Scheduled Monument. The effect of development will be to increase the visual intrusion, together with noise and commercial activity, into the setting of these features. The impact of the development will be Moderate and therefore, even with the proposed planting there will continue to be a Moderate impact upon the setting of the Scheduled Monument. This impact is significantly less than 'substantial harm' (NPPF para 134).

5.87 There will be visual intrusion on the 'Moat, fishponds and shifted village earthworks at Ullesthorpe' by the upper limits of the proposed development within the western portion of the study site. However, the impact of the mitigated development is considered to be low**.**

5.88 There will be a requirement for further pre-determination evaluation, through trial trenching and metal detecting, of the hitherto unknown heritage assets identified within Zone 1 (Assets A1-A4, A6, A10-A23) and within the area proposed for the rail freight terminal (Zone 2).

5.89 This will determine the need for and scope of any archaeological mitigation. With appropriate mitigation the impact of the development upon these assets is assessed as Minor.

5.90 There will be a minor impact on the significance of Ullesthorpe Mill (Grade II). The Proposed Development will result in additional buildings apparent in the distance as viewed from the upper two windows of the Mill which have a southerly aspect. No residual effects have been identified upon the Conservation Area of Ullesthorpe or Claybrooke Parva, or the remaining Listed Buildings in the search area as they are partially or fully screened from the Proposed Development by intervening built development, mature trees and local topography. Where the Proposed Development can be seen from listed buildings mitigation will include increased or enhanced planting and building cladding treatments.

5.91 The Proposed development will not involve significant change to run off rates into the river, nor will it create significant changes to soil chemistry or hydrology. The construction and operation phases of the development will not affect the hydrology of the Scheduled Monument or the Listed Buildings at Claybrooke Mill.

5.92 Any residual effects following mitigation are considered to be minor. As all archaeological remains will be removed by the construction phase of the development there will be no further impacts upon the archaeological resource from the completed development.

5.93 Bittesby House and its associated outbuildings, Bittesby Cottages and the former lodge to Bittesby House are 'non-designated heritage assets'. The proposed development will result in the loss of these buildings. They are of low significance; therefore their loss constitutes moderate change. This will be mitigated by historic building recording prior to and during their demolition – a minor positive effect.

Cumulative Effects

5.94 Each of the technical chapters sets out a consideration of the potential environmental effects when considered in combination with a number of other agreed developments. Cumulative residual effects, those that remain after mitigation, are dealt with in each of the technical chapters and summarised below.

5.95 No significant adverse effects are envisaged during the construction phase. Any potential effects in associated with the proposed development in combination with the other projects identified are considered to be negligible and not significant. During the operational phase, the cumulative effects are not considered to be adverse in respect of any of the assessment parameters save for Transport, Landscape and Visual and Heritage, and in all cases are not considered to be significant.

5.96 The db symmetry sensitivity test conclusions are summarised below.

Cumulative Effects with symmetry park

Traffic and Transport

5.97 The maximum average delay at any individual junction due to the symmetry park traffic is approximately 30 seconds (M69 J1), and the maximum increase in journey time on the selected routes is 34 seconds (M6(W) to M1(N)). Therefore, the impact of the symmetry park development on users of the highway network is considered to be negligible.

5.98 The symmetry park development will result in an increase in HGV traffic of 32% on the A4303 between Hunter Boulevard and the A5. Therefore the impact on pedestrians and cyclists on this section of the road is considered to be minor adverse. Elsewhere on the network impacts are below 30% and are therefore considered negligible.

5.99 The symmetry park development is predicted to generate 23 trips additional trips by bus in the AM peak, and 21 trips in the PM peak. This is considered likely to increase crowding on the existing bus service, and therefore there will be a minor adverse impact on public transport which is not significant.

Noise and Vibration

5.100 This assessment has shown that the impact in both the short and long term of road traffic associated with the proposed development would be limited to a Negligible Magnitude in all cases.

Hydrology and Flood Risk

5.101 The land at Glebe Farm drains to the River Swift, which is a tributary of the River Avon. As such, if this development were to take place in addition to the application proposals, the cumulative effects are considered to be Negligible as only Zone 2 is part of the same catchment. As such cumulative impacts to the water environment and increases to flood risk are considered to be negligible.

Landscape and Visual

5.102 Effects on the landscape of the Lutterworth Lowlands District LCA are elevated to become significant, during construction, and up until the mid to long term.

5.103 Significant sequential visual effects in the day time on road users passing along the A5 during construction and in the early years of operation. However, the combined effects are not significant from the mid-term. Night time sequential visual effects, as experienced from the A5, are not significant during construction or in operation. An increase in artificial lighting effects is anticipated, arising from sky glow, on communities to the south of Magna Park over and above the levels arising from this application and other considered development. However, the potential scale of this is not possible to accurately estimate at present.

Air Quality

5.104 All predicted air quality impacts are negligible, and the operational effects are unchanged from those described in section 10.6 of Chapter 10.

6 Conclusions

Conclusions

6.1 The proposed development would inevitably change aspects of the local environment. However, the design of the scheme and its incorporated and proposed mitigation, would ensure that there would be no significant long term residual adverse effects for the purposes of the Regulations.

6.2 None of the adverse effects identified would be more that 'Moderate' and from an EIA perspective would not therefore be of more than local significance and would not be considered key decision making issues.

6.3 Moderate beneficial effects are predicted to result from the extensive highway and junction improvements that are proposed as part of the development. Major beneficial effects are predicted with regard to the socio-economic effects of the proposed development, in particular associated with the creation of both construction and operational phase employment.

6.4 The proposed development will create 5,800 operational jobs and a further 1,634 construction jobs. On current shares, some 1,088 of the operational jobs and 287 of the construction jobs are likely to go to Harborough residents, with 3,360 operational and 924 construction jobs to residents of Leicestershire. Mitigation is proposed to increase those shares.

6.5 Given the good match between the occupational profile of the jobs to be created and that of the resident labour force, the jobs will over time help to encourage the young, qualified and skilled to work in the district rather than commute out for work, with consequential benefits for the local economy. The proposed development responds positively to the District's particular demographic and employment challenges.