



**MIRA TECHNOLOGY PARK
SOUTH SITE**

DESIGN & ACCESS STATEMENT

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Revision P09

SGP

Architects + Masterplanners



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Introduction

Purpose of Document

This document has been prepared by Stephen George + Partners LLP on behalf of ERI MTP Ltd in support of an outline planning application (with all matters reserved) for a strategic employment development park on land located south of the A5 Watling Street. The planning application is supported by a Parameters Plan that details proposed vehicular access points onto the A5 Watling Street and A444 Weddington Lane, the design of a proposed link road connecting these, and built development and landscape areas.

Structure of the Document

Following this introduction, the DAS is presented in three main parts as follows:

1. Part One: The Site and Development Influences, describes the Location, the Site and Setting Today and the Development Influences affecting the development;
2. Part Two: Development Framework, describes the Development Parameters, the Vision, Concept and Objectives; presents the proposed Development Framework, and illustrates the Building Design, Landscape Design, Accessibility and Highways Proposals and Environmental Performance framework. It also presents Illustrations of the Development; and
3. Part Three: Implementation, provides further explanation of the Phasing and Management of the proposals. The final chapter is the Conclusions.

The DAS is also supported by an appendix containing a schedule of the application material submitted

In addition to the description of the existing site provided in the DAS, the reader is also directed to the Planning Statement and supporting information.

Planning Context

The North Warwickshire Local Plan was adopted in September 2021 and supports the southern extension of the MIRA Technology Park as an opportunity to broaden the range of higher skilled employment generating uses in the Borough. Policy LP39 of the Local Plan allocates approximately 42 hectares of land for development (Site Allocation E4) of Class E(g) (research and development) and B2 (industrial) uses. Class B8 (warehousing and distribution) uses are permissible only where they are ancillary or secondary to the primary use.

The Site Allocation E4 requires inter alia the preparation of a Masterplan for the site for agreement. This Masterplan should include:

- The provision of sustainable transport measures including cycle and footpath links;
- A significant landscape buffer to the southern and south eastern boundaries of the site;
- Means to maximise site solar energy generation through roof mounted PV's;
- Means of controlling lighting to minimise impact on Caldecote; and
- Proposals for smaller incubator units.

The purpose of this outline application is to provide a Masterplan in the form of a Parameter Plan to agree the basis for future detailed proposals. This DAS therefore considers the design opportunities and constraints of the site in informing the Parameter Plan that accompanies the planning application. In considering the design proposals it was decided at an early stage that incubator units would be provided on the northern site given the synergy of these type of units with the smaller research and development activity that is undertaken in the established northern area. This is explained further in the Planning Statement. Accordingly, the Parameter Plan does not include any incubator units.

Finally, the application site is slightly different to the allocated site boundary in the Local Plan. This change has been made to allow the incorporation of a link road between the A444 and A5 as considered later in this document. The total developable area remains approximately 42 hectares as required by Policy LP39 and Site Allocation E4.

About MIRA

MIRA Technology Park is one of the UK's leading Enterprise Zones and, with over 40 major international automotive and low carbon-related engineering companies such as Bosch, Toyota and Polestar as occupiers on the Park, it comprises Europe's largest and fastest growing automotive R&D cluster. MIRA Technology Park lies at the centre of the UK's automotive heartland, within an economic growth corridor accessed from the newly upgraded A5 between Atherstone and Hinckley in Warwickshire.

MIRA Technology Park contains 40 major test facilities and over 110 kilometres of test tracks making it a world class facility and a global attraction for companies to the UK. It also supports the growing technologies in alternative fuels, electrification and autonomous technologies through recent major investment in key related assets. The synergy between the industry cluster and facilities at the existing Technology Park provides an opportunity for companies at the forefront of new transport low carbon technologies to capitalise on this centre of technological development in the transport industry. MIRA Technology Park is also a key asset in the Midlands low carbon ecosystem attracting inward investment to the region and being in the heart of the UK's engineering labour pool.

Whilst MIRA Technology Park benefits from an existing outline planning consent, which has seen the recent campus expansion and on completion will comprise approximately 185,000sqm, the existing Technology Park is restricted in its capacity to accommodate large scale facilities in excess of c. 15,000sqm. The land South of the A5, recently adopted within the Local Plan for employment use, provides a unique proposition to deliver large scale manufacturing facilities linking directly into the existing MIRA Technology Park site. It provides a highly complementary opportunity for automotive and low carbon-related advanced manufacturing facilities, and benefits from the recent delivery of major power and road infrastructure investment to facilitate development. These synergistic development proposals are at the heart