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1 Introduction

1.1 Introduction

- 1.1.1 This Background Document relates to land located at Lower Heathcote Farm, Warwick (the site). The document is submitted on behalf of Gallagher Estates Ltd who have a controlling interest over the land. Attached at **Figure 1.1**, Site Context Plan, is a plan which identifies the site.
- 1.1.2 The site covers 63.5ha hectares and is subject to an outline planning application by Gallagher Estates Ltd which seeks approval for residential development (upto 785 dwellings) with access, extensive open space, a local centre, primary school and associated infrastructure. The application is accompanied by an Environmental Statement (ES) and a range of attendant supporting documentation. There is, therefore, extensive technical information available in relation to the site.
- 1.1.3 The Background Document should be read in association with Gallagher's representations to the draft Local Plan. Collectively the submissions demonstrate that the inclusion of the site at Lower Heathcote Farm in the draft Local Plan is appropriate, justified, effective, deliverable, consistent with national policy and soundly based, and the site can assist in meeting the objectively assessed need for housing in Warwick District.

1.2 Purpose of the Background Document

- 1.2.1 The Background Document is cognisant of the evidence base published by the District Council as summarised in the 'Site Selection Methodology and Site Selection Table' (April, 2014). The site is included within the Site Selection Table as "Part of W07", in addition to being considered as part of a wider area incorporating additional land to the immediate east of the Gallagher Estates Ltd site. This includes the old Sewage Works and land extending further to the east bounded by Harbury Lane to the north and open countryside to the south. This background document focuses specifically on the Gallagher Estates Ltd site, however is dealt with in the context of the wider development in this area.
- 1.2.2 In light of the above, within the chapters that follow (see section 1.4 below), the Background Document draws on Gallagher Estates Ltd extensive technical knowledge of the site alongside the evidence base as published by the Council.
- 1.2.3 The Background Document and accompanying Representations effectively demonstrates the suitability, achievability, availability and, in essence, the sustainability of this site for development and supports the identification of this site within the draft Local Plan.

1.3 Site Description and Context

- 1.3.1 The site is predominantly agricultural land, including the buildings of Lower Heathcote Farm and the remainder of its associated land holding. Land use on site consists of approximately six arable fields, with two areas of improved grassland, one of which is used as a caravan park. The site also consists of two fishing ponds, amenity grassland and a complex of farm buildings associated with Lower Heathcote Farm. Topographically the site lies at +67-70m AOD at its highest in the east, with a slope across the south-western part of the site falling to approximately +50m AOD towards the stream corridor. Effectively, this site lies on the northern edge of a shallow valley side. Other vegetation on site includes a number of hedgerows with occasional trees and some mature riparian vegetation associated with the stream corridor. There are no public rights of way located within the site boundary.
- 1.3.2 **Figure 1.2**, Site Location Plan, shows the site in its immediate context. The site is situated on the southern urban edge of Warwick / Learnington. The site has firm boundaries and is defined by Harbury Lane with its associated vegetation to the north, along with the site 'Land North of Harbury Lane' beyond, which was granted consent to Gallagher Estates Ltd for the development of up to 220 dwellings in August 2013. Development has not yet commenced on site.
- 1.3.3 The southern boundary of the site at Lower Heathcote Farm is demarcated by a stream corridor, with further open countryside beyond, including the Village of Bishop's Tachbrook located approximately 1 km to the south-east. Heathcote Park and an existing hedgerow lies to the site's east, with the former Severn Trent Sewerage Works and further agricultural land beyond. This land also forms part of the proposed allocation for development in the Publication Draft Local Plan (Ref

H02). The residential area of Heathcote lies further to the north east of the site, including 'Warwick Gates', in addition to the employment/commercial development.

1.3.4 Europa Way and associated vegetation defines the site's western boundary. 'Land South of Gallows Hill/ West of Europa Way' lies beyond Europa Way which Gallagher Estates Ltd have a controlling interest. An outline planning application by Gallagher Estates Ltd has been submitted on land to the South of Gallows Hill / West of Europa Way, which seeks approval for residential development (up to 450 dwellings) with access, open space and associated infrastructure.

1.4 Organisation of the Background Document

- 1.4.1 The Background document is structured as follows:
 - Chapter 1: Introduction- provides an introduction to the site and explains the purpose and content of the document.
 - Chapter 2: Masterplanning and Design Concept provides an "Indicative Masterplan" for the site with an accompanying discussion which demonstrates how proposals could be successfully accommodated on the site.
 - Chapter 3: Landscape and Visual Issues considers the capacity of the site to accommodate development in relation to landscape and visual issues.
 - Chapter 4: Ecology considers ecological and nature conservation issues in relation to the site.
 - Chapter 5: Transport and Accessibility considers the accessibility of the site to public transport and nearby facilities and discusses the capacity of the surrounding highway network and potential access arrangements.
 - Chapter 6: Other Issues Looks at a range of other technical issues relating to the site including archaeology, noise, air quality, agricultural land quality, land contamination and geotechnical issues and utilities & services.
 - Chapter 7: Summary & Conclusions provides an overview of the Background Document's findings and draws conclusions.
- 1.4.2 The specialist consultants who have contributed to the preparation of this background information are referenced in the Project Directory at the front of this document.

2 Masterplanning and Design Concept

2.1 Introduction

2.1.1 This chapter gives consideration to the opportunities and constraints of the site at Lower Heathcote Farm. An assessment of these opportunities and constraints has enabled a design concept to be developed, which has facilitated the formulation of indicative development proposals. These development proposals are discussed further below and are illustrated on Figure 2.2, Indicative Masterplan.

2.2 Opportunities, Constraints and Design Principles

2.2.1 An evaluation of the site has highlighted specific opportunities, constraints and design principles which have been utilised to inform and structure the design of potential development proposals. These opportunities and constraints are set out below and illustrated on **Figure 2.1**, Constraints and Opportunities Plan:

Opportunities

- Provision of improvements to Heathcote Lane, Harbury Lane and Europa Way,
- Creation of a high quality gateway to the Europa Way/Gallows Hill/Harbury Lane junction;
- Development of connections to the existing highway and public rights of way network and infrastructure provision;
- Development of a sustainable residential development with a unique identity and character that also complements and takes positive design cues from the local vernacular;
- Provision of a range of house types, sizes and tenures;
- Provision of a network of public open space/green infrastructure which complements the existing green links as well as providing for the needs of the new community;
- Provision of a strong landscape framework that utilises existing vegetation and landscape features on site;
- Integration with potential new development to the east and west of the site; and
- Provision of a sustainable urban drainage system

Constraints

- The retention of existing hedgerows and other landscape features;
- The retention and protection of identified protected species habitats;
- The existing buildings within the development site;
- The rising land form to the south-east of the site; and
- The incorporation of existing services

Design Principles

- 2.2.2 It is recognised that considerable importance is placed upon achieving a high standard of design across any proposed development site, which is clearly advocated in National and Local Government Policy and Guidance. The identification of the constraints and opportunities above, in tandem with clear design principles and objectives will help ensure a high quality layout can be designed on the site at Lower Heathcote Farm, and one that will successfully assimilate on the site, and also into the surrounding landscape and urban fabric.
- 2.2.3 It is acknowledged that successful urban design is dependent upon achieving an appropriate relationship between community needs, development principles, development form and a positive response to local conditions. The principles discussed below have derived from detailed site assessments, including those disciplines discussed throughout this document, and have been developed in order to steer the design of any potential new community on the site at Lower Heathcote to achieve this successful relationship.

Function and Quality

"Developments will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development" (Paragraph 58, point 1, NPPF

- The development provides the opportunity to establish a distinctive identity to a place which, whilst having its own character integrated with the surrounding built form and landscape context;
- Retention and potential enhancement of the existing landscape features on the site, including the existing boundary vegetation and ponds;
- Establish a distinctive identify through well-designed spaces and built form;
- Varying building height and materials by encouraging high quality design that creates variety and visual interest that assists in creating a diverse and distinctive, comprehensive development;
- Minimise the impact of the development on the open countryside and surrounding context, particularly giving consideration to the southern extent of the site, it's topography and the wider open agricultural existence; and
- Protection of the existing floodplain round the Tach Brook which is located within and in the vicinity of the site to ensure that the development does not increase the risk from flooding in the area.
- 2.2.4 A Green Infrastructure Strategy has been integral to the design of the potential indicative proposals and aims to ensure that any development on the site at Lower Heathcote Farm provides connected and multi-functional landscapes and green spaces, not only within the individual site itself, but also the wider existing and/or potential future surroundings. The strategy identifies key GI hubs, creates physical and accessible links along existing and potential new green corridors, and includes a variety of potential habitats, such as wetlands and wildflower meadows.
- 2.2.5 The strategy has been devised to contribute to Warwick District's green infrastructure vision and aspirations for the 'peri-urban park' concept, and aims to provide numerous benefits for both new and existing communities, including economic benefits as the area could become an attractive new neighbourhood in which to live. The strategy aims to encourage people to undertake healthy activities through recreation; integrate potential development physically and socially into the existing town; and provide a valuable link to the countryside. The linked network of green spaces would also enhance biodiversity and nature conservation interest, in addition to providing a sense of place to potential development and reinforcing the elements that contribute to local landscape character.
- 2.2.6 Further information on the Green Infrastructure and Landscape Strategy is discussed within Chapter 3, Landscape and Visual Issues, which further assists in demonstrating how a well designed proposed development on the site at Lower Heathcote Farm can indeed function well and add to the overall quality of the area.

Quality of Public Realm

"Developments will establish a strong sense of place, using streetscapes and buildings to create attractive and comfortable places to live, work and visit" (Paragraph 58, point 2, NPPF 2012)

- Provision of a clear hierarchy of connected spaces and places, including streets that are accessible by a variety of users and which consider the design of the space as well as the streets function as a movement corridor;
- Provision of, and easy access to green spaces encompassing various forms of recreational activities for different age groups, not just within the potential Country Park in the south of the site but also throughout the development;
- Incorporation of different types of place areas that form an integral part of the open space strategy;
- Creation of green links to act as wildlife corridors through the site, thus linking wildlife habitats both on and off the site as well as providing increased connectivity to the surrounding countryside, specifically to the south;
- Integration of existing and proposed landscape features such as the hedgerows and trees in order to soften the built form, particularly towards the southern countryside edge of the development and the proposed improvements to the existing road network;
- Creation of a clearly defined public realm through the provision of continuous building frontage lines and variations in enclosure of private spaces;
- Control of access to private areas, particularly rear gardens and parking courts; and

• The provision of a variety of publicly accessible open spaces and recreation areas that meet the needs of the local community, as well as encouraging social activity.

Accessibility

"Developments optimise the potential of the site to accommodate development, create and sustain an appropriate mix of uses (including incorporation of green and other public spaces as part of developments) and support local facilities and transport networks" (Paragraph 58, point 3, NPPF 2012)

- Integration of the development at Lower Heathcote into the existing movement network, including new public transport provision with bus stops located within easy walking distance of all the new dwellings;
- Convenient, safe and direct access for all residents to the existing and proposed local services and facilities including the proposed school, retail and other community uses;
- Provision of multiple access points into the development forming part of a permeable network of streets which assists in dispersing traffic (vehicular and pedestrian);
- Enhancement and extension of the existing public rights of way network as an integral part of the development, particularly facilitating access to the town centre, employment areas and within the proposed open spaces onsite and beyond;
- Maximisation of the opportunities for alternative modes of transport to the car particularly walking, cycling and bus travel;
- Creation of a clear movement hierarchy providing easily recognisable routes which balances the street as a space alongside its function as a movement corridor;
- Maximisation of the connections to the town centre via sustainable routes for pedestrians, cyclists and public transport users;
- Provision of buildings that assist in navigation through the development as well as signify gateway points;
- New education, community and leisure facilities incorporated into the potential proposed development for the benefit of the new and existing communities; and
- Potential future connection in the east towards the former sewage works.

Response to Context

Developments will respond to local character and history, and reflect the identity of local surrounding and materials, while not preventing or discouraging appropriate innovation" (Paragraph 58, point 4, NPPF 2012)

- Integration of the development into the existing built form fabric, particularly in relation to scale, height and massing of the nearby Warwick Gates development;
- Provision of architecture that, where appropriate, reflects positive design elements of the local vernacular;
- Respond to the existing site topography and minimise the impact of the development on the open countryside and surrounding context, particularly giving consideration to the southern extent of the site, it's topography and the wider open agricultural existence, including the consideration of views in and out of the site;
- The incorporation of physical and visual connections into the development proposals through an integrated landscape design approach, as well as consideration to creating/maintaining views and vistas;
- Retention of the existing landscape features and habitats on the site, including the retention of existing trees, hedgerows and other ecological features wherever possible;
- Protection of the existing floodplain round the Tach Brook which is located within and in the vicinity of the site to ensure that the development does not increase the risk from flooding; and
- Protection of existing and proposed residential amenity through the use of frontage development thereby enclosing rear gardens.

Safe and Accessible Environments

"Developments create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion" (Paragraph 58, point 5, NPPF 2012)

- Creation of clearly defined public realm through the provision of continuous built frontage lines and variations in enclosure of private spaces; and
- Control of access to private areas, particularly rear gardens and parking courts.

Sustainability and other key considerations

- Provision of a mix of uses which cater for the everyday needs of the new residents, including education, leisure, recreation and retail activities;
- Provision of a range of house types, tenures and sizes in order to cater for choice and a variety of households;
- Creation of a development which allows ease of movement for all types of users and provides equal employment, social, community, leisure and retail activity opportunities for all;
- Provision of Sustainable Drainage Systems as part of the flood mitigation proposals;
- Consideration of the proposals in relation to the location of the buildings on site, gradients, and the relationship between various uses and transport infrastructure, particularly for those with disabilities;
- In-built 'robustness' the ability of the development, including individual buildings, to adapt to changes such as use, lifestyle and demography over time;
- Make efficient use of land through proposing a development with an appropriate density;
- Encouragement of walking, cycling and public transport use rather than the use of the private car thereby reducing the reliance on natural resources;
- Use of energy efficient building techniques; and
- Achievement of high levels of passive solar gain through the careful orientation of buildings, where appropriate.

2.3 Design Proposals

- 2.3.1 The design principles set out above have each been carefully considered within the masterplanning process in order to inform and structure the indicative design proposals, which are described further below and are illustrated in **Figure 2.2**, Indicative Masterplan. This plan illustrates one way in which development could be successfully accommodated on the site at Lower Heathcote Farm. The proposals, particularly the uses and disposition, have evolved over a significant amount of time in tandem with discussions with stakeholders, including Warwick District Council planning department and conservation team, and the Environment Agency.
- 2.3.2 It is considered that the site at Lower Heathcote could successfully accommodate the following:
 - Up to 785 residential units with a mix of size, tenures and types;
 - Provision of a mixed use community hub/local centre up to a maximum of 1400sqm, providing flexible space for community facilities, potentially including retail units (Classes A1 to A5 inclusive) and facilities within use class D1;
 - Provision of a two form primary school on approximately 2.5ha
 - Provision of access points from a new road link leading from Europa Way to two points of access/egress on Harbury Lane, with potential future access in the east to the former Severn Trent Sewage works site.
 - Comprehensive green infrastructure and open space network, including a Country Park, children's play space, amenity green space/informal open space, and natural areas including SUDs, retained and newly planted hedgerows and greenways;
 - Provision of formal sports pitches;
 - Potential provision of allotments;
 - Network of pedestrian and cycle paths within the development which connect to the surrounding area and existing public rights of way;
 - Roads and associated infrastructure;
 - Foul and surface water drainage infrastructure, including three attenuation ponds forming part of the Sustainable Urban Drainage System infrastructure' and
 - Demolition of the on-site buildings associated with Lower Heathcote Farm

Residential

- 2.3.3 It is considered the site at Lower Heathcote could successfully provide up to 785 residential units with a range of dwelling types and tenures of varying sizes, including affordable housing.
- 2.3.4 The average net density, would allow the formation of differing densities across the development including higher density towards the existing urban areas and lower densities near rural edges, in accordance with the 'Garden Suburbs' approach. Overall, the suggested density would result in the efficient use of the site, whilst at the same time promoting densities which are appropriate to the

local area and which will help assimilate the development into the surrounding areas. This would also allow for a range of dwellings across the site with varying sizes and tenures in order to accommodate a variety of household types. This would provide a hierarchy of dwellings from large detached properties with larger plots, through to smaller terraced forms, allowing for a variety in the proposed streetscape.

- 2.3.5 Affordable housing would be provided in any development in line with current policy and would likely be provided in a series of clusters. This would include affordable rented, social rented, shared ownership and low cost/reduced cost market housing.
- 2.3.6 The homes would vary in height; with the majority being between 2 and 3 storeys (a likely maximum being up to 13m ridge height above proposed ground level).

Local Centre and Education Provision

- 2.3.7 Community facilities form an integral element of sustainable urban extensions; they provide a basis for building new communities that, in turn, provide support for the facilities. The indicative masterplan proposes a mixed use Community Hub/Local Centre over a maximum area of 1400sq m located along the main route through the development and adjacent to Harbury Lane, which could potentially provide a mix of uses such as restaurants, pubs, offices, food retail, non food retail and residential / apartments. The suggested central location would provide a visible frontage to existing and new traffic and provide focus for new and existing residents within the locality.
- 2.3.8 The site could also accommodate a two form entry primary school which could also provide playgrounds and associated facilities, and potentially pre-school facilities. The suggested location of the primary school illustrated on **Figure 2.2** is such that the majority of new dwellings are within the suggested maximum 800m walking distance zone.

Public Open Space and Green Infrastructure

- 2.3.9 Any proposed development at the site at Lower Heathcote Farm would provide a comprehensive green infrastructure and open space network in accordance with Warwick District Council's adopted Open Space SPD 2009 requirements. The indicative proposals at **Figure 2.2** illustrate a total of 31.20ha of open space (not including attenuation areas), which is comprised of a number of different types of green infrastructure elements, including a large country park, amenity green space, natural areas, children's/youth areas, potential sports pitches and potential allotments.
- 2.3.10 The vision for a country park, forms part of the aspirations of Warwick District Council, as set out in the Publication draft of the Local Plan, and could be delivered as part of any proposals on the site at Lower Heathcote Farm. The indicative proposals illustrate the country park could form the entire southern extent of the site, and could potentially connect with the surrounding area to the east and south. A comprehensive landscape strategy and landscape masterplan, which specifically consider this country park, have been developed so to ensure that proposed green infrastructure principles and concepts are taken forward in an inherent manner to further design and ensure that an appropriate landscape scheme would be incorporated into the design of any development. This is discussed further within Chapter 4 of this document, however key elements which could be incorporated into any development on site are as follows:
 - Creation of public open space and the introduction of a proposed Country Park to the southeast of the site, including walkways, open space and landscape planting;
 - Retention of vegetation where possible, including trees and hedgerows along all site boundaries;
 - Enhancement planting where there are existing gaps in vegetation along boundaries;
 - A number of drainage attenuation areas set within areas of open space will contribute to a sustainable urban drainage system;
 - The integration of the Tach Brook into the landscape proposals for the site;
 - Proposed play area, open space and kick-about space, allotments and sports pitches to the southeast of the site;
 - Public open space and tree and shrub planting throughout the development;
 - Primary route tree planting will provide a sense of place and aid legibility;
 - Proposed surfaced pedestrian and cycle paths and mown paths, and their associated connections to the wider public right of way network and Harbury Lane to the north;
 - Urban tree planting within development plots; and
 - Structure planting enhancement, in particular to provide visual containment of the development from the south.

- 2.3.11 Play areas would be provided and situated within appropriate walking distances of the majority of new dwellings, as indicatively illustrated on Figure 2.2.
- 2.3.12 The proposed linked network of green spaces, planting and sustainable drainage features could provide a sense of place, help enhance local landscape character, aid sustainability and improve the area's biodiversity and nature conservation interest.

Accessibility

- 2.3.13 The indicative proposals illustrate the potential disposition of land uses across the site at Lower Heathcote Farm and subsequently a potential structure for movement within the development. A well-connected movement network, accessible by all users is illustrated, which would help to ensure that all areas of the development are easy to navigate, safe and secure. There is a clear movement hierarchy in the illustrated proposals which clearly defines main routes, such as the spine road and main tree lined avenues, and also caters for other minor routes, which could incorporate garden streets, landscape shared surfaces, private drives and quiet lanes, all of which helps to achieve a permeable layout. The layout and utilisation of different street types, recognises the need combine the function of the street as a movement corridor, alongside its place function.
- 2.3.14 The overall vehicular access strategy for the site has been established using the appropriate junction modelling system. Traffic data from the model has been extracted and used to define the most appropriate form of access, which is proposed to be via Europa Way and via two accesses off Harbury Lane. The access off Europa Way takes the form of a traffic signal controlled crossroad junction which will also provide access to Land South of Gallows Hill. The two access points to/from Harbury Lane take the form of simple priority junctions. The site accesses are linked within the site via a spine road from which access to individual development parcels will be derived.
- 2.3.15 The location of the site close to the established community, accessible town centre and to public transport nodes are positive characteristics which can be maximised through the provision of safe, direct, convenient and attractive pedestrian routes in any proposals.
- 2.3.16 There are currently no public rights of way through the site, and any development would specifically aim to provide new footpaths and cycleways with enhanced surfacing, lighting and signage which will provide links with proposed facilities such as the local centre, sports pitches and primary school. A pedestrian/cycle network within the site would be, and has been to date, seen as an integral part of the transport infrastructure for the proposals. With the aim to promote journeys on foot or by bicycle, as opposed to the car. The pedestrian and cycle network could permeate through any proposed development on the site, providing access to the surrounding areas and new and existing open space, particularly to the countryside to the south of the sites. The potential for connection to any future off-site network would also allow users of all ages and abilities to move safely and conveniently between all points of any proposed development and surrounding facilities.

2.4 Wider Potential Proposals at South of Harbury Lane

- 2.4.1 It is acknowledged that the Gallagher Estates Ltd land at Lower Heathcote Farm is not proposed for development in isolation. The land forms part of a wider area to the east, which is proposed to be allocated as part of Site H02 in the Publication Draft Local Plan.
- 2.4.2 Gallagher have been liaising with adjacent land owners to ensure that any development proposed at Lower Heathcote Farm does not undermine or prejudice the realisation of development on the remainder of the proposed allocated site, part of which does now have planning permission. In order to illustrate that there is no difficulty in a comprehensive development proposal being delivered, an illustrative Strategic Masterplan for the area has been produced and is included at **Figure 2.3**.

2.5 Conclusions

- 2.5.1 This chapter gives consideration to the opportunities and constraints of the site located at Lower Heathcote Farm, Warwick. An assessment of these opportunities and constraints has enabled design concepts and principles to be developed, which can be taken forward within any detailed design schemes for the site at Lower Heathcote Farm.
- 2.5.2 This analysis has facilitated the formulation of indicative development proposals, which illustrate one way in which development could be successfully accommodated on the site. These indicative proposals, as shown in **Figure 2.2** Indicative Masterplan, demonstrates that a functional, sustainable and desirable layout of the site can be achieved which respects the local character of the site and surroundings and also accords with the principles of high quality design, and best practice.
- 2.5.3 It can be concluded, and has been shown within this chapter, that development on the site at Lower Heathcote Farm can achieve and deliver the following:
 - The creation of an integrated residential community with a sensitive relationship to the existing settlement;
 - The provision of a series of highways improvements to mitigate the impact arising from the development;
 - Providing a development that is well connected, readily understood and easily navigated, thus promoting a layout which reduces dependence on the car and enhances public transport, cycling and walking networks;
 - The protection and enhancement of existing landscape and ecological features;
 - The creation of a strong landscape and open space structure that responds to the local area and retains and enhances the immediate locality;
 - Providing a range of dwelling sizes, types and tenures that offers an accessible and acceptable choice of lifestyles;
 - Promoting a development form that creates recognisable streets and spaces;
 - The creation of a Gateway Feature to Europa Way /Gallows Hill;
 - Potential to link with the proposed allocations to the east of the site and proposed development South of Gallows Hill / West of Europa Way; and
 - Promoting the objectives of sustainable development through layout and design.

3 Landscape and Visual Issues

3.1 Introduction

3.1.1 This chapter considers the site located at Lower Heathcote Farm, Warwick and its context in landscape and visual terms; the associated opportunities and constraints; and the capacity of the site to accommodate development in relation to landscape and visual issues. An assessment of these opportunities and constraints has informed the design principles, which may be taken forward within any detailed design schemes for the site at Lower Heathcote Farm.

3.2 The Site

Landscape Planning Designations

3.2.1 Landscape and other relevant environmental designations are illustrated on **Figure 3.2.** There are no national or regional landscape relevant designations within close proximity of the site. There are no local landscape relevant designations within close proximity of the site.

Landscape Resources

Topography and landform

3.2.2 Landform on site is undulating and topographically the site lies at +67-71m AOD at its highest in the east, with a slope across the south-western part of the site falling to approximately +50 m AOD towards the stream corridor. The landform has some influence over the character of the local landscape in that it forms the valley of the local stream network.

Land use

3.2.3 Land use consists largely of arable agricultural land comprising six arable fields and two areas of improved grassland. The site also consists of two fishing ponds, amenity grassland and a complex of farm buildings. There is a woodland block to the south-west of the site. The farmland is considered to be typical of the landscape character of the Feldon Parklands as defined by the Warwickshire Landscape Guidelines.

Vegetation

3.2.4 Vegetation on site consists of hedgerow field boundaries including a variety species, including hawthorn (Crataegus monogyna), ash (Fraxinus excelsior) and elder (Sambucus nigra). There is also a recently planted beech (Fagus sylvatica) hedgerow and a leylandi (Cupressocyparis leylandi) hedgerow. Bramble is also common on site. There is an area of woodland along the south-western boundary, consisting of ash, hawthorn, pedunculate oak, blackthorn and willow. Broad leaved woodland is also present to the south-west of the site. There is some riparian vegetation associated with the Tach Brook to the south of the site.

Hydrology

3.2.5 A network of minor water courses including brooks and ditches drain the countryside in the surrounding area. The River Avon is located approximately 2.0km to the west. The Tach Brook runs in an east-west direction along the southern boundary of the site. There are a number of small to medium sized water bodies, including two associated with New House Farm fishing lakes.

Public Access

3.2.6 There are no public rights of way within the site boundary. The closest public footpath is located approximately 350m to the south. The Centenary Way / Grand Union Canal Walk long distance footpaths are located approximately 1.6km to the north. There are a limited number of public rights of way and public open spaces within the vicinity of the site.

Landscape Character

- 3.2.7 Landscape character areas/types are illustrated on Figure 3.3.
- 3.2.8 The following landscape character description has been developed with reference to both national and local published studies.

Local Landscape Character

- 3.2.9 At a local level, reference has been made to the Warwickshire Landscape Guidelines (1993). The site is located within the Feldon landscape character area and the Feldon Parklands landscape character type (Figure 3.3). The key characteristics of the Feldon Parklands landscape character type are:
 - A varied undulating topography often associated with steep wooded scarp slopes.
 - A well-defined geometric pattern of small to medium sized fields.
 - Many hedgerow and roadside trees.
 - A nucleated settlement pattern of large and small villages.
 - Vernacular style Blue and White Lias limestone buildings.
 - Disused quarries with semi-natural grassland and scrub.
- 3.2.10 Of these characteristics, most are found in the surrounding area and within the application sites themselves. The Feldon Parklands Landscape Character Area, in the context of the sites themselves, is described as follows.

Feldon Parklands Landscape Character Area

- 3.2.11 The merged settlements of Royal Learnington Spa and Warwick form the northern boundary of the Feldon Parklands landscape character type in this location. There are a number of typical urban fringe land uses such as Learnington and Country Golf Club to the south of Whitnash and disused sewage works south of Heathcote. Otherwise land use is predominantly agricultural interspersed with a nucleated settlement pattern of medium to small sized villages such as Bishop's Tachbrook. There are a number of woodland blocks including Nursery Wood, Barford Wood and Lodge Wood to the east. This area is also a registered park and garden. Field boundaries are typically hedged with many hedgerow trees; this is also evident along roadsides. Landform is gently undulating, sloping down to a stream south of Heathcote. There are a number of public rights of way that cross the landscape north-west and south of Bishop's Tachbrook. A number of linear transport corridors cut through the landscape including the M40 motorway to the south-west and A-roads to the south and west.
- 3.2.12 The wooded character of this landscape character type creates a sequence of linked wooded spaces which define the scale and pattern of the landscape. In this location the continuity of that pattern is variable, and where tree cover is weaker, the structure of the landscape is fragmented. The removal of hedgerows also contributes to the decline of the landscape structure. In some areas hedgerows have been truncated or removed completely.
- 3.2.13 In terms of of perceptual aspects, views throughout the Feldon Parklands in this area are generally framed by woodland blocks and other vegetation, with some more open views from elevated areas. Main roads such as the A452 Europa Way bring traffic into the area and Warwick Technology Park on the edge of the character area has an urbanising effect.. Perceptual aspects are generally influenced by the urban edge to the north, in particular through views of the edge of settlement at Heathcote and Warwick Technology Park.

Landscape Value

- 3.2.14 The landscape has some recreational value in terms of the public right of way network that crosses the landscape to the south. There are a number of designations in the area, including Warwick Castle Registered Park and Garden and Warwick Conservation Area to the west. Bishop's Tachbrook Conservation Area and Mallory Court Registered Park and Garden are also located to the southeast.
- 3.2.15 The management strategy as set out in the Warwickshire Landscape Guidelines is aimed at creating a more unified landscape by enhancing the wooded character of the area. The management strategy also suggests the importance of conserving primary hedgerows and strengthening wooded

streamlines to reinforce enclosure. Field pattern is a dominant visual element in this landscape and any new woodland planting should complement the small scale geometric pattern of hedged fields.

Visual Amenity

3.2.16 A number of viewpoint photographs were taken in February 2014, and illustrate views towards the site in the context of the surrounding landscape. The locations of viewpoints are illustrated on Figure 3.1 and the associated panoramic viewpoint photographs are shown in Figure 3.6. The views are described as follows.

Viewpoint 1: Public footpath south of Landor Road

3.2.17 This viewpoint is taken from the public footpath south of Landor Road, looking west at approximately +83m AOD, 1.2km east of the Land at Lower Heathcote Farm site. An area of arable farmland characterises the foreground and middle distance and views beyond this towards the two proposed sites are limited by intervening field boundary vegetation. The fence line denoting the rear boundary of properties along Landor Road is visible to the north. Mature vegetation screens views of properties along Harbury Lane to the south. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 2: Junction of Harbury Lane and Oakley Wood Road

3.2.18 This viewpoint is taken from the junction between Harbury Lane and Oakley Wood Road, looking south-west, at approximately +70m AOD, 900m east of the Land at Lower Heathcote Farm site. A well-established hedgerow, including two significant hedgerow oaks, screen views from this location to the south and east. The Land at Lower Heathcote Farm site is located beyond this intervening vegetation. Harbury Lane is visible heading away from the viewpoint to the north-east. Receptors are people travelling generally through the landscape on roads.

Viewpoint 3: Oakley Wood Road

3.2.19 This viewpoint is taken from Oakley Wood Road, looking west. The viewpoint is located at approximately +70m AOD, 1.2km south-east of the Land at Lower Heathcote Farm site. Rolling arable fields are visible in the foreground and middle distance, sloping down to the stream to the south of the Lower Heathcote Farm site which is just visible along the horizon to the left of the view. Vegetation associated with the eastern edge of Castle Park provides a partial, distant backdrop to views of the Lower Heathcote Farm site. The open nature of the landscape is broken up somewhat by occasional individual trees in the middle distance. Receptors are people travelling generally through the landscape on roads.

Viewpoint 4: Oakley Wood Road

3.2.20 This viewpoint is taken from Oakley Wood Road near to Chapel Hill Farm, looking north-west at approximately +65m AOD, 1.4km south-east of the Land at Lower Heathcote Farm site. Arable fields are visible in the foreground, these fields slope down to Brookside Farm which sits within a localised depression in the landform to the north. The agricultural field patterns of the wider landscape are visible to the north-east. In the middle ground the disused sewage works located off Harbury Lane and its associated vegetation is visible and serves to partially screen views towards the land at Lower Heathcote Farm site to the north-west. The ground plane of the site at Land at Lower Heathcote Farm is not discernible from this location and distance. Receptors are people travelling generally through the landscape on roads.

Viewpoint 5: Public footpath north-west of Bishop's Tachbrook

3.2.21 This viewpoint is taken from a public footpath north-west of Bishop's Tachbrook, looking north at approximately +70m AOD, 750m south-east of the Land at Lower Heathcote Farm site. Arable fields are visible in the foreground and stretch across the landscape to the east. The line of the public right of way is visible passing through the arable landscape to the west. In the middle distance the disused sewage works and associated vegetation is visible along the horizon. The southern extent of the Land at Lower Heathcote Farm site is located to the north-west of this and slopes westwards until it reaches Europa Way. In the far distance, Warwick Castle is just visible and punctuates the skyline. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 6: Public footpath north-west of Bishop's Tachbrook

3.2.22 This viewpoint is taken from a public footpath north-west of Bishop's Tachbrook looking north, at approximately +70m AOD, 500m south of the Land at Lower Heathcote Farm site. An area of grassland and field boundary vegetation associated with New House Farm is visible in the

foreground, as is the plantation woodland to the north in the middle distance. The surrounding landscape is characterised by arable farmland, gently sloping to a local stream to the north. The disused sewage works off Harbury Lane is visible to the north. Vegetation lining Harbury Lane forms a backdrop to views of the site. Grove Farm is visible in the far distance to the north-east. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 7: Public footpath north-west of Bishop's Tachbrook

3.2.23 This viewpoint is taken from a public footpath north-west of Bishop's Tachbrook looking north, at approximately +73m AOD, 400m south of the Land at Lower Heathcote Farm site. A very large arable field is visible in the foreground to the north and west; this is bounded by mature vegetation. There is a remnant hedgerow in the centre of the field. The southern part of the site at Land at Lower Heathcote Farm is visible to the north from this location; vegetation along Harbury Lane forms a backdrop to views of the site. Lower Heathcote Farm itself is also visible to the north. Existing recent residential development at Heathcote is just visible in the far distance. The Old Grange farm building associated with New House Farm is visible to the east. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 8: Public footpath north-west of Bishop's Tachbrook

3.2.24 This viewpoint is taken from a public footpath north-west of Bishop's Tachbrook looking north, at approximately +68m AOD, 300m south of the land to the land at Lower Heathcote site. A very large arable field is visible in the foreground to the north and west; this is bounded by mature vegetation. There is a remnant hedgerow in the centre of the field. The southern part of the site at Land at Lower Heathcote Farm is visible to the north from this location; vegetation along Harbury Lane forms a backdrop to views of the site. The Old Grange is visible to the east. The disused sewage works is visible to the east of the site. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 9: Public footpath north-west of Bishop's Tachbrook

3.2.25 This viewpoint is taken from a public footpath north-west of Bishop's Tachbrook looking north, at approximately +65m AOD, 350m south-west of the land at Lower Heathcote Farm site. A very large arable field is visible in the foreground; bounded by mature vegetation, particularly to the west with the boundary with Europa Way. The southern part of the Land at Lower Heathcote Farm is visible to the north-east from this location. The disused sewage works and associated vegetation is visible to the east of the site. Vegetation associated with Harbury Lane and the disused sewage works form the backdrop to views along the skyline. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 10: Public footpath west of the A452

3.2.26 This viewpoint is taken from a public footpath west of the A452 looking north-east, at approximately +70m AOD, 500m south-west of the Land at Lower Heathcote Farm site. Open, arable fields are visible in the foreground and middle distance, bounded by the heavily vegetated Europa Way to the south-east. Land at Lower Heathcote Farm is visible to the north. Some existing residential development is also visible beyond the site to the north. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 11: Public footpath west of the A452

3.2.27 This viewpoint is taken from a public footpath west of the A452 looking north-east, at approximately +70m AOD, 600m south-west of the land at Lower Heathcote Farm. A pasture field is visible in the foreground, with a well-defined footpath along the post and rail field boundary to the north-west. The Asps property is visible to the north-west and beyond is Nursery Wood in the middle distance. Warwick Technology Park is visible through gaps in intervening vegetation to the north. Some existing commercial development is visible in the far distance to the north, and individual properties such as Hawkes Farm and Lower Heathcote Farm are visible between gaps in existing vegetation. Existing residential development at Heathcote is visible to the north-east. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 12: A425 Banbury Road

3.2.28 This viewpoint is taken from Banbury Road looking north at the access to New House Farm. It is located at approximately +70m AOD, 900m south of the land at Lower Heathcote Farm. Arable fields are visible in the foreground; the access track to New House Farm is also visible to the north, bounded by a banked hedgerow to the east. Land at Lower Heathcote Farm is visible in the middle distance with the existing urban edge of Warwick forming a backdrop to the site to the north. This includes existing commercial development which is noticeable to the north. The vegetated corridor

of Europa Way is visible in the middle distance and provides some filtering of views towards Warwick to the north. Receptors are people travelling generally through the landscape on roads.

Viewpoint 13: A425 Banbury Road

3.2.29 This viewpoint is taken from Banbury Road looking east at approximately +62m AOD, close to The Asps residential property. Arable and pasture fields bounded by post and rail fencing, hedgerows and remnant hedgerow trees are visible in the foreground and middle distance. Recent coniferous planting along a field boundary can be seen to the north. The Asps residential property is visible to the east. The rooflines of residential development at Heathcote can be seen in the far distance to the east. Receptors are people travelling generally through the landscape on roads. This viewpoint is also representative of views from occupiers of the residential property at The Asps and is located in close proximity to the eastern edge of Warwick Conservation Area and Warwick Castle Registered Park and Garden.

Viewpoint 14: Gallows Hill

3.2.30 This viewpoint is taken from Gallows Hill, looking south-east at approximately +68m AOD. A large pasture field is visible in the foreground and middle distance, sloping from the south to the northwest. The woodland belt associated with Turnbull Gardens is visible along the horizon to the south. Receptors are people travelling generally through the landscape on roads. This viewpoint is also representative of views from people at work at Warwick Technology Park.

Viewpoint 15: Europa Way

3.2.31 This viewpoint is taken from Europa Way looking south-west, at approximately +63m AOD, 200m north of both application sites which are located to the east and west of the main carriageway in the middle distance. Commercial units including a car garage are visible to the east. Formal grassed areas and mature avenue style planting lining Europa Way is also visible in the foreground and middle distance. A well vegetated embankment screens views of the wider landscape to the west. Receptors are people travelling generally through the landscape on roads.

Viewpoint 16: Heathcote Lane

3.2.32 This viewpoint is taken from Heathcote Lane looking south-west at approximately +65m AOD, 400m north-east of the Land at Lower Heathcote Farm. Land at Lower Heathcote Farm site sits beyond Harbury Lane in the middle distance. A hawthorn hedgerow is visible to the south with mature hedgerow trees forming a boundary between the road and the agricultural arable field beyond. The roofline of the health and fitness centre is visible beyond the intervening hedgerow and hedgerow tree vegetation to the south. Lighting columns associated with Macbeth Approach are also visible above the tree line. Receptors are people travelling generally through the landscape on roads.

Viewpoint 17: Public open space, Heathcote

3.2.33 This viewpoint is taken from the public open space adjacent to Cranmer Grove looking south-west. The viewpoint is located at approximately +65m AOD, 300m south-east of the land South of Gallows Hill and 150m north-east of the land at Lower Heathcote Farm. An area of amenity green space with recent tree planting is visible in the foreground and middle distance. Harbury Lane is visible in the middle distance, beyond which a mature hedgerow forms the boundary to the land at Lower Heathcote Farm application site. Receptors are people engaged in outdoor recreation using the local public right of way network.

Viewpoint 18: Public open space, Heathcote

3.2.34 This viewpoint is taken from the public open space adjacent to Tamora Close looking south-west. The viewpoint is located at approximately +67m AOD, 30m north of the land at Lower Heathcote Farm. Foreground views are characterised by Harbury Lane and a fragmented but mature hedgerow to the south. This hedgerow forms the northern boundary of the land at Lower Heathcote Farm. Receptors are people who are engaged in outdoor recreation, in this case using the local public open space. This viewpoint is also representative of views from occupiers of residential properties at Heathcote.

Viewpoint 19: Harbury Lane / Europa Way

3.2.35 This viewpoint is taken from the traffic island at the junction between Harbury Lane and Europa Way, looking south-east. The viewpoint is located at approximately +64m AOD, 30m north of the Land at Lower Heathcote Farm. A large scale arable field is visible in the foreground. Lower Heathcote Farm and associated boundary vegetation is visible in the middle distance to the north-east. To the west

of the farm the view consists of gently undulating agricultural land, bounded by hedgerows and framed by woodland edges. Lighting columns associated with Europa Way are visible to the west. Receptors are people travelling generally through the landscape on roads.

Viewpoint 20: Gallows Hill

3.2.36 This viewpoint is taken from Gallows Hill looking south-west at approximately +65m AOD. A mature hedgerow lines the road in the foreground, containing a number of hedgerow trees. The hedgerow is fragmented which allows views into the arable field beyond. The woodland belt at Turnbull Gardens is visible in the distance to the south. Receptors are people travelling generally through the landscape on roads.

Viewpoint 21: A452 Europa Way

3.2.37 This viewpoint is taken from the A452 Europa Way looking west at approximately +60m AOD, 20m west of the land at Lower Heathcote Farm. The roadside vegetation lining Europa Way is visible in the foreground which consists of mature trees on embankment, limiting views to the surrounding landscape from this location. A short gap in the vegetation allows a glimpsed view into the land west of Europa Way. Receptors are people travelling generally through the landscape on roads.

Viewpoint 22: A452 Europa Way

3.2.38 This viewpoint is taken from the A452 Europa Way looking east at approximately +55m AOD, 20m west of the land at Lower Heathcote Farm. Roadside vegetation lining Europa Way is visible in the foreground, largely consisting of mature trees and overgrown hedgerow shrubs. Receptors are people travelling generally through the landscape on roads.

Viewpoint 23: Banbury Road

3.2.39 This viewpoint is taken from Banbury Road looking east at approximately +68m AOD. Roadside vegetation lining Banbury Road is visible in the foreground, largely consisting of mature trees and overgrown hedgerow shrubs. Receptors are people travelling generally through the landscape on roads. This viewpoint is located in close proximity to the eastern edge of Warwick Conservation Area and Warwick Castle Registered Park and Garden.

Viewpoint 24: Gallows Hill

3.2.40 This viewpoint is taken from Gallows Hill near to Tollgate Cottage looking south-east at approximately +54m AOD. Road infrastructure is visible in the foreground, beyond which the post and rail fence bounding the arable field to the south-east and some associated planting is visible. The field beyond ascends to the south-east and is framed by woodland associated with Turnbull Gardens to the south and trees lining Gallows Hill to the north. Receptors are people travelling generally through the landscape on roads. This viewpoint is located in close proximity to the eastern edge of Warwick Conservation Area and Warwick Castle Registered Park and Garden.

Summary

3.2.41 The site located at Lower Heathcote Farm site is generally visually well contained by the vegetated road infrastructure of the area and the nature of the topography and the valley of the Tach Brook. Most close views are facing into this valley. Long distance views are limited from the north by the built edge of Learnington and Warwick, and by intervening landform and vegetation form the south, east and west. This visual character has an influence on the site's ability to accommodate development.

3.3 Opportunities and Constraints

3.3.1 The following opportunities and constraints have been identified:

Opportunities

- The northern area of the site is topographically flatter, providing the opportunity to avoid the more visually exposed south/south-west facing slope;
- The existing green infrastructure network both within the site and along its boundaries, providing the opportunity for further enhancement;
- The site is in close proximity to other existing open space destinations, such as that at Warwick Gates to the north;

- The site has strong visual and physical links with the existing urban edge of Warwick and Learnington;
- The combination of undulating contextual landform with vegetation across it serves to provide visual containment from a number of areas to the south, east and west;
- Existing built form also serves to provide visual containment from a number of areas to the north;
- The 'urban fringe' character of the immediate overall site area;
- The potential to provide a softer appearance to the overall urban edge when viewed from areas to the south;
- The potential to create a high quality mixed use development that ties together the existing fragmented elements of the urban edge, and creates a more attractive 'gateway' into this part of Warwick;
- The opportunity to make improvements to the local green infrastructure network by connecting the site with areas off-site;
- The opportunity to make improvements to the Green Infrastructure on site to include access, open spaces, visual connectivity, and the existing landscape resources including water features and woodland vegetation;
- Integration of the ponds on site into a sustainable urban drainage system; and
- Use of the extensive flatter parts of the site as a practical platform for development.

Constraints

- Views into the site from the existing settlement edge;
- Visual exposure of the sloping parts of the site from local footpaths to the south;
- The perception of urban sprawl across open countryside towards the Village of Bishops Tachbrook to the south;
- A generally weak landscape infrastructure around various parts of the site boundaries.

3.4 Indicative Development Strategy

- 3.4.1 An indicative development envelope has been identified with reference to the landscape and visual constraints and opportunities. The indicative development strategy is described as follows:
 - Development has been maximised where both visual enclosure and the urban fringe context offer an excellent opportunity with limited landscape and visual constraints;
 - Development has been limited to the central and northern section of the site, where the land is flatter,
 - Proposed creation of a structured and considered green infrastructure strategy to include the following key elements:
 - Strong swathes of infrastructure planting both through the development envelope and along the southern edge, creating 'layers' of planting infrastructure, to visually contain the indicative proposals and provide a softer presentation of the overall urban edge when viewed from the south;
 - Enhancement of the existing hedgerow network where possible, including retaining and replacing boundary hedgerows where possible; and combining these corridors with pedestrian green links where feasible
 - Integration of the existing water features on site into a SUDS;
 - Creation of a hierarchy of attractive green open spaces to include gateway landscape treatments; open space located to maximise

views towards Warwick Castle and the town centre; a play hub; potential allotment and sport pitch sites; and informal accessible linear open spaces associated with the stream corridor along the overall southern/south-western site boundary; and

- Provision of much increased public access across the area, with the potential to link in with the surrounding landscape.
- Consideration of biodiversity opportunities associated with the water features and the potential of the south facing retained open meadows.
- 3.4.2 A number of long sections have been drawn which help to illustrate the parameters of any proposed built form on the site and help demonstrate the site's ability to accommodate development.
- 3.4.3 Section AA (Figure 3.9), illustrates how the contours of the site broadly slope from the north to the south and that from the public right of way to the south of the site (approximately +65 metres AOD); the proposed development envelope appears behind the sloping land retained as open space and in front of the existing settlement edge. The development envelope is located at approximately +70 metres AOD. Views are therefore largely attained from the public footpath at lower ground to the south looking up and across the landscape to the north.
- 3.4.4 The scale of the open space in relation to the proposed built form is identified in Section BB (Figure 3.9). Section BB illustrates a comparison of the relative elevations of the indicative proposals with the existing residential properties at Willow Close and demonstrates the layers of existing and proposed vegetation that would serve to filter views from the public right of way to the southwest.

3.5 Green Infrastructure Strategy

- 3.5.1 The identified landscape and visual constraints and opportunities detailed in section 3.3 of this chapter and illustrated in **Figure 3.5** have helped to guide the proposed land use, distribution and scale of development that is suggested in the indicative masterplan (Figure 2.2) and demonstrate how the site has capacity for development. Consequently, within the proposals, landscape and visual mitigation has been integral with the design layout.
- 3.5.2 The indicative proposals at Figure 2.2 illustrate a total of 31.20ha of open space which is comprised of a number of different types of green infrastructure elements, including a large country park, amenity green space, natural areas, children's/youth areas, potential sports pitches and potential allotments.
- 3.5.3 Any proposed development at the site at Lower Heathcote Farm would provide a comprehensive green infrastructure and open space network in accordance with Warwick District Council's adopted Open Space SPD 2009 requirements. The green infrastructure strategy would also be informed by Warwick District Council's Green Infrastructure Study (2010), Warwickshire, Coventry and Solihull Sub-Regional Green Infrastructure Study (2011), Strategic Green Infrastructure Delivery Assessment (2012) and Options for Future Expansion in Warwick District Considerations for Sustainable Landscape Planning (2012).
- 3.5.4 The vision for a country park forms part of the aspirations of Warwick District Council and could be delivered as part of the green infrastructure strategy for any proposals on the site at Lower Heathcote Farm. The indicative proposals illustrate the country park could form the entire southern extent of the site, and could potentially connect with the surrounding area to the east and south. A comprehensive landscape strategy and landscape masterplan, which specifically consider this country park, have been developed so to ensure that proposed green infrastructure principles and concepts are taken forward in an inherent manner to further design and ensure that an appropriate landscape scheme would be incorporated into the design of any development. Key elements which could be incorporated into development on site are as follows:
 - Retention of a large area of public open space and the introduction of a proposed country park to the southeast of the site, including walkways, open space and landscape planting;
 - Retention of vegetation where possible, including trees and hedgerows along all site boundaries;
 - Enhancement planting where there are existing gaps in vegetation along boundaries;

- A number of drainage attenuation areas set within areas of open space will contribute to a sustainable urban drainage system;
- The integration of the Tach Brook into the landscape proposals for the site;
- A proposed play area, open space and kick-about space to the southeast of the site;
- Public open space tree and shrub planting throughout the development;
- Potential location for allotments and sports pitches to the southeast of the site;
- Primary route tree planting will provide a sense of place and aid legibility;
- Proposed surfaced pedestrian and cycle paths and mown paths, and their associated connections to the wider public right of way network and Harbury Lane to the north;
- Urban tree planting within development plots; and
- Structure planting enhancement, in particular to provide visual containment of the development from the south.
- 3.5.5 As part of a green infrastructure strategy a number of landscape character zones may be developed that could provide broad guidelines to the design of landscape and green infrastructure if development were to come forward on the site. The landscape character zones would both promote a sense of identity for the site and reflect the surrounding landscape character.

3.6 Conclusions

- 3.6.1 The extent of new development has been balanced against the landscape and visual opportunities and constraints, and further influenced by the delivery of an integral landscape strategy (Figure 3.8). The site is generally visually well contained by the vegetated road infrastructure of the area and the nature of the topography. Most views are achieved from a short distance, close to the boundary of the site. Long distance views are limited from the north by the built edge of Leamington and Warwick. This visual character has an influence on the site's ability to accommodate development.
- 3.6.2 It is considered that development on the site at Lower Heathcote Farm can deliver an integrated residential community with a sensitive relationship to the existing settlement and a strong green infrastructure strategy. This green infrastructure strategy will allow development to be implemented without harming the character of the local landscape by retaining as much existing vegetation as possible and introducing new amenity and structure planting throughout the site and in key locations, for example along the western boundary. The strategy could also deliver a multifunctional network of open spaces with enhanced opportunities for public recreation and local ecology.

4 Ecology & Nature Conservation

4.1 Introduction

4.1.1 This chapter considers the site at Lower Heathcote Farm in relation to ecological issues and draws upon the full ecological impact assessment which has been undertaken in relation to the outline planning application currently submitted to Warwick District Council, which included Phase 1 and relevant Phase 2 onsite surveys. In particularly, this chapter sets out the existing conditions at the site and reviews the potential ecological constraints and opportunities, demonstrating how the site at Lower Heathcote Farm could accommodate development.

4.2 Site Analysis and Existing Conditions

Nature Conservation Designations

4.2.1 Information from Warwickshire Biological Records Centre (WBRC) and MAGIC indicate that there are no Environmental Statutory Nature Conservation Designations within 2km of the site, although a number of Non-Statutory Nature Conservation sites are located within 2km of the site, including the Tach Brook and tributaries Local Wildlife Site which is located along the southern boundary of the site. The associated Ecosite designation extends into the southern part of the site. Seven of the Non-Statutory Nature Conservation sites are designated as Local Wildlife Sites, with a further eight designated as potential Local Wildlife Sites. The sites and the reason for their designation are summarised in Table 4.1.

Table 4.1 - Local Wildlife Sites and Potential Local Wildlife Sites within 2km of the Site - Land at						
	Lower Heathcote Farm					
Site Name	Site Name Reason for designation					
Local Wildlife Sites (L	WS)					
River Avon and	Ecosite 20/26	Supports rare, notable and protected species and				
Tributaries		functions as a habitat corridor and linear feature.				
Alderham Pasture	Ecosite 26/26	North of the M40 a variety of habitats from species				
and Osier Beds		rich grassland to swamp, wet woodland and sedge				
		beds. The half south of the M40 is a potential LWS.				
Plestowes Stream	Ecosite 46/26	A stream and associated habitats including semi-				
		natural and plantation wood, ponds and grasslands.				
Myton Hamlet Mill	Ecosite 93/26	Part of the River Avon LWS described above.				
Pond						
Warwick Castle	Ecosite 120/26	Includes part of the River Avon LWS described above				
Park		and a pond and swamp. Nursery Wood within the site				
		is a potential LWS.				
Tach Brook and	Ecosite 08/36	Part of the River Avon LWS described above.				
tributaries						
Golf Course at	Ecosite 20/36	Bridle Path with species rich hedgerows, golf course				
Whitnash and Golf		with mature woodland. The south-west section is a				
Lane		potential LWS.				
Potential Local Wildlin						
Greys Mallory	Ecosite 09/26	Mixed site with broadleaved semi-natural woodland,				
		plantation and pools.				
Barford Quarry	Ecosite 11/26	A regenerating quarry with typical mosaic common				
		to post industrial sites				
Woodland on	Ecosite 22/26	Two areas of woodland, one semi-natural the other				
Hareway Lane		with replanting.				
Grand Union Canal	Ecosite 30/26	Important linear wildlife corridor with records of water				
		vole.				
Railway -	Ecosite 116/26	Deep railway cutting includes semi-improved				
Leamington Spa to		grassland, tall ruderal, scrub and scattered trees.				

Birmingham		
Warwick Ecosite 126/26		Area had potential but due to development may no
Technology Park		longer meet requirements.
GWR Railway – Ecosite 06/36		Embankment and cuttings with broad-leaved semi-
Warwick to		natural woodland, scrub and grassland communities.
Banbury		
River Leam	Ecosite 16/36	Important to rare, notable and protected species
		and as a linear feature and connects to the Newbold
		Common Local Nature Reserve.

4.2.2 Nature on the Map revealed the presence of four BAP (Biodiversity Action Plan) habitat types within 2km of the site: coastal, floodplain grazing marsh, reed beds, traditional orchards and deciduous woodlands. There are no ancient woodland sites within 2km of the site, however there are tree preservation orders on four trees located along Harbury Lane in close proximity to the northern boundary of the site.

Habitats and Flora Analysis

4.2.3 Following the onsite Extended Phase 1 habitat survey on the site at Lower Heathcote Farm, the following habitat/vegetation types were identified. These habitats are also illustrated on Figure 4.1, Phase 1 Habitat Plan.

Arable fields

4.2.4 At the time of survey, the majority of the site comprised arable fields, most of which had been harvested. Some of the fields had wide margins (4-5m) which were relatively species rich, however the intensive agricultural arable fields were found to be species poor. The majority of the southern arable field is within the area designated as a LWS, however the arable habitat is not considered to fulfil the criteria for designation as a LWS.

Improved and amenity grassland

4.2.5 There are three areas of improved grassland within the site which are currently used as caravan sites. These fields are species poor dominated by perennial rye grass and white clover. Further areas of amenity grassland can be found around the lake margins and within Lower Heathcote Farm gardens.

Hedgerows

- 4.2.6 The site contains sixteen hedgerows varying from defunct species poor to intact species rich. The species composition of each hedgerow varies, however species generally present in most hedgerows within the site include hawthorn (*Crataegus monogyna*), ash (*Fraxinus excelsior*) and elder (*Sambucus nigra*). A newly planted beech (*Fagus sylvatica*) hedgerow as well as a leylanddi (*Cupressocyparis leylandi*) hedgerow are also located on site. Bramble (Rubus fructicosus agg.) is frequently found within the hedgerows and common nettle (*Urtica dioica*) and ivy (Hedera helix) are frequently found within the ground flora.
- 4.2.7 Nine of the hedgerows on site are species rich with one of these having the potential to meet the criteria for 'important' hedgerows under the wildlife and landscape criteria of the Hedgerow Regulations 1997. The remaining hedgerows within the site are not considered to be 'important' under the wildlife and landscape criteria of the Hedgerow Regulations 1997 and are not species rich.

Wet Grassland

4.2.8 There is an area of wet marshy grassland dominated by willowherb species in the south-west corner of site. The area of wet (marshy) grassland is relatively small and offers limited potential for invertebrates and common reptiles.

Broad-leaved Woodland

4.2.9 Adjacent to the wet grassland is an area of woodland with ash, hawthorn, pedunculate oak (*Quercus robur*), blackthorn (*Prunus spinosa*) and willow (*Salix sp.*) trees. There is also an area of broad leaved woodland outside the south-west boundary of the site.

Stream Corridors

- 4.2.10 The Tach Brook runs along the southern boundary of the site. The stream corridor is lined with tall ruderals, scrub and semi-mature trees. The stream itself is approximately 3m wide and 20cm deep and has a fast flow.
- 4.2.11 The second watercourse on site is located along a defunct hedgerow and is approximately 2m deep and 1m wide. The water was approximately 5cm deep and 25cm wide at the time of survey. This watercourse is a tributary of the Tach Brook which crosses underneath Europa Way via a culvert and through the 'Land South of Gallows Hill'.
- 4.2.12 A small ditch, relatively dry, also connects with the Tach Brook and is located to the west of the fishing lakes. The ditch does not connect with either of the fishing lakes.
- 4.2.13 These water resources do provide habitat diversity within an intensively agricultural landscape and has the potential to provide wildlife corridors for a variety of wildlife.

Fishing Lakes

4.2.14 The two large lakes on site are stocked with fish and are used by recreational anglers. The lake margins are planted with rush species and the terrestrial habitat immediately surrounding the lakes comprise improved grassland with occasional scrub and immature tree planting. They have small pontoons and some small wooden shelters. These two lakes are not hydrologically connected and there is no outflow from the western lake to the ditch connecting to the Tach Brook. These lakes have the potential to provide limited opportunities for a variety of wildlife including birds, invertebrates, foraging bats and amphibians as well as providing habitat diversity in an area of intensive agriculture.

Mature trees

4.2.15 There are numerous mature/semi-mature trees on site which are associated with hedgerows. Four trees along Harbury Lane, in close proximity to the northern boundary of the site are covered by a TPO. The mature trees on site have the potential to support a variety of wildlife including roosting bats and breeding birds.

Scrub

4.2.16 There are occasional patches of bramble and common nettle dominated scrub filling in gaps in hedgerows, in particular along the eastern boundary of the site. These have the potential to provide opportunities for a variety of wildlife including nesting and foraging birds.

Disturbed Ground

4.2.17 There is an area of disturbed ground in the south-west corner of the site and is dominated by dove's foot crane's bill (*Geranium molle*) and meadow foxtail (*Alopercus pratensis*). This area has the potential to provide suitable habitat for common reptiles and invertebrates as well as providing some habitat diversity in a landscape dominated by intensive agriculture.

Buildings and hardstanding

4.2.18 Buildings are present on site within Lower Heathcote Farm. Some of these buildings are farm sheds and are built of corrugated metal and are therefore considered unsuitable as bat roosts other than possible night perches. However some of the buildings are brick built with tiles and have a number of potential access points for bats and birds.

Protected / Notable Species

4.2.19 WBRC holds a number of records for nationally or county rare flora species within 2km of the site. However none of these records are located on site. Furthermore, during the Extended Phase 1 Habitat Survey, no legally protected, rare or scarce flora species were recorded on the site. Therefore, the habitats on the site are considered to be of negligible value for protected flora species.

Invasive Species

4.2.20 No invasive species, as listed in the Wildlife and Countryside Act 1981 (as amended) Schedule 9, Section 14, such as Japanese knotweed, were identified within or directly adjacent to the site boundary.

Fauna Analysis

Amphibians

- 4.2.21 WBRC holds records of great crested newt, smooth newt, common frog and common toad within 2km of the site. None of these records are located on or directly adjacent to the site. The closest record for great crested newt is located approximately 1.0km to the east of the site.
- 4.2.22 OS maps shows 10 water bodies and 3 streams on or within 500m of the site. Two of these water bodies comprise large fishing lakes which are located on site and which are considered to offer very limited potential for supporting amphibians due to the presence of fish and lack of aquatic vegetation which amphibians can use to seek refuge from predatory fish. There are also two streams located on site which are considered to be unsuitable as breeding habitat for amphibians due to the fast flowing water. Of the remaining ponds one was dry at the time of the survey and one was found not to exist. Five of these could not be accessed at the time of the survey to undertake an assessment of their suitability for supporting amphibians. The remaining stream to the north of the site is a very shallow ditch and is considered to offer very limited potential for amphibians. The mosaic of habitats located within the site in addition to the rubble piles, grass and compost heaps could provide terrestrial foraging and sheltering habitat for amphibians. The location Plan. A summary of the water bodies / courses identified is provided in Table 4.2 below:

Table 4.2	Table 4.2 – Summary of ponds and streams within 500m – Land at Lower Heathcote Farm				
Pond / Stream	Pond / Stream Pond Access and Status				
Reference	Reference				
P1	Dry	N/A			
P2	Does not exist	N/A			
P3	Fishing Lake - very limited suitability due to presence of fish and lack of aquatic vegetation	0.32 (Poor)			
P4	Fishing Lake - very limited suitability due to presence of fish and lack of aquatic vegetation	0.32 (Poor)			
P5	P5 Large rectangular pond on field margin surrounded by scrub and tussocky grassland – suitable for supporting GCN.				
P6 Large rectangular pond on field margin surrounded by scrub and tussocky grassland – suitable for supporting GCN.		0.78 (Good)			
P7	P7 Small circular field pond containing silage bales – suitable for supporting GCN.				
P12	P12 Does not exist				
P13	Two medium sized ponds at disused sewage works – Further surveys not possible as no access available to waters edge. 0.87 (Excellen				
P14 Medium sized garden pond, lined, large amphibian population (known – some suitability for GCN although fish present		0.41(Poor)			
S1	Shallow drainage ditch - limited potential for GCN	N/A			
S3	Fast flowing stream – unsuitable for GCN	N/A			
S4	N/A				

4.2.23 Six ponds and a shallow drainage ditch within 500m of the site were subject to further surveys, however did not reveal the presence of great crested newts, although smooth newts and frogs were observed in some. The results are summarised in Table 4.3 below:

	Table 4.3: GCN Survey Summary 2013				
Pond Number	Survey Methods Used	Dates of surveys	GCNs Present	Other amphibians	
P3	Torch & bottle & egg searches (all visits)	17.04.13, 02.05.13, 21.05.13, 11.06.13	Ν	frogs	
P4	Torch & bottle & egg searches (all visits)	17.04.13, 02.05.13, 21.05.13, 11.06.13	Ν	frogs	
P5	Torch & bottle (all visits) No suitable aquatic vegetation observed for egg searching	18.04.13, 02.05.13, 21.05.13, 12.06.13	N	Smooth newts, frogs	
P6	Torch & bottle (all visits) No suitable aquatic vegetation observed for egg searching	18.04.13, 02.05.13, 21.05.13, 12.06.13	N	Smooth newts	

P7	Torch & bottle (all visits)	18.04.13, 02.05.13,	N	Smooth newts
	No aquatic vegetation	21.05.13, 12.06.13		
	for egg searching			
P14	Torch and egg searches	17.04.13, 02.05.13,	Ν	Frogs (toads
	(all visits) No bottle traps	21.05.13, 12.06.13		observed on
	because the pond is			land near to
	lined			pond)
S1	Torch and egg searches	17.04.13, 02.05.13,	Ν	Smooth newt,
	only (all visits). Too	21.05.13, 11.06.13		frogs
	shallow for bottle traps.			_

Badgers

- 4.2.24 WBRC states that there are a number of records of badger activity within 1km of the site.
- 4.2.25 A badger survey was undertaken in September 2012, the results of which have been presented in the ecological assessment submitted as part of the outline application. Mindful of the sensitive nature of this information, only a short summary of the findings are presented here.
- 4.2.26 In summary badger activity was found on the extent and outside of the site, in the form of four apparent setts. Three of the setts identified appeared to show signs of recent activity; however the remaining sett appeared vacant and currently inhabited by rabbits. Mitigation measures on site shall be incorporated to respect the sensitivity of these areas and any development on the site would be designed to ensure these active setts are retained.

Bats

- 4.2.27 WBRC holds numerous records for various bat species within 2km of the site. These include records for daubenton's bat, noctule, common pipistrelle, soprano pipistrelle, Leisler's bat, Natterer's bat and brown long-eared bat. The closest records are located along the northern site boundary of the adjacent site Land west of Europa Way.
- 4.2.28 There are a number of mature trees on the site, notably in association with the hedgerows, and also 12 buildings associated with Lower Heathcote Farm which could provide roosting opportunities. Additionally, the hedgerows, stream corridors, lakes and woodland edges provide suitable foraging habitat and navigation routes for bats. Given this potential, Emergence, Re-entry and Activity Bat Surveys were undertaken on the site in accordance with best practice methodology.
- 4.2.29 With respect to the Emergence/Re-entry surveys, two buildings were confirmed as containing roosts used by low numbers of pipistrelle and are considered to be low status non-breeding summer roosts. One of the buildings shows evidence of bat activity in the way of droppings during the inspection survey, however no bats were observed leaving/re-entering this roost during the emergence/re-entry surveys suggesting this is an occasional feeding perch.
- 4.2.30 The bat activity surveys undertaken recorded at least four species of bat foraging and commuting on the site, including common, soprano and unidentified pipistrelles, Noctule, Myotis species and Daubenton's. Activity was concentrated around the lakes, the southern boundary adjacent to the Tach Brook and along two of the central hedgerows, areas where there is potential to provide foraging and commuting corridors. Noctule flight patterns were identified; and the species was shown to commute high over the site from the west to the woodland block and lakes to the south east; common and soprano pipistrelle were revealed to follow similar commute patterns. No bat activity was observed in the vicinity of the three mature pedunculate oak trees along the northern boundary and no bats were observed emerging from or re-entering them. Overall the site is considered to be of local value for at least four species of bat for foraging / commuting.

Birds

- 4.2.31 WBRC holds two records for barn owl which is a county BAP species located within 2km of the site. The closest record is situated approximately 0.8km to the south-west of the site.
- 4.2.32 During the Extended Phase 1 Habitat Survey the following bird species were recorded within or close to the site: wood pigeon, blue tit, mute swan (*Cygnus olor*), gold finch, buzzard and magpie, were seen during the surveys.
- 4.2.33 The mature trees, hedgerows and farm buildings have the potential to provide breeding, feeding and nesting opportunities for many bird species. Evidence of nesting birds was observed in two of

the buildings, one of which also had the potential to be used by barn owl however no evidence of this species was observed during the surveys. The hedgerows and areas of woodland within the site are important for breeding birds and are therefore considered to be of at least local importance for breeding birds. The open fields, although of less value for birds, do hold nesting opportunities for ground nesting birds such as skylark.

4.2.34 The mature trees on site are considered to have limited potential for nesting barn owl. The majority of the site comprises arable fields which are considered to be poor foraging habitat for barn owl. The field margins are considered to offer limited foraging habitat for this species.

Dormouse

4.2.35 The hedgerows within the site contain few species suitable for dormouse and WBRC holds no records of dormice within 2km of the site. Furthermore, no evidence of dormouse activity was observed on the site at the time of the habitat survey and it is therefore considered unlikely that dormice are present on site.

Invertebrates

- 4.2.36 WBRC holds records for both wall and small heath butterflies which UKBAP species. Neither of these species has been record on or directly adjacent to the site.
- 4.2.37 The arable fields are unlikely to support a notable assemblage of invertebrates. However, the hedgerows, streams, large lakes and areas of improved grassland have the potential to provide suitable habitat for assemblages of common invertebrate species. Flowering plants on site could potentially be a source of nectar for species such as bees and butterflies. However the majority of the site comprises arable land and is considered to be of less value for invertebrates.

Reptiles

- 4.2.38 WBRC holds records for adder and grass snake within 2km of the site. The closest record for grass snake is located approximately 0.2km to the west of the site along the Tach Brook and the closest record for adder is located approximately 0.6km to the west of the site.
- 4.2.39 The woodland edge, stream corridors, hedgerows and wide field margins within the site could potentially support common reptiles such as slow worm and grass snake. The rubble piles on site could also potentially provide refuges and hibernation sites for common reptiles whilst the grass and compost heaps may provide suitable egg laying sites for grass snake. Reptile surveys were therefore undertaken in July and September 2013.
- 4.2.40 No adult reptiles were observed on the site during the July or September surveys however the observation of 2 juvenile grass snakes in September surveys suggests that a low population of this species is present within the area of woodland in the west of the site.
- 4.2.41 The site therefore is not considered to qualify as a 'key reptile site' however the habitats within the site, notably the area of broadleaved woodland adjacent to where the juvenile grass snakes were observed and the Lakes to the north, are considered to offer potential for this species.

Water Vole and Otter

- 4.2.42 The Tach Brook runs along the southern boundary of the site and the stream which runs through the site have steep wide banks but had a shallow water level at the time of the survey. There are records for water voles within close proximity to the adjacent site (Land South of Gallows Hill). The sections of watercourses on and adjacent to the site boundary that could be observed are not considered suitable for water vole as they are very small and extremely shaded by dense scrubby vegetation without the grassy slopes that water voles favour and no evidence of this species was observed.
- 4.2.43 There is the potential for otter to use the watercourses and fishing lakes for foraging however no evidence of use by this species was observed at the time of the survey.

Other Fauna

4.2.44 WBRC holds records for brown hare (*Lepus europaeus*) and hedgehog (*Erinaceus europaeus*) within 2km of the site.

4.2.45 The fields of arable crop and the hedgerows may offer potential sheltering and foraging habitat for brown hare and the hedgerows and areas of scrub could potentially provide suitable resting and foraging habitat for hedgehogs.

Summary of Nature Conservation Value

4.2.46 Overall the majority of the area is of negligible value for nature conservation in a local context because it is for the most part intensively used agricultural land. The hedgerows, trees and woodland areas provide shelter, foraging and nesting opportunities for a range of fauna species and are considered to be of local value for nature conservation.

4.3 Ecological Opportunities

- 4.3.1 As evidenced by the above discussion, the majority of the site is of low ecological value, and therefore any development proposal on the site presents the opportunity to deliver numerous ecological enhancements over the current ecological situation, providing benefits to the local biodiversity.
- 4.3.2 Whilst any development onsite will inevitably result in permanent loss of agricultural land, and potential impacts on other habitats, it is considered that the careful masterplanning of the site is capable of providing real benefits to biodiversity and wildlife while still maximising the developable potential of the site.
- 4.3.3 Figure 2.2, Indicative Masterplan, demonstrates one way in which development could be successfully accommodated on the site at Lower Heathcote Farm. Specific key concepts have been integral throughout the development of these indicative proposals, which aim to avoid or reduce in severity any ecological impacts, and exploit opportunities through habitat creation and enhancement. The specific key concepts considered, which can be incorporated into any proposals for the site, include the following:
 - Maintain and enhance existing features, particularly retaining the continuity and functioning of linear habitats such as hedgerows and use these as a basis for any proposal layout;
 - Enhance and create new habitats and features;
 - Create linked network of habitat corridors to improve wildlife movement, including permeability into the proposed built environment as well as open space areas, linking habitats both within the site and external; and
 - Create areas which are of value to wildlife and amenity.
- 4.3.4 As illustrated on the Indicative Masterplan for the site, any proposed development provides the opportunity to not only retain key features where possible, such as the linear linked hedgerows, mature trees and the stream corridors, but also to introduce a variety of additional planting and features across the site. Planting would be designed to enhance ecological biodiversity by including foraging/nesting opportunities for a range of species and to take into account the habitat requirement of the local fauna, improving the current ecological habitats. The creation of habitats will specifically contribute to BAP targets. SUDs and greenways will be designed to be suitable for local flora and fauna.
- 4.3.5 Furthermore, additional strategic planting and pockets of open space, would help create a linked network of green infrastructure over the site, enabling the management of species across an otherwise unsuitable, intensively managed habitat, thereby increasing the benefit to the local wildlife population. This has the opportunity of continuing to provide wildlife corridors and linkages to habitats both within, and external, to the site.
- 4.3.6 Any proposed development at the site at Lower Heathcote Farm would provide a comprehensive green infrastructure and open space network in accordance with WDC's adopted Open Space SPD 2009 requirements, which the above concepts could be incorporated into. Warwick District Council specifically have visions for a Country Park in the district, the aspiration of which could be delivered as part of the green infrastructure strategy for any proposals on the site.
- 4.3.7 As illustrated on the Indicative Masterplan at Figure 2.2, the Country Park could form the retained grassland at the southern edge of the site associated with the Tach Brook. This area provides numerous opportunities for a variety of habitats and recreational areas, such as a wetland meadow corridor, enhancement planting, creation of walkways and the retention and planting of groups of native trees, including species such as willows and alders evocative of flood plain meadows. Clearly,

in addition to providing biodiversity benefits, this Country Park would also bring amenity benefits to both existing and future residents. Any Country Park or other open space areas would also be appropriately managed to help maintain these positive benefits and secure biodiversity gain in the long term.

- 4.3.8 Further information on potential possibilities for the Country Park, in addition to the other Green Infrastructure opportunities of the site at Lowe Heathcote Farm is discussed within Chapter 4, Landscape and Visual Issues; this includes discussion surrounding Indicative Green Infrastructure and Landscape Strategies and a more detailed Landscape Masterplan.
- 4.3.9 Obviously these ideas can be progressed further at the detailed design stages in any proposed development, however these concepts and recommendations illustrate how development of the site at Lower Heathcote Farm could provide real benefits to biodiversity in the long term.

4.4 Conclusion

- 4.4.1 Drawing upon the full ecological impact assessment which has been undertaken in relation to the outline application at Lower Heathcote Farm, it is evidenced that the majority of the site is of low ecological value due to the site, for the most part, being intensively used agricultural arable land which is found to be species poor. The hedgerows, trees and woodland areas do however provide some shelter, foraging and nesting opportunities for a range of fauna species.
- 4.4.2 Whilst development onsite will inevitably result in permanent loss of agricultural land, and potential impacts on some habitats, it is however considered that any development proposal presents the opportunity to deliver numerous ecological enhancements over the current low ecological value of the site. Any proposed development at the site at Lower Heathcote Farm would provide a comprehensive green infrastructure and open space network, which specifically could deliver a Country Park in the south of the site, in line with Warwick District's Council aspirations.
- 4.4.3 On review of the potential ecological constraints and opportunities, it is therefore considered that the careful masterplanning of the site is capable of providing real benefits to biodiversity and wildlife while still maximising the developable potential of the site, demonstrating that the site at Lower Heathcote Farm could successfully accommodate development.

5 Transport and Accessibility

5.1 Introduction

- 5.1.1 This chapter sets out the transportation and highways related context for the potential development on land at Lower Heathcote Farm and its surroundings.
- 5.1.2 As discussed in Chapter 1, Introduction, the site at Lower Heathcote Farm is currently subject to an outline planning application with access not reserved. A Transport Assessment (TA), Framework Travel Plan (FTP) and ES Chapter were submitted in support of this application, the information from this is drawn upon in this chapter.

5.2 The Site and Surroundings

Existing Site Access

5.2.1 The site at Lower Heathcote Farm is situated to the south of Leamington Spa and is bordered to the north by Harbury Lane, to the east by Heathcote Park, to the south by open countryside and to the west by Europa Way. This site is currently accessed via a simple priority junction formed with Harbury Lane which leads to the Farm, fishing lakes and Caravan Park which are present on site. A second dropped kerb type access to this site is also situated on Harbury Lane.

Local Highway Network

- 5.2.2 The local highway network is shown in **Figure 5.1**.
- 5.2.3 The development site is bound to the west by the A452 Europa Way, which runs in a north-south alignment.
- 5.2.4 The A452 runs from Brownhills in the north-west to the M40 in the south-east (separate spurs connect to Junctions 13 and 14) via areas of north and east Birmingham, Balsall Common, Kenilworth and Leamington Spa.
- 5.2.5 Past the site, the A452 is Europa Way, which provides a link between Learnington Spa in the north and the M40 at Junctions 13 and 14 in the south. Key junctions along Europa Way include:
 - the four-arm A452 (Princes Drive / Europa Way) / A425 (Myton Road / Old Warwick Road) roundabout known as "Foundry Roundabout", to the north of the Grand Union Canal in Leamington Spa;
 - the four-arm A452 (Europa Way) / Queensway / Tachbrook Park Drive roundabout known as "Shires Roundabout" to the south of the Grand Union Canal in Learnington Spa;
 - the five-arm A452 (Europa Way) / Gallows Hill / Heathcote Lane / Harbury Lane roundabout to the north of the proposed development sites;
 - the four-arm A452 (Warwick By-Pass / Europa Way / Banbury Road) / A425 (Banbury Road) roundabout known as "Greys Mallory Roundabout" to the south of the development sites; and
 - the M40 Junctions 13 and 14.
- 5.2.6 The section of the A452 Europa Way in the vicinity of the site takes the form of a single carriageway road which is subject to a 50mph speed limit. No footways are provided and street lighting is only provided at the roundabout junctions to the north and the south.
- 5.2.7 Heathcote Lane runs in an east-west alignment between the five-arm A452 (Europa Way) / Gallows Hill / Heathcote Lane / Harbury Lane roundabout (adjacent to the site) in the west and the B4087 Tachbrook Road in the east. There is a shared footway / cycleway along the northern side of the road and a footway along the southern side of the road along the eastern section. Heathcote Lane is subject to a 40mph speed limit and street lighting is provided along its length.
- 5.2.8 Harbury Lane runs in an north-west to south-east alignment between the five-arm A452 (Europa Way) / Gallows Hill / Heathcote Lane / Harbury Lane roundabout in the north-west (adjacent to the

proposed development sites) and the B4455 Fosse Way in the south-east. In the vicinity of the site, there are no footways or street lighting. Harbury Lane is subject to a 50mph speed limit.

- 5.2.9 Gallows Hill runs in a north-west to south-east alignment between its junction with the A425 (Banbury Road) in the north-west and the five-arm A452 (Europa Way) / Gallows Hill / Heathcote Lane / Harbury Lane roundabout to the north-west corner of the site, via Warwick Technology Park.
- 5.2.10 There is a shared footway / cycleway along the northern side of the road between the Technology Park and the roundabout and street lighting is provided. Gallows Hill is currently subject to the National Speed Limit (60 mph) along its length.
- 5.2.11 The A425 runs from the grade separated A46 (Warwick By-Pass) / A4177 (Birmingham Road) / A425 (Birmingham Road) junction known as "Stanks" in the west to Daventry in the east via Warwick, Leamington Spa and Southam. Banbury Road is a separate spur of the A425 which runs in a north-south alignment from Warwick in the north to Greys Mallory Roundabout in the south (close to the M40 Junctions 13 and 14).
- 5.2.12 In addition to those junctions between the A425 and A452 previously mentioned, key junctions along the A425 in the area surrounding the proposed development site include.
 - A425 (Banbury Road) / A425 (Myton Road) / Bridge End four-arm roundabout;
 - A425 (Banbury Road) / Gallows Hill signalised T-Junction.
- 5.2.13 Banbury Road is subject to the National Speed Limit, between the junction with Gallows Hill and Greys Mallory Roundabout. This section is rural in nature with no street lighting or footways provided. On the approach to and north of the Gallows Hill junction, Banbury Road is subject to a 40mph speed limit as it becomes more urban in nature, with the introduction of footways and street lighting.

5.3 Sustainable Location

5.3.1 The site at Lower Heathcote Farm is considered to be sustainably located and benefits from a range of amenities in the local area which are accessible via walking, cycling and public transport.

Sustainable Travel - Walking & Cycling

- 5.3.2 An assessment has been undertaken of the existing pedestrian and cycle network surrounding the site at Lower Heathcote Farm including pedestrian and cycle links, crossing facilities and an analysis of the existing local facilities which can be reached on foot or by bicycle within reasonable journey times.
- 5.3.3 The local highway network has an existing footway network which allows pedestrians safe and convenient access to existing local bus stops and amenities. For example the area to the north of the site has existing provision for pedestrians and cyclists. There is an off-carriageway shared pedestrian / cycleway on the northern side of Gallows Hill linking Warwick Business Park to the Europa Way roundabout. This shared pedestrian / cycleway continues a short distance along the northern arm of Europa Way to a signal controlled crossing, allowing access across Europa Way for pedestrians and cyclists. The shared pedestrian / cycleway continues along the northern edge of the carriageway of Heathcote Lane to Heathcote Industrial Estate and beyond to the Warwick Gates development. This also connects through into Tachbrook Park via a link off Heathcote Way and into Warwick Gates to Tachbrook Road to the railway station.
- 5.3.4 There are also off-carriageway shared pedestrian / cycleways along Macbeth Approach and Gallagher Way, which provide a north / south link for the pedestrian and cycle facilities along Heathcote Lane to Harbury Lane and Earl Rivers Avenue. The off-carriageway pedestrian / cycleways continue south east alongside Harbury Lane. The Warwick Gates development has pedestrian and cycleways throughout the development.
- 5.3.5 With respect to any potential development on the site at Lower Heathcote Farm, pedestrian and cycle connections could easily be incorporated into any development proposals providing pedestrian and cycle connections and good connectivity within the development itself and also connecting to the existing surrounding infrastructure at strategic locations.

- 5.3.6 For Example, footways lining both sides of internal site roads, off-carriageway pedestrian connections, two such routes emerging onto Harbury Lane from the site. The indicative masterplan at Figure 2.2 illustrates potential opportunities for such links.
- 5.3.7 In order to demonstrate pedestrian accessibility in the existing surrounding area of the site at Lower Heathcote Farm, walking isochrones have been plotted. These have been plotted using the existing road network and therefore illustrate the actual distance walked as opposed the distance as the crow flies. Walking isochrones have been plotted for five, ten, fifteen and twenty minute journey times on foot.
- 5.3.8 The walking speed is based on guidance given in Paragraph 3.30 in the IHT's publication 'Guidelines for Providing for Journeys on Foot' which states: '*An average walking speed of 1.4m/s can be assumed which equates to approximately three miles per hour'*. It is therefore assumed that it is possible to walk 420m in five minutes, 840m in ten minutes, 1,260m in fifteen minutes and 1,680m in twenty minutes. Pedestrian access points around the development sites have been used as the starting points for the isochrones and therefore those living at the furthest extents of the sites will be required to walk a greater distance.
- 5.3.9 The walking isochrones have been plotted on Figure 5.2.
- 5.3.10 As shown in **Figure 5.2**, various employment and retail areas are accessible via walking from the site, along with the residential areas in Heathcote such as the Warwick Gates development. This shows that the retail facilities within the highlighted retail areas with an acceptable walking distance from the site, providing a viable sustainable alternative transport mode for residents at the proposed development. It also demonstrates that the site is within acceptable walking distance from local existing residential areas, providing a viable sustainable alternative transport mode for employees commuting to the proposed development.
- 5.3.11 In order to demonstrate cycling accessibility in the existing surrounding area, cycling isochrones have been plotted. These have been plotted using the existing road network and have been plotted for five, ten, fifteen and twenty minute journey times by bike.
- 5.3.12 Sustrans "Cycle Friendly Employers Information Sheet" recommends an acceptable cycling speed as being 4.4 m/s. It is therefore assumed that it is possible to cycle 1,320m in five minutes, 2,640m in ten minutes, 3,960m in fifteen minutes and 5,280m in twenty minutes.
- 5.3.13 The cycling isochrones have been plotted on Figure 5.3.
- 5.3.14 **Figure 5.3** shows the various employment and retail areas accessible within a 20 minute cycle ride from the site. It also shows that both Learnington Spa Railway Station and Warwick Railway Station are within a 10 minute cycle ride from the development. **Figure 5.3** illustrates the extent of the local residential areas accessible via cycling to / from the site, including Warwick, Learnington Spa, Sydenham, Whitnash and Heathcote. This demonstrates that the site is within acceptable cycling distance from local existing residential areas, providing a viable sustainable alternative transport mode for any future employees commuting to any development on the site at Lower Heathcote Farm. It also demonstrates that the retail and employment facilities within the highlighted retail and employment areas are within an acceptable cycling distance from the site, providing a viable sustainable alternative transport mode for any future residents. The railway stations accessibility via cycling also provides a genuine rail option for any future potential users of the site at Lower Heathcote Farm.
- 5.3.15 National Cycle Network Route 41 runs between Warwick and Learnington to the north of the site, and provides a largely traffic free route between the two. The route is accessible from Europa Way via Old Warwick Road.
- 5.3.16 There are no public rights of way which bisect or border the site nor are there any in the immediate vicinity. It is therefore considered that any development on the site at Lower Heathcote Farm would not be affected by or are likely to affect existing public rights of way.

Sustainable Travel - Public Transport

5.3.17 There are existing bus stops located in the area surrounding the site at Lower Heathcote Farm, the nearest bus stops and corresponding distances are as follows:

- Bus stops on Harbury Lane at the junction with Heathcote Park approximately 160m from the nearest site access point onto Harbury Lane (served by number 67A/67B bus service); and
- Bus stops on Earl Rivers Avenue approximately 300m from the nearest site access point onto Harbury Lane (served by number 68 and 77 bus service).
- 5.3.18 The number 67A, 67B, 68 and 77 bus services operate within the area immediately surrounding the site.
- 5.3.19 The number 68 bus service is the most frequent of these services and runs along Earl Rivers Avenue, Harbury Lane and Gallows Hill adjacent to the site frontage. This service routes between Hatton Park and Cubbington serving the centres of Warwick and Learnington en-route. This route operates Monday to Saturday at up to a 30 minute frequency. The number 68 service stops at Learnington Spa and Warwick Parkway railway stations as well as Warwick bus station allowing connections to other public transport services to be made.
- 5.3.20 The number 67A and 67B bus services operate on Sundays only and run along Earl Rivers Avenue and Harbury Lane. The 77 bus service operates at more infrequent intervals throughout the day and routes along Tachbrook Road to the Shires Retail Park. This service also provides connection to Leamington town centre.
- 5.3.21 These bus routes are summarised in Table 5.1.

	Service	Douto	Typical Frequency / Mins			
	Number	Route	Mon - Fri	Sat	Sun	
	68	Hatton Park – Warwick – Leamington - Cubbington	30	30	-	
	67A	Harbury – Warwick Gates – Leamington - Cubbington	6 (Fri & Sat	0 Eves only)	30	
	67B Bishops Tachbrook – Warwick Ga – Leamington – Cubbington			-	120	
77 Fenny Compto Leamington		Fenny Compton – Kineton - Leamington	120	120	-	

Table 5.1: Local Bus Services

- 5.3.22 With respect to any proposed development on the site at Lower Heathcote Farm, there is the potential for these services to be improved, enhancing the sites sustainable credentials further.
- 5.3.23 Discussions have taken place with the operator of the number 68 service with regards to providing a route extension to the service in order to serve any development on site directly by routing the service through the development itself.
- 5.3.24 The nearest railway stations to the site are Learnington Spa (approximately 2.3km to the north of the site) and Warwick (approximately 2.7km to the north west of the site). The location of these stations relative to the development is illustrated on **Figure 5.4**.
- 5.3.25 The walking and cycling accessibility assessment highlights that both the railway stations can be accessed within a 10 minute cycle ride from the developments. The local bus service assessment highlights that the number 68 bus service provides frequent connections to both the railway stations from the bus stops near the site.
- 5.3.26 Leamington Spa Railway Station is managed by Chiltern Railways and has cycle storage facilities. There are 75 covered cycle racks on the platforms, along with additional racks at the front of the station.
- 5.3.27 It is possible to travel directly from Learnington Spa to destinations such as Birmingham, Coventry, London, Manchester and Bournemouth as well as other destinations en-route.
- 5.3.28 Warwick Railway Station is managed by Chiltern Railways and has cycle storage facilities. There are 5 cycle racks on the platform which are uncovered, along with 5 cycle storage lockers at the front of the station.
- 5.3.29 It is possible to travel directly from Warwick to Birmingham, London and Stratford-upon-Avon as well as other stations en-route.

5.3.30 A summary of typical rail journey times from Learnington Spa and Warwick are provided in Table 5.2.

Provider	Route	Typical Journey Time	Typical Frequency / Mins	
		Mins	Mon - Sat	Sun
Chiltern Railways	Birmingham – Warwick – London Marylebone	London Marylebone – (80 – 90)	30	30-60
Chiltern Railways London Marylebone – Warwick – Birmingham Snow Hill		Birmingham Snow Hill – (40)	30-60	60
Chiltern Railways Stratford – Leamington Spa – London Marylebone		London Marylebone – (70 – 90)	20	30
Cross Country Bournemouth – Leamington Spa – Coventry – Manchester Piccadilly		Coventry – (10) Bournemouth – (160) Manchester – (150)	30	60

5.3.31 As shown by Table 5.2, London, Birmingham and Manchester are all accessible from the local railway stations, and are served by trains at frequencies up to every 30 minutes from Monday to Saturday.

Local Amenities

- 5.3.32 The site is situated in a location which benefits from reasonable accessibility to a range of existing amenities.
- 5.3.33 There are a number of local amenities within the surrounding area which can be reached by foot, cycle or bus, providing a range of services accessible from the site at Lower Heathcote Farm.
- 5.3.34 Employment opportunities are available in the area surrounding the site and are predominantly situated to the north. These include Warwick Technology Park, Heathcote Industrial Estate, Tachbrook Business Park, Shires Gate Retail Park and Queensway Trading Estate.
- 5.3.35 The nearest healthcare facilities to the site are situated to the north east at the Warwick Gates Family Health Centre, whilst Warwick Hospital is situated north of Warwick town centre, to the north west of the site.
- 5.3.36 Retail facilities are provided in the Warwick Gates local centre, the Shires Retail Park and in Learnington Spa and Warwick town centres.
- 5.3.37 Warwick Gates contains a co-operative food store, a chemist and other local shops, such as food take-away shops and an estate agent.
- 5.3.38 The Shires Retail Park contains a Sainsbury's supermarket, a Boots Chemists, Debenhams and shops such as Halfords, Next and Harvey's. There are also restaurants such as Frankie & Benny's and KFC.
- 5.3.39 Learnington Spa and Warwick town centres contain a mix of retail, leisure and entertainment facilities.
- 5.3.40 St Joseph's Catholic Primary School, St Margaret's C of E Primary School, Whitnash Primary School and Briar Hill Infant School are situated to the east of the site in the Whitnash estate.
- 5.3.41 The nearest secondary schools are Myton School, situated to the north west of the site, Aylesford School, situated to the west of the site and Campion School situated to the north east of the site. Warwickshire College (Learnington Campus) is situated to the north of the sites.
- 5.3.42 Table 5.3 and **Figures 5.2** and **5.3** show local amenities and their distance from the site in terms of metres and in walking and cycling times respectively.

5.3.43 Distances measured for the amenities set out in Table 5.3 are from the nearest development site access point, (as illustrated on the indicative Masterplan on Figure 2.2) along the road network and using pedestrian/cycleways where appropriate.

Table 5.3: Local Amenities

Accessibility		y	Area	Amenity	Amenity Name	Approximat e Distance from Nearest Site Access (km)
Walking	Cycling	Public Transport		Туре		Lower Heathcote Farm
				Foodstore	Co-Operative	
				Pharmacy	Chemist	
			Warwick Gates	Take-Away	Fish Fair	1.4
				raite / indy	Pawpaw	
				GP / Clinics	Warwick Gates Family Health Centre	
				Supermarket	Sainsbury's	
			The Shires Retail	Pharmacy	Boots	
			Park	Retail	Various e.g. Halfords, Next and Harveys.	1.9
				Restaurants	Frankie & Bennys, KFC	
				Retail	Various	
				Foodstores	Various	-
			Warwick Town Centre	Restaurants	Various	2.7
				Leisure	Various	
				Healthcare	Various	
				Retail	Various	
			Leamington	Foodstores	Various	
			Town Centre	Restaurants	Various	- 3.8
				Leisure	Various	

5.3.44 As shown by Table 5.3 and **Figures 5.2** and **5.3**, there are a large number of local amenities accessible within reasonable walking and cycling distances of the site, and/or accessible by public transport.

5.3.45 The availability of these local facilities, and their accessibility by a number of modes of sustainable travel, will aid social inclusion and reduce reliance on the private car.

Sustainable Location Summary

5.3.46 As demonstrated though the above discussions, the site is considered to be located in an area with ready accessibility to the existing walking, cycling and public transport networks. It is considered that the sustainable credentials of the site could potentially be further improved, to the benefit of any future residents/employees through an extension to existing public transport services, linkages to the existing walking and cycling infrastructure networks and the implementation of a robust Travel Plan focussing on minimising single occupancy private car use.

5.4 Potential Site Proposals

5.4.1 As discussed in Chapter 1, Introduction, and earlier in this chapter the site at Lower Heathcote Farm is currently subject to an outline planning application with access not reserved. As part of this application, a full Transport Assessment, including Framework Travel Plan was undertaken and submitted. This work was based upon similar proposals to those set out in the indicative Masterplan at Figure 2.2, this assumed the following development schedule (Table 5.4).

Table 5.4. Floposed Development Schedule			
Development Site	Lower Heathcote Farm		
Site Area (Built Form)	22.47 ha		
Residential	785 dwellings		
Education	2.5 ha (2 form entry)		
Local Centre	1,400m ² (max) (Community facilities, potentially includes retail A1-A5 and D1 facilities)		
Other Uses (open space, play areas, allotments)	✓		
Attenuation Areas	✓		

Table 5.4: Proposed Development Schedule

5.4.2 The mixed use nature of the development proposals provides an opportunity for a significant level of self-sufficiency, thereby reducing the level of trips generated on the surrounding highway network.

Potential Access Arrangements

- 5.4.3 Following detailed discussions with Warwickshire County Council (WCC), the vehicular access strategy for the proposals subject to planning application was established using the WCC 2028 M40 Junction 12-14 corridor PARAMICS model (Myton Road extension version). Traffic data from the model was extracted and used to define the most appropriate form of access for the site.
- 5.4.4 This model included development on the Lower Heathcote Farm site and also the proposed development subject to outline planning application at South of Gallows Hill (up to 450 residential dwellings). The following discussions set out the site access arrangements derived from this work and are subject to the planning application, demonstrating that the site at Lower Heathcote Farm can be safely accessed.
- 5.4.5 All site access junctions have been designed accordingly to accommodate typical refuse, emergency and delivery vehicles which would access this type of development.
- 5.4.6 Three vehicular access points to the development site were designed. These include:
 - Europa Way Site Access;
 - Harbury Lane Western Site Access; and
 - Harbury Lane Eastern Site Access

Europa Way Site Access

5.4.7 This site access has been proposed to take the form of a new signalised crossroads junction providing access into the site at Lower Heathcote Farm and also the site South of Gallows Hill and a direct link between the two development sites. The traffic signal controlled junction provides opportunity to incorporate signal controlled crossing facilities for pedestrians and cyclists thereby providing permeability between the sites.

Harbury Lane Site Accesses

- 5.4.8 The proposals include the provision of two priority controlled site access junctions on Harbury Lane into the Lower Heathcote Farm development. The reasons for the proposed accesses on Harbury Lane taking this form are as follows:
 - To enable the retention of the existing hedgerows and trees along this boundary, which aid in creating green links through and adjacent to the proposed development area;
 - The two access points create a more permeable movement network that creates links between the three sites and the existing network for road users and pedestrians and cyclists;
 - The two access points also draw traffic associated with the local centre and the primary school within the development, whereby sufficient parking provision and drop off points can be designed within the proposals and therefore discouraging traffic to stop along Harbury Lane. The retention of the existing hedgerows aids in this by creating a clear buffer/boundary between the proposed uses and the existing road; and
 - The addition of the two access points will act as traffic calming along Harbury Lane, through change of character of the existing carriageway and any additional traffic calming features that may be considered necessary.
- 5.4.9 The two priority T-Junctions along Harbury Lane have been proposed to be located as follows;
 - one between the five-arm A452 (Europa Way) / Gallows Hill / Heathcote Lane / Harbury Lane roundabout and the four arm Harbury Lane / Earl Rivers Avenue / Macbeth Approach roundabout (the western priority access junction); and
 - the second to the east of the four arm Harbury Lane / Earl Rivers Avenue / Macbeth Approach roundabout (the eastern priority access junction).
- 5.4.10 Two additional pedestrian and cycle access points have also been proposed into the Lower Heathcote Farm development, both off Harbury Lane.
- 5.4.11 The site accesses to Lower Heathcote Farm have been proposed to link within the site boundary via a spine road, as illustrated on Figure 2.2 (indicative Masterplan), from which access to individual development parcels could be derived. This spine road would be designed to facilitate movement of vehicles through the site and has been designed for 30mph to ensure it takes a form appropriate for a residential development.
- 5.4.12 It is intended within any development proposals that pedestrian and cyclist access to the site will be provided via the site access junctions described above but also in a number of other locations.

Potential Proposed Parking Provision

- 5.4.13 The current WDC parking standards are set out in Warwick District Council Vehicle Parking Standards Supplementary Planning Document (SPD) (November 2007) and prescribe permissible parking standards for cars, disabled users, motorcycles and cycles. The proposed development site is classified in the SPD as being in a low accessibility zone.
- 5.4.14 In any proposed development including the application submitted, cycle parking will be provided to a high standard and adhere to the following principles as a minimum where public or communal spaces are provided:
 - Stands which permit the user to lock both the frame and wheels to the stand (e.g. Sheffield stands);
 - Stands to be covered to protect bicycles and users from the weather; and
 - Stands to be situated in a prominent position, as close to building entrances as possible, to benefit from a high level of natural surveillance.
- 5.4.15 It is assumed that cycle parking for houses will be accommodated using garages or sheds.

- 5.4.16 It is the preferred option of WDC to update the Vehicle Parking Standards SPD in light of the NPPF. NPPF at paragraph 39 states: 'If setting local parking standards for residential and non-residential development, local planning authorities should take into account:
 - the accessibility of the development;
 - the type, mix and use of development;
 - the availability of and opportunities for public transport;
 - local car ownership levels; and
 - an overall need to reduce the use of high-emission vehicles."
- 5.4.17 These considerations can be incorporated when determining parking provision for any proposed development.

Potential Servicing Strategy

- 5.4.18 The proposed land uses identified for the site are unlikely to generate large numbers of heavy vehicle trips. The types of heavy vehicles which are considered to be likely to require access to any development on site are as follows:
 - Refuse Collection (Refuse collection vehicle) All land uses; and
 - Deliveries (Will vary in size from transit vans up to articulated vehicles) A1-A5, and primary schools land uses.
- 5.4.19 Consultation with the local emergency services authority would be undertaken for any development as the design evolves to ensure that emergency access is facilitated to all areas which require access within the sites.
- 5.4.20 Guidance on servicing access is provided in MfS 1 and 2. It is intended that this guidance would be adhered to in any development proposals.

Potential Public Transport Strategy

- 5.4.21 This strategy (or similar) could be incorporated into any development proposed and is set out below.
- 5.4.22 As part of the submitted planning application, a public transport strategy for the site was established based upon previous discussions with the bus operator, Stagecoach.
- 5.4.23 It is recognised that it would be beneficial to provide public transport to serve any proposed development.
- 5.4.24 The developer is willing to make a fair and reasonable contribution to providing public transport provision to serve any development. In the first instance, it would be the intention to utilise the existing Monday to Saturday number 68 bus service which operates at a 30 minute frequency in each direction.
- 5.4.25 It is proposed that the public transport strategy could then be delivered in stages, as follows:
 - Once the site infrastructure to allow buses to route through the site is constructed, it is proposed that the number 68 bus service would be re-routed accordingly.
 - There are significant development aspirations in the area surrounding the proposed Lower Heathcote site and therefore should this further development come forward then a more bespoke service could be provided by the Council to serve the Lower Heathcote site and the wider development in this area.
- 5.4.26 The Council will be able to utilise the developer contributions to provide bus services that they feel are appropriate.
- 5.4.27 It was previously identified by Stagecoach, and more recently confirmed by WCC, that all dwellings should be situated within 400m of a bus stop where feasible and on this basis the rule of thumb is the provision of four stops per mile.
- 5.4.28 The existing and potential amended number 68 routes are illustrated on **Figure 5.5** for comparison.

Potential Pedestrian / Cycle Links

- 5.4.29 Within any proposed development for the site it would be the intent to to provide a network of pedestrian/cycle routes through the development to link with the wider foot/cycle network outside the development site. Potential outline proposals for the wider area are detailed below:
 - Crossing on Heathcote Lane to link Land North of Harbury Lane with existing shared use foot/cycleway on Heathcote Lane;
 - Retention of the shared foot/cycleway on Heathcote Lane and Gallows Hill and existing toucan crossing over the A452 Europa Way and incorporation into scheme designs for the A452 Europa Way/Heathcote Lane/Harbury Lane/Gallows Hill junction;
 - Toucan crossings and advanced stop lines incorporated within the proposed A452 Europa Way/Land West of Europa Way/Land South of Harbury Lane traffic signal controlled junction to facilitate east/west movements by pedestrians and cyclists between Land South of Gallows Hill and Lower Heathcote Farm;
 - Two Refuge type crossings on Harbury Lane in line with the positioning of the proposed site access priority junctions formed with Lower Heathcote Farm;
 - Shared foot/cycleway provision on Macbeth Approach and Harbury Lane linking the site accesses of Land north and south of Harbury Lane with existing shared use provision on Macbeth Approach and Earl Rivers Avenue; and
 - Cycle parking provided in line with agreed WCC standards for each constituent land use.
- 5.4.30 Notwithstanding the comprehensive range of off-site sustainable transport infrastructure it is also the applicants' intention to ensure connectivity throughout the site for those travelling by sustainable means, in particular those on foot or travelling by bicycle.

Highway Infrastructure

- 5.4.31 The S-PARAMICS modelling exercise and complementary junction capacity modelling has identified that a number of off-site locations require highway improvement schemes to be implemented should development at Lower Heathcote Farm and at Land South of Gallows Hill (outline applications currently submitted) come forwards.
- 5.4.32 The modelling has identified that mitigation measures are required and suitable schemes designed for the following junctions:
 - A452 Europa Way/Heathcote Lane/Harbury Lane/Gallows Hill Roundabout;
 - A452 Europa Way/A425 Old Warwick Road/A425 Myton Road Roundabout ('Foundry' Roundabout);
 - A452 Europa Way/Queensway/Tachbrook Park Drive Roundabout ('Shires' Roundabout);
 - A425 Banbury Road/A425 Myton Road/Bridge End Roundabout;
 - A425 Banbury Road/Gallows Hill Signal Controlled Junction; and
 - M40 Junction 14 Approach
- 5.4.33 In terms of the off-site locations where mitigation measures have been proposed to be delivered, WCC has indicated that for the sites identified in the Core Strategy a wider mitigation scheme would be required at these junctions, therefore, it is likely to be impractical to deliver the WSP mitigation proposals for these junctions. Therefore, the developer would look to make a contribution towards this wider scheme in these locations as identified in the WCC STA, on a basis which is proportional to the development impact in this location.

5.5 Conclusions

5.5.1 This chapter provides evidence to demonstrate that development (such as that proposed as part of the submitted planning application) on the Lower Heathcote Farm site is feasible and is supported by a sustainable location. Any relevant design guidance would be adhered to and suitable strategies can be achieved with respect to access, servicing and parking provision. Suitable mitigation measures have been identified as part of the submitted Transport Assessment and the developer would be willing to make a fair and reasonable contribution towards delivering these in order to accommodate any potential development on the site.

6 Other Environmental Issues

6.1 Introduction

- 6.1.1 This chapter gives consideration to other pertinent environmental disciplines which are of relevance to address when demonstrating the suitability of the site at Lower Heathcote Farm to successfully accommodate development. Numerous comprehensive technical assessments have been undertaken on the site at Lower Heathcote Farm which accompanied the outline planning application for the site, as discussed in Chapter 1, Introduction. This included, in addition to those disciplines already discussed in this back ground document, the following disciplines; archaeology, cultural heritage, air quality, noise environment, flood risk/drainage/water resources, agricultural land, land contamination and geotechnical issues and utilities and services.
- 6.1.2 This chapter provides a short synopsis of the individual technical assessment findings, demonstrating these environmental issues are not a constraint to development.

6.2 Archaeology

- 6.2.1 A detailed archaeological assessment has been undertaken on the site (and relevant study area), which has included a desk based assessment, site walk over, geophysical survey and 4% detailed on-site trial trenching.
- 6.2.2 A review of the Warwickshire Historic Environment Records identified five non-designated entries, including a possible deserted medieval village, the cropmark of a trackway and findspots of a Bronze Age adze, medieval coins and an Anglo-Saxon brooch (all findspots have subsequently been removed).
- 6.2.3 Geophysical survey on site verified the presence of the cropmark trackway, and identified a limited number of potential soil filled features of possible archaeological origin, in addition to an enclosure. The trial trenching ascertained that the enclosure was Neolithic in date and indicated the presence of archaeological remains in association with the possible deserted medieval village.
- 6.2.4 Overall, it is considered that the site as a whole has a low archaeological potential, with the findings of interest being isolated to two distinctive parts of the site; these being the location of a Neolithic enclosure within the western boundary of the site and the possible location of a deserted medieval village within the south of the site.
- 6.2.5 Following consultation with the County Archaeologist (Anna Stocks) throughout the extensive work undertaken and specifically these findings, it is considered that there are no archaeological issues which would preclude development on the site. It is considered that any potential impacts on these isolated areas of interest can be successfully mitigated for via any planning condition, where required.

6.3 Cultural Heritage

- 6.3.1 A Cultural Heritage Assessment has been undertaken which was submitted as part of the supporting documentation in relation to the outline planning application on the site at Lower Heathcote Farm.
- 6.3.2 Desk study, research and fieldwork have identified that no designated heritage assets lie within the boundary of the site at Lower Heathcote Farm, and there are no Scheduled Ancient Monuments or registered battlefields either within the site or in the study area. A number of designated heritage assets have been identified within 1km of the site, including:
 - Warwick Castle Registered Park and Garden (Grade I Listed);
 - Warwick Conservation Area;
 - The Toll House (Grade II Listed);
 - Heathcote Hill Farmhouse (Grade II Listed);
 - The Hunting Lodge (Grade II* Listed);
 - The Aspens (Grade II Listed);
 - Barn approximately 30 metres north west of Newhouse Farmhouse (Grade II Listed);
 - Greys Mallory (Grade II Listed);

- West Lodge, East Lodge and Archway to east of Greys Mallory (Grade II Listed).
- 6.3.3 Warwick Castle (Grade I Listed and Scheduled Ancient Monument) and St Mary's Church (Grade I Listed).are also present in the vicinity of the site, however outside 1km study area.
- 6.3.4 The assessment undertaken identifies the site is distanced from the majority of the above assets. Due to this distance, allied with the topography of the site and the surrounding area, and screening effect from existing buildings and vegetation, it is considered that any development on this site is unlikely to be clearly visible from the majority of the assets. Furthermore, where the site and potential development may be visible, this would be viewed in the context of existing built development, including the large format buildings at Warwick Technology Park, Warwick Preparatory School, Heathcote Technology Park and residential development beyond, together with built development at Leamington Spa and the Sikh Temple.
- 6.3.5 Based on an assessment of the significance of the identified designated heritage assets and the contribution that elements of setting, including the site, make to that significance, it is concluded that the Lower Heathcote Farm site could be developed with no harm to the identified assets.

6.4 Agricultural Land Use and Soils

- 6.4.1 A detailed agricultural land use and soil assessment has been undertaken with respect to the site at Lower Heathcote Farm, specifically to determine the Agricultural Land Classification (ALC) of the site and identify the amount of 'best and most versatile' agricultural land which could potentially be impacted on by any development onsite.
- 6.4.2 The site at the time of survey comprised of six field units of arable nature, which were in the production of beans and barley. It was identified that the primary limitations to ALC on the site are droughtiness, soil wetness and gradient. The site exhibits 49.7ha of best and most versatile land, including 37.9ha Grade 2 and 11.8ha Grade 3a. No Grade 1 ALC areas were identified on site.
- 6.4.3 Any development on the site would obviously result in the removal of agricultural land and production, however this loss must be considered against the positive socio-economic benefits brought about by any development. As part of any scheme, consideration can also be given to the reuse of stripped soils within the development or off-site if deemed beneficial, minimising any impacts.
- 6.4.4 It is not considered that the agricultural land classification of the site at Lower Heathcote Farm would preclude development.

6.5 Land Contamination and Geotechnical Issues

- 6.5.1 The existing ground conditions for the site at Lower Heathcote Farm have been conjectured from desk study researches which have included a review of geological information, historical mapping and environmental information.
- 6.5.2 The site is recorded to have been farmland, with associated farm buildings, from the time of the earliest reviewed mapping in 1887. There is no evidence of other land uses on the site, therefore any contamination of soils is likely to be limited to that in relation to the arable land use of the site and the potential for traces of pesticides and fertilisers. Storage of fuel in above ground storage tanks at Lower Heathcote Farm could also potentially result in ground leakages in nearby areas, however generally there is considered to be a low risk of significant contamination on the site at Lower Heathcote Farm.
- 6.5.3 The ground conditions are conjectured to comprise fourth terrace river deposits and alluvium overlying Mudstones of the Mercia Mudstone Group beneath. Given this, alongside the historical land use and proximity to the Tach Brook, there is the potential for localised softening of shallow clay, which would need to be considered in determining foundation depths of any development. The nature and physical properties of the clay/cohesive materials found at the site would also need to be taken into consideration, including the desiccation and shrinkability of clay / cohesive materials. The presences of higher permeability Terrace Gravel deposits over the Mudstone could potentially result in shallow groundwater and surface seepages, and would need to be borne in mind in any development.

6.5.4 In summary however, none of the above matters are of concern and would certainly not preclude development on the site.

6.6 Air Quality and Noise Environment

- 6.6.1 As part of the technical assessments submitted with the outline planning application on land at Lower Heathcote Farm, quantitative modelling for both the above disciplines was undertaken to establish what impact developing the site could potentially have with respect to air quality and noise. For the purposes of these assessments, assumptions were made on the amount and form of development on site, similar to that set out in the Indicative Masterplan at Figure 3.2.
- 6.6.2 Existing noise levels and existing and future year 'with no development' air quality conditions were established on and surrounding the site at identified existing and likely proposed sensitive receptors, such as residential dwellings and the proposed primary school. It was found that neither the existing noise levels, nor the existing or 'no development' future year air quality conditions at these onsite and surrounding receptors would present significant constraint to development on the site, assuming sensible consideration is given to detailed layouts.
- 6.6.3 The existing (and with no development future year) conditions were then compared with the predicted conditions that would occur should development on the site come forward, primarily focusing on the impact of increased traffic and resulting implications. With respect to air quality, the assessments revealed that the predictions for those sensitive receptors, with development, would be well below the objectives, thereby concluding that air quality is not considered to be a constraint to development. With respect to noise, the assessments revealed that the increase in road traffic noise at existing receptors would be below the threshold of perception, and the predicted noise levels at proposed receptors should not be a determining factor in granting planning permission, providing standard mitigation and sensible design is considered within any detailed layouts.
- 6.6.4 In summary therefore, the quantitative technical assessments which have been undertaken, demonstrate that neither air quality nor noise matters are considered to present constraint to potential development, similar to that illustrated in Figure 3.2 Indicative Masterplan, on the site at Lower Heathcote Farm.

6.7 Flood Risk, Drainage and Water Resources

- 6.7.1 As part of the technical assessments submitted with the outline application on land at Lower Heathcote Farm, a Flood Risk Assessment, including an outline drainage strategy, and an assessment of the water resources in and around the site have all been undertaken in order to ensure any development on site can be successfully accommodated.
- 6.7.2 The site lies within the Tach Brook catchment, a tributary of the River Avon in Warwickshire and bounds the southern edge of the site for a length of approximately 1km. A tributary of the Tach Brook also passes through the site, originating in the north west corner, flowing south west following an existing hedgerow, to then pass under Europa Way. Two lakes are also present within the site, both of which are now used for trout fishery, one of which was previously used for irrigation purposes. The two ponds are not hydrologically connected, however there is a small watercourse linking the lakes to the Tach Brook.
- 6.7.3 The Environment Agency's Flood Zone Mapping indicates that the majority of the site does not fall within a designated flood plain (i.e. falls within Flood Zone 1, low probability of flooding). The maps show that there is a small section of the proposed site, at the south-west boundary that lies within Flood Zone 2 (1 in 1000 year event) and Flood Zone 3 (1 in 100 year event). However more recent analysis has resulted in the flood extents being revised.
- 6.7.4 Any development proposals for the site, as demonstrated in the indicative proposals within Figure 2.2, Indicative Masterplan, can locate development and attenuation facilities in Flood Zone 1 and no development will be located within Flood Zones 2 and 3. Due to the rural nature of the surrounding area and site topography, the risk of overland flood flows would be limited to the low lying area of the site, adjacent to the Tach Brook. This part of the site will be proposed as public open space in any proposed development.
- 6.7.5 Drainage strategies and a FRA for the site have been completed which were submitted in support of the outline planning application for the site. This work assumed development proposals similar to that

presented in Figure 2.2, and demonstrates that development can indeed be accommodated on site. For any development proposals at Lower Heathcote Farm, the management of surface water from the site can be based upon the following principles.

- Infiltration techniques are considered unsuitable for this location due to the underlying geology, therefore the SUDs design would look to utilise porous pavements, a series of swales and retention ponds and an attenuation system that results in discharge from the site more closely replicating the rural hydrograph than an urban hydrograph.
- Runoff from the impermeable areas of the development could ultimately be attenuated by gravity into three proposed ponds based upon three drainage catchments within the site which would ultimately discharge into the Tach Brook;
- All ponds will be located outside of the 1000 year floodplain and would be sized to accommodate surface water for each catchment area. The western existing pond would be reduced in size and form one of the three attenuation ponds;
- It is likely that the existing man made pond currently used for fishing will be filled. By filling in this existing pond and reprofiling the steep embankment will remove the potential of flooding; and
- 6.7.6 The work undertaken has confirmed that any proposed development on the site would not be affected by existing flooding and that surface water runoff from any development could be managed in a sustainable manner, ensuring that there will be no increase in surface water flooding and would, in fact, aim to reduce surface water run-off and flood risk.
- 6.7.7 By implementing inherent design measures within any site proposals, there would be no unacceptable impacts in relation to water quality, drainage or flood risk, demonstrating that the site at Land at Lower Heathcote Farm is suitable for development.

6.8 Utilities and Services

- 6.8.1 Any proposed development on the site at Lower Heathcote Farm will need to ensure that utility provisions, including electricity, gas, water and telecommunications can be facilitated. As part of the site assessments, the electricity, gas, water and telecommunications providers which operate in the area of the site have been contacted to establish the location of existing services and to determine any constraints and limitations.
- 6.8.2 At the time of investigation, the electricity and gas service providers confirmed that upstream reinforcement measures may be required to service any development on the site at Lower Heathcote Farm, however this could be achieved and would not preclude development. Existing electrical cables across the site would also likely be diverted as part of any development works and under grounded through internal adoptable roads. The existing water main in the vicinity of the site at Lower Heathcote Farm would be required to be diverted, however again this would likely be accommodated within the proposed highway infrastructure of any scheme, along with other service provisions.
- 6.8.3 In summary, although some upstream reinforcement may be required to facilitate development at the site at Lower Heathcote Farm, it has been confirmed by statutory undertakers that this can be overcome by undertaking reinforcement works to the existing infrastructure where required. The provision of utilities which would be required to serve any potential development on the site at Lower Heathcote Farm, is considered to be feasible to achieve; therefore service provision is not an issue which would preclude development of this site.

6.9 Conclusions

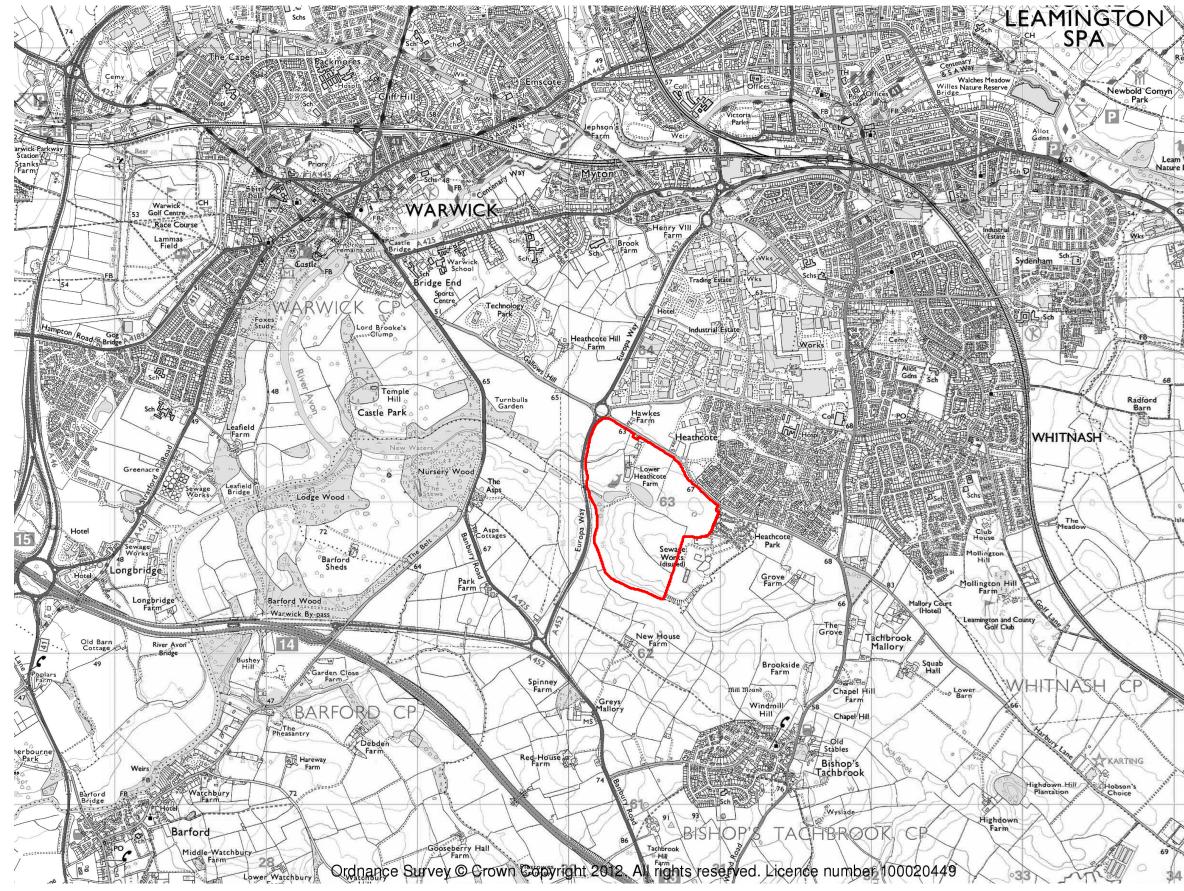
6.9.1 This chapter has provided a synopsis of the other environmental technical assessments which have been undertaken in relation to potential development at the site at Lower Heathcote Farm. The assessments undertaken (in addition to those already considered earlier in this background document) have included the following disciplines; archaeology, cultural heritage, air quality, noise environment, flood risk/drainage/water resources, agricultural land, land contamination and geotechnical issues and utilities and services.

6.9.2 As demonstrated above, none of these other assessments undertaken have highlighted areas of concern that would preclude, or result in significant constraint to, development on the site, further demonstrating the suitability, achievability and sustainability of the site for development at Lower Heathcote Farm.

7 Conclusion

7.1 Conclusion

- 7.1.1 This Background Document relates to land located at Lower Heathcote Farm, Warwick, which is included as part of a proposed allocation in Warwick District Council's Publication Draft Local Plan (Policy DS11, Site H02). The document is submitted on behalf of Gallagher Estates Ltd who have a controlling interest over the land. The Background Document should be read in association with Gallagher's representations to the draft Local Plan.
- 7.1.2 The land at Lower Heathcote Farm covers 63.5ha hectares of predominantly agricultural land and is currently subject to an outline planning application by Gallagher Estates Ltd which seeks approval for residential development (up to 785 dwellings) with access, open space, a local centre, primary school and associated infrastructure. An indicative Masterplan demonstrating how these proposals could successfully be developed has been provided and is discussed in Chapter 2 of this Background Document. An Environmental Statement and a range of supporting documentation was submitted with this application, therefore extensive technical information in relation to the site is available.
- 7.1.3 The purpose of this document has been to draw on the technical knowledge of the site. This serves to reinforce the suitability and deliverability of the site and, in turn, its soundness as part of a proposed allocation.
- 7.1.4 The chapters of the Background Document provide a composite assessment of the suitability of the site at Lower Heathcote Farm for development, giving consideration to any potential environmental constraints including those in relation to landscape and visual, ecology, transportation and accessibility, flood risk and drainage, archaeology and cultural heritage, agricultural land, geotechnical and land contamination, noise environment, air quality and utilities and services. This Background Document has demonstrated that the site is situated in a sustainable location for development, a conclusion which has been made throughout the evolution of the Local Plan.
- 7.1.5 Through these investigations, opportunities and constraints have been identified which has enabled an Indicative Masterplan to be produced which demonstrates how development could be successfully delivered, and accompanying text which explains the design philosophy behind the proposals. The Indicative Masterplan reflects the outline planning application that is currently submitted to Warwick District Council, however inevitably the detail of this will evolve through the detail design stages. The proposals set out in the Indicative Masterplan and accompanying discussions have the potential to provide a well designed and sustainable development which takes account of the sites constraints and maximises the opportunities that the site affords.
- 7.1.6 Alongside the Representations being submitted on behalf of Gallaghers, this Background Document therefore demonstrates that the inclusion of the site at Lower Heathcote Farm in the draft Local Plan is appropriate, justified, effective, deliverable, consistent with national policy and soundly based, and the site can assist in meeting the objectively assessed need for housing in Warwick District as part of a wider area of allocated land South of Harbury Lane. Furthermore, the collective submission also effectively demonstrates the suitability, achievability, availability and, in essence, the sustainability of this site for development, and supports the identification of the site at Lower Heathcote Farm for development as part of the allocated land South of Harbury Lane within the draft Local Plan.





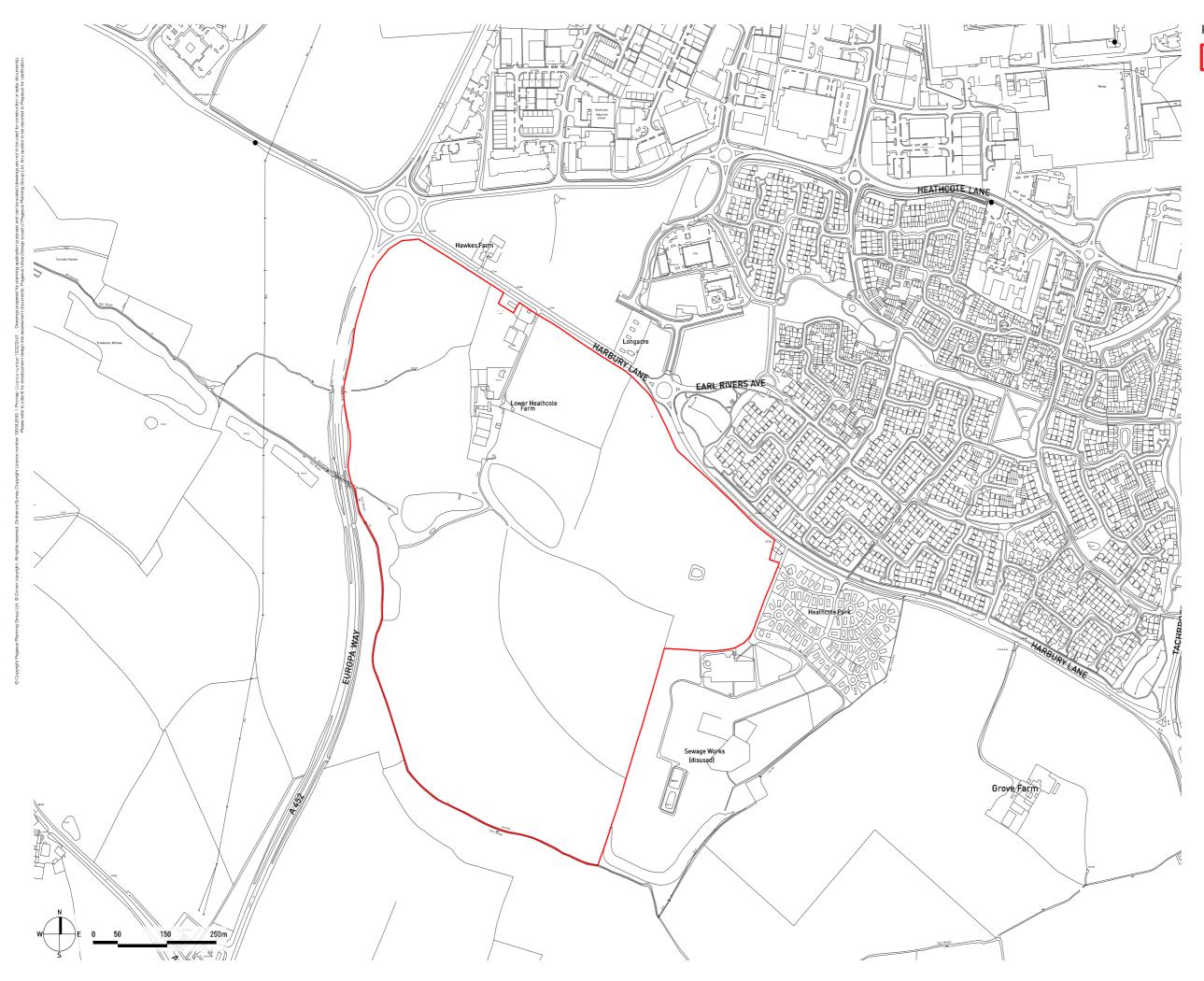




Site Context Plan

1.1 |FIGURE TITLE

1:25000 @ A3 | SCALE Bir.4361_55



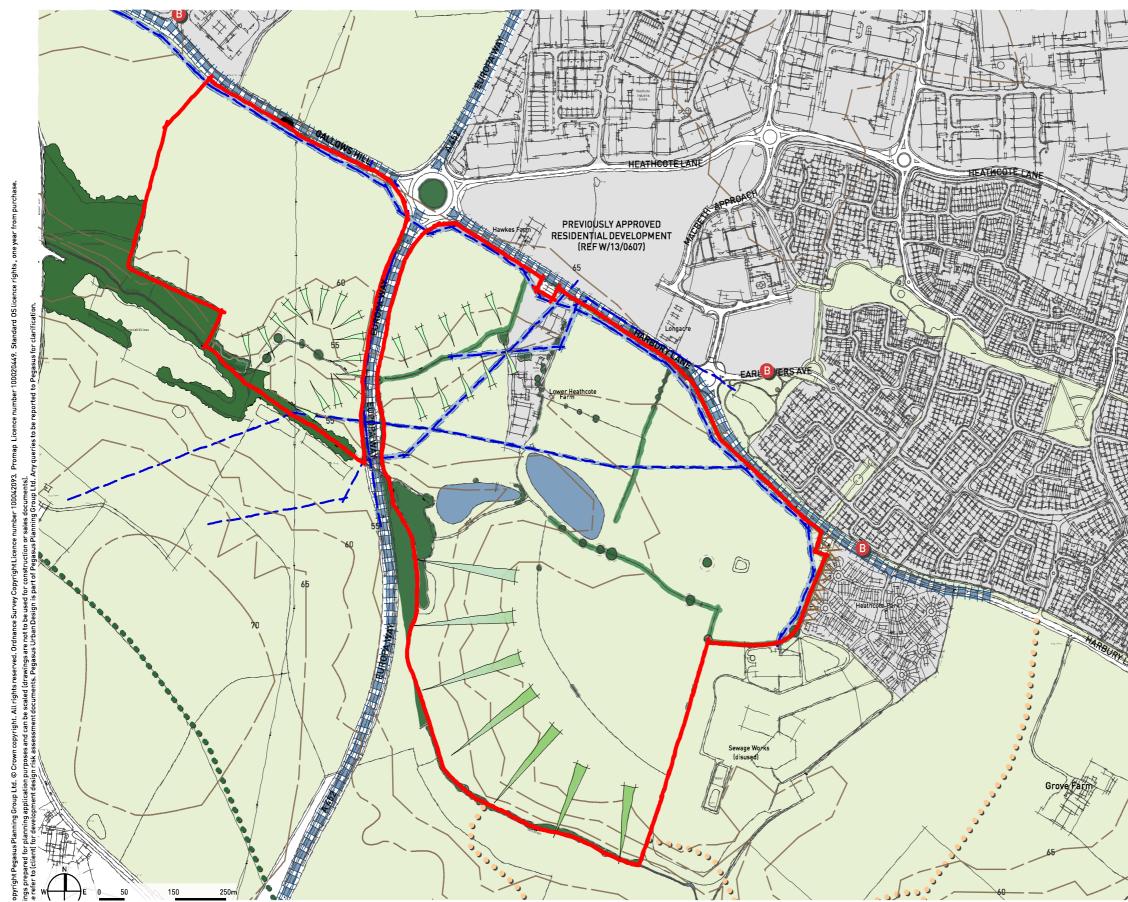


SITE BOUNDARY [63.49HA]

Site Location Plan

1.2 FIGURE

1: 1500 @ A2 SCALE Bir.4361_02-2 DWG.NO





KEY

SITE BOUNDARIES



EXISTING VEGETATION

EXISTING ROAD

EXISTING BUS STOPS

EXISTING SERVICES & ASSOCIATED EASEMENTS



EXISTING PONDS

X

GENERAL DIRECTION OF LOCALISED TOPOGRAPHY



EXISTING GREEN ACCESS LINKS



POTENTIAL GREEN ACCESS LINKS (WDC GREEN INFRASTRUCTURE PROPOSALS)

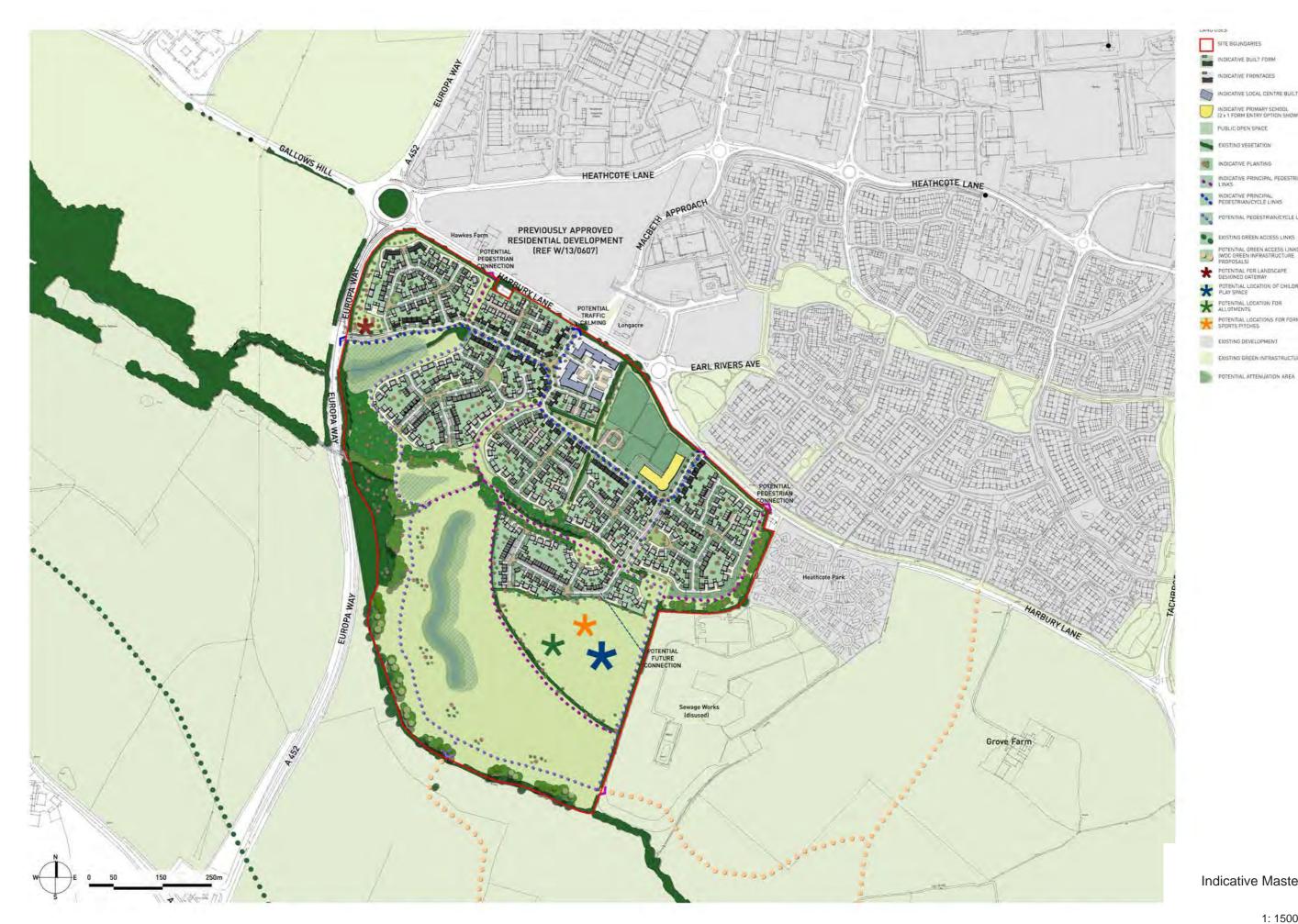


SENSITIVE RESIDENTIAL EDGE

2.1 FIGURE TITLE

NTS @ A3 SCALE Bir.4361_09 DWG.NO

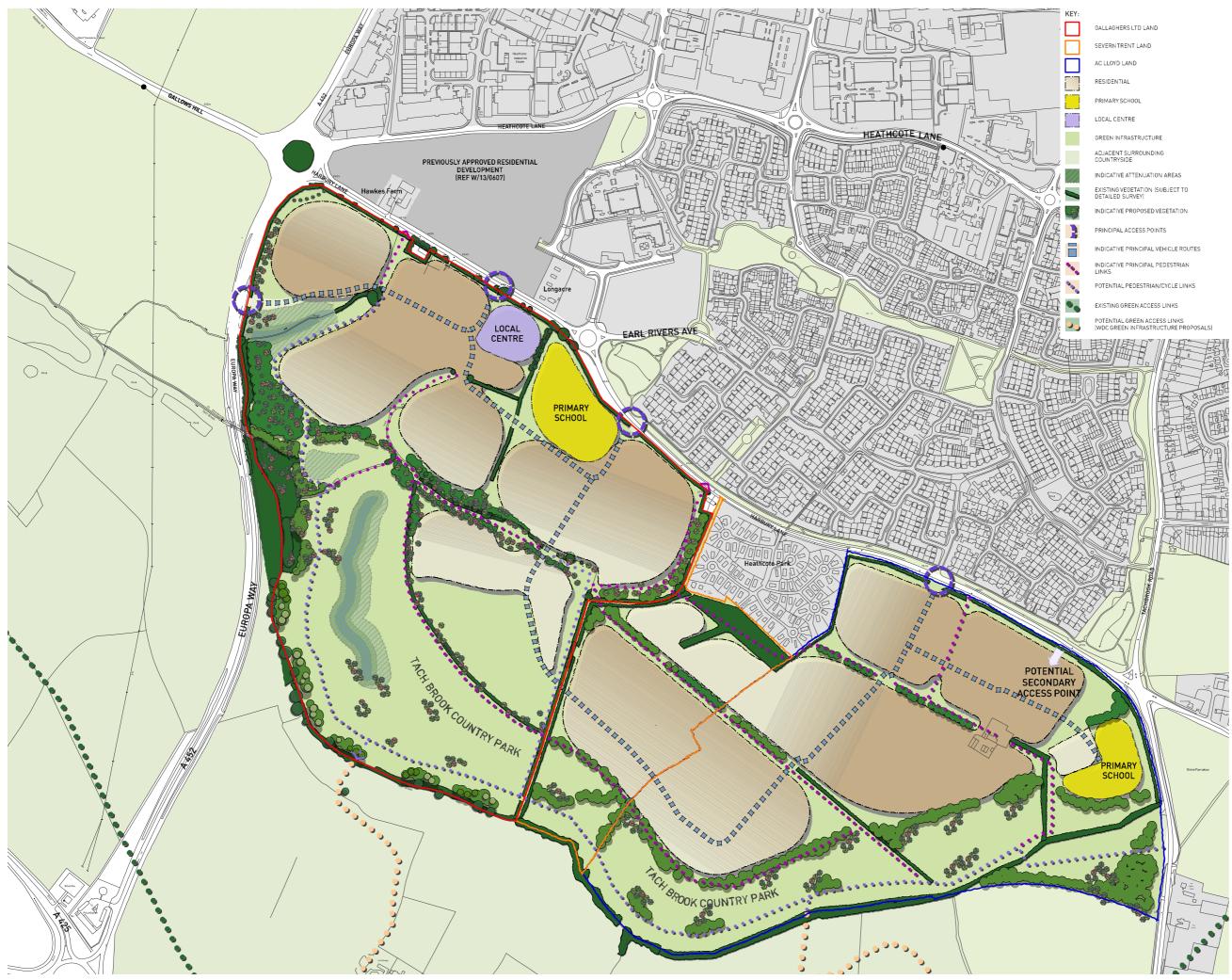
Opportunities and Constraints





2.2 FIGURE Indicative Masterplan

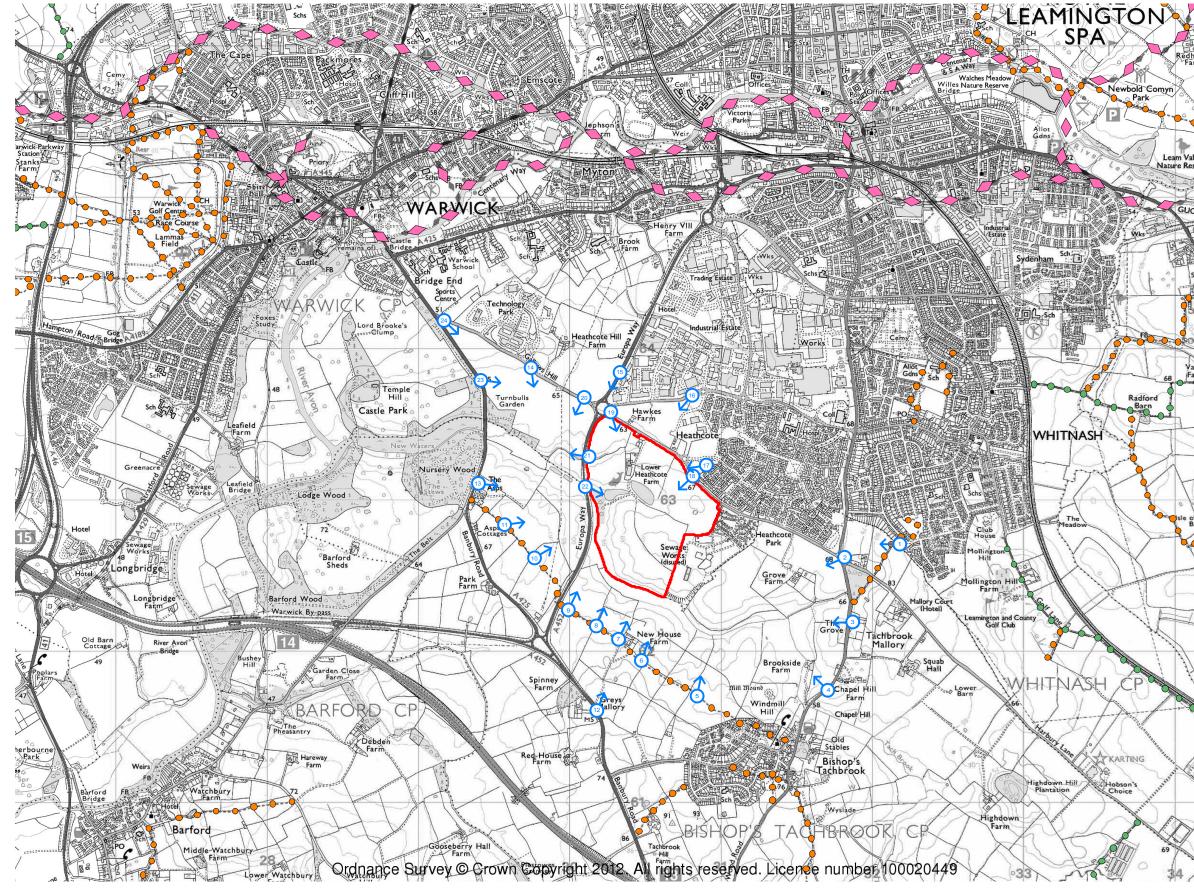
> 1: 1500 @ A2 SCALE Bir.4361_05C-2 DWG.NO



Illustrative Strategic TITLE Masterplan

> 1: 15000 @ A2 SCALE Bir.4361_36C-1 DWG.NO

2.3 FIGURE









Public footpaths



Public bridleways



Long distance footpaths



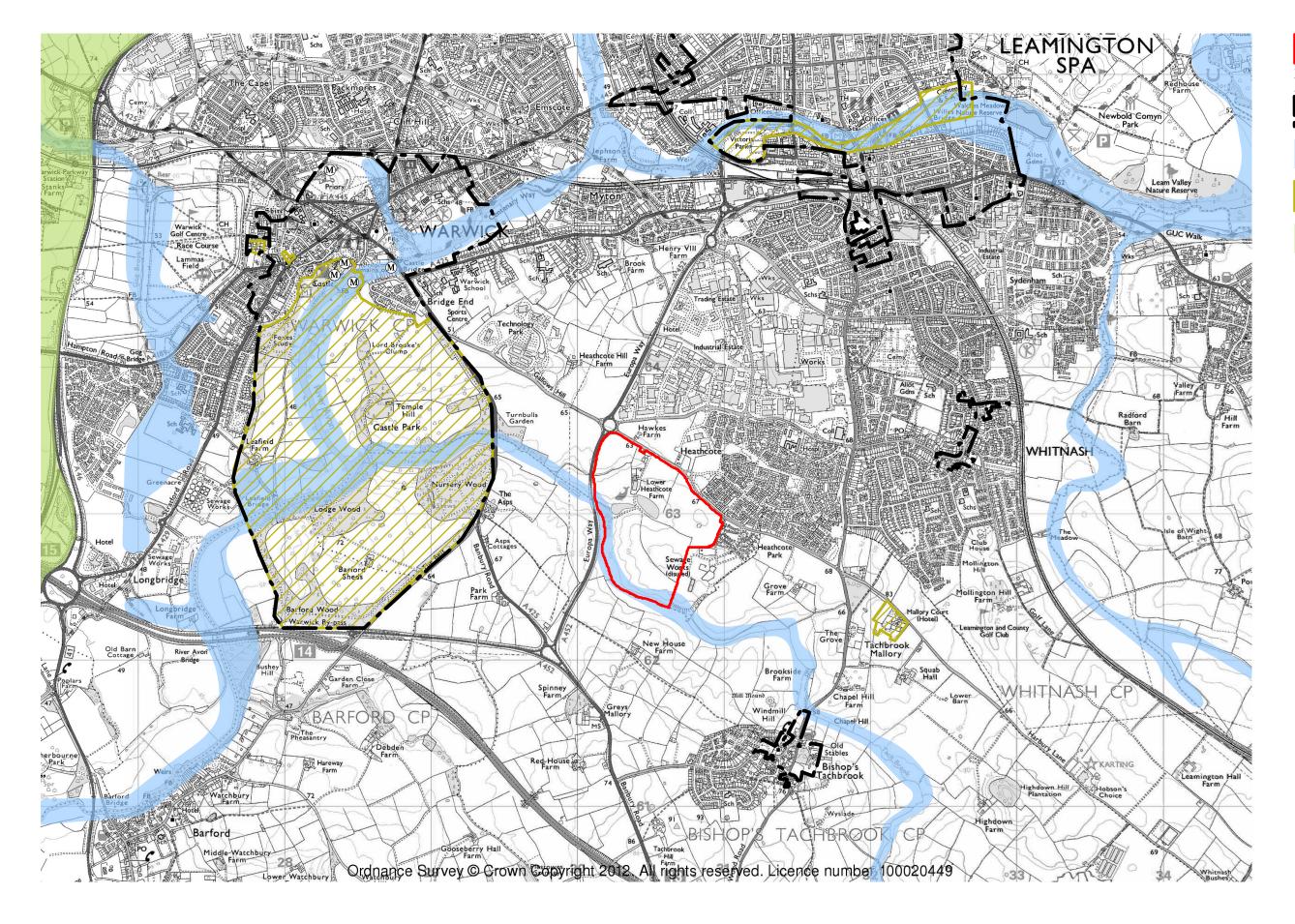
Location of Photographic Viewpoints



Site Location, Public Rights of Way and Viewpoint Locations

> 1:25000 @ A3 | SCALE Bir.4361_46

3.1 |FIGURE TLE





Warwick District Local Plan September 2007

Conservation Areas



Flood Plain



Parks & Gardens of Special Historic Interest

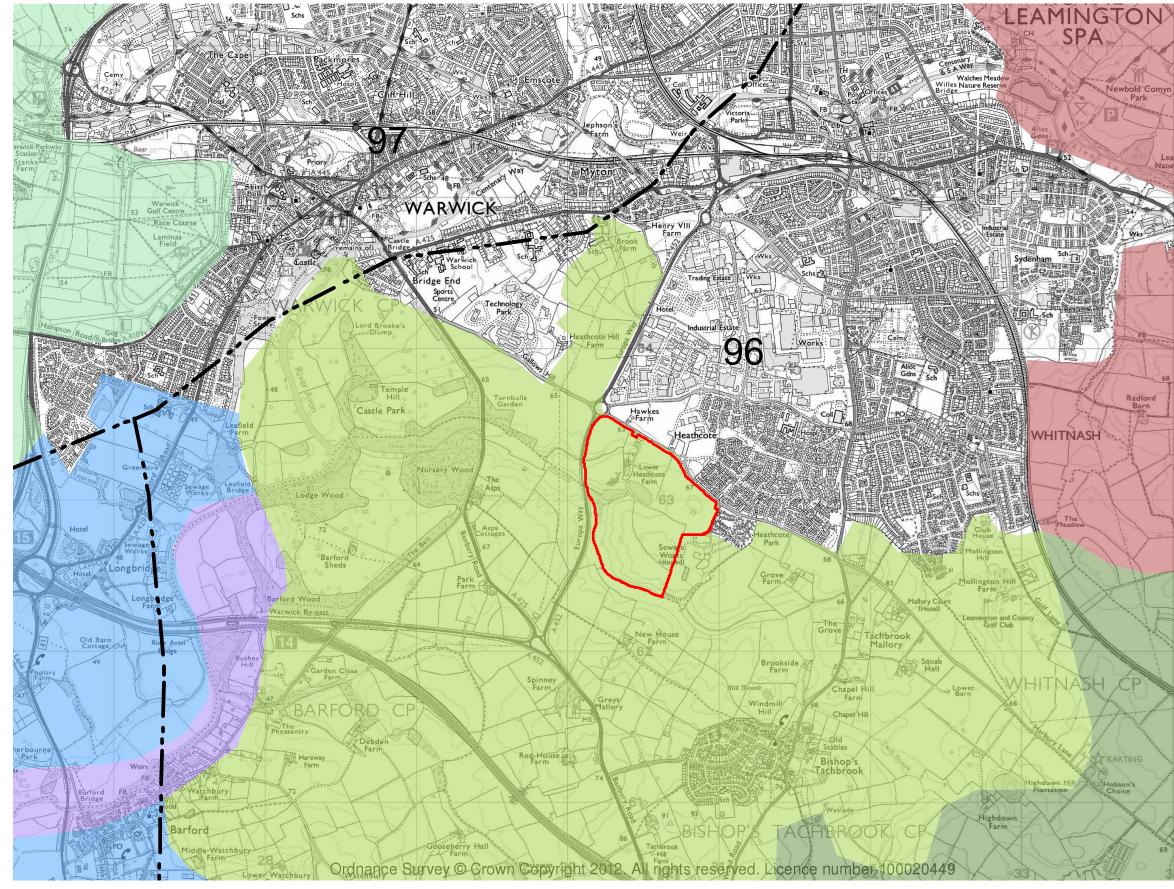




Landscape (Planning) Designations

3.2 |FIGURE TITLE

1:25000 @ A3 SCALE Bir.4361_47







National Character Area



NCA boundary: - 96 Arden - 97 Dunsmore & Feldon

Warwickshire Landscape Guidelines Landscape Types Arden Wooded Estates



Feldon Parklands



Plateau Fringe

River Meadowlands

Terrace Farmlands

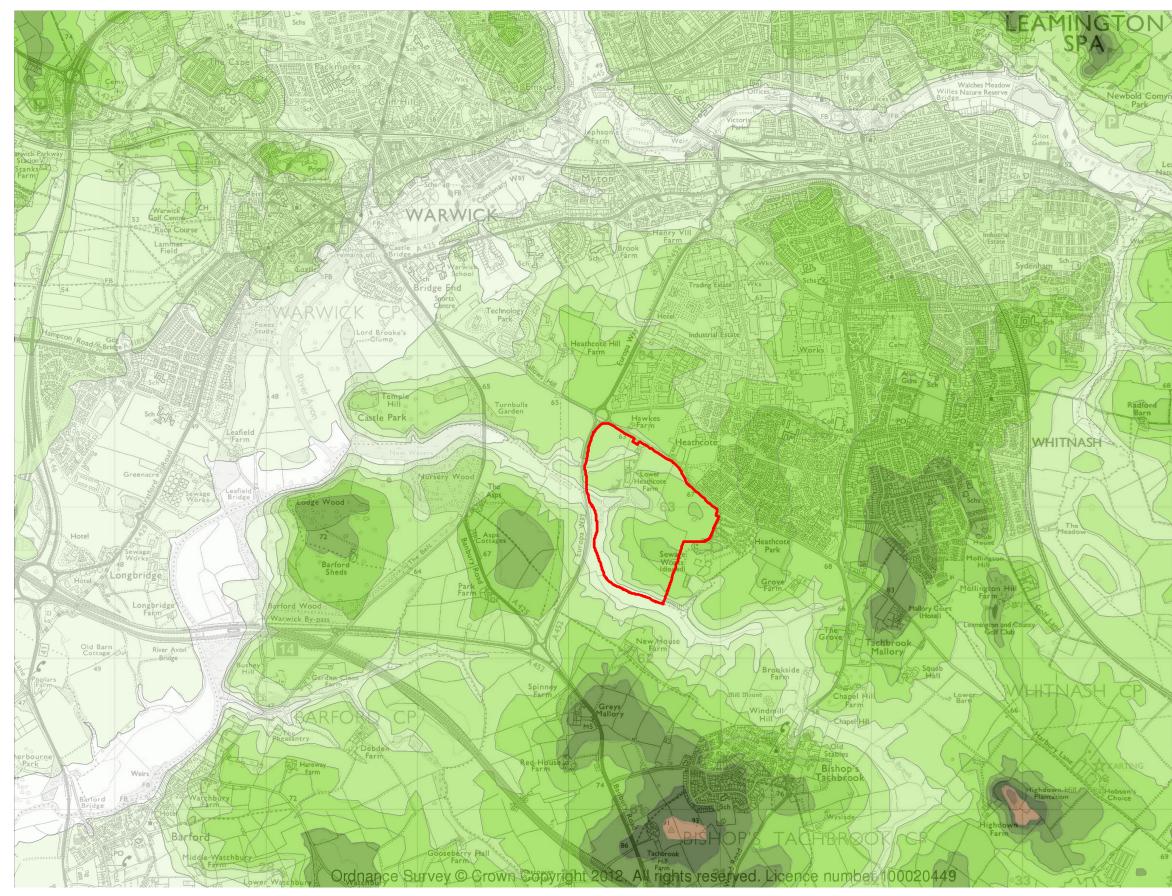




Landscape Character

3.3 |FIGURE TITLE

1:25000 @ A3 SCALE Bir.4361_48



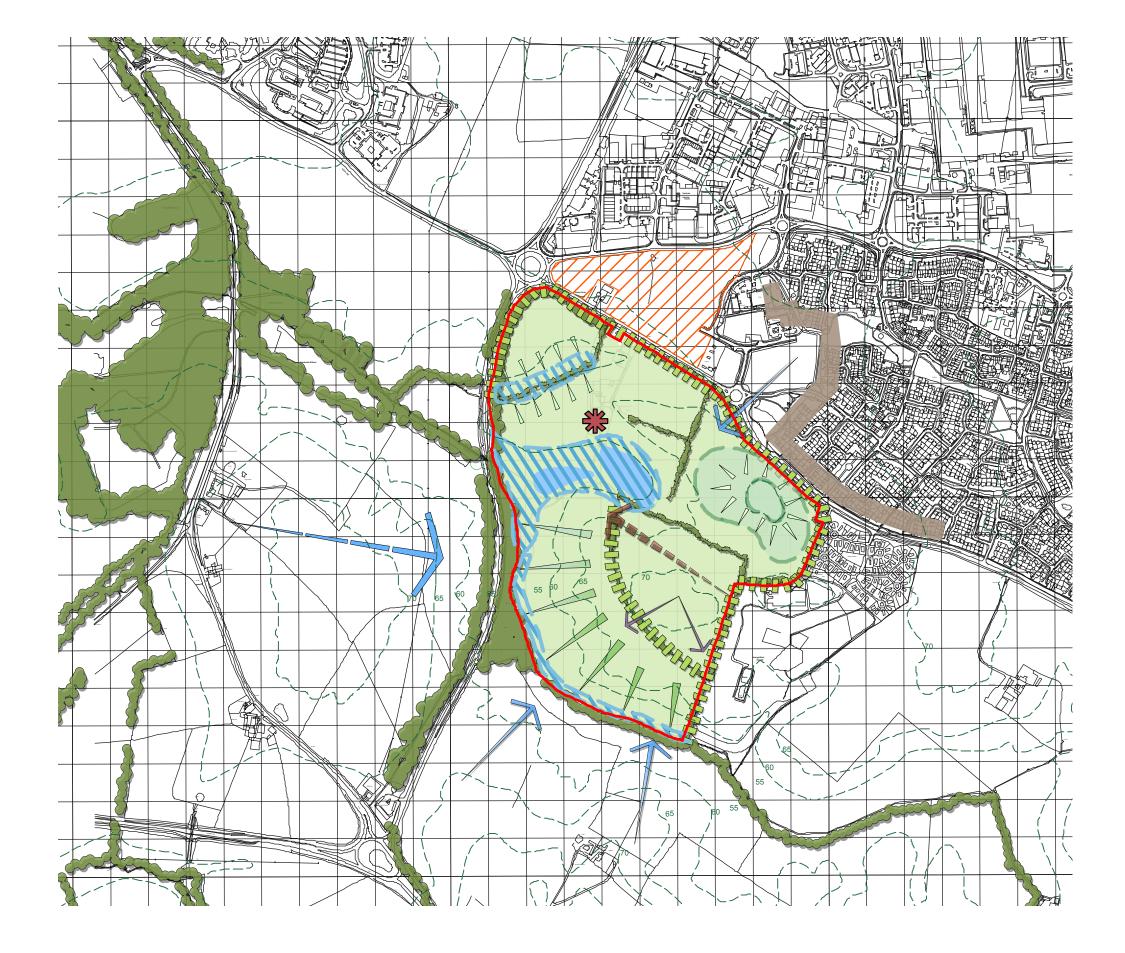






3.4 |FIGURE Topography TITLE

1:25000 @ A3 |SCALE Bir.4361_49 DWG. NO







Visible urban edge



Existing Vegetation (providing visual containment)



Views to site



View towards Warwick



Filtered views to site



Views south to countryside/



Existing Ponds

Bishops Tachbrook





Existing buildings



Steep, exposed slope



Localised slopes



Landscape edges/ boundaries



Contours



Previously approved residential development (Ref W/13/0607)



3.5 FIGURE Landscape and Visual Analysis

> 1:10000 @ A3 SCALE Bir.4361_50

DWG. NO

TITLE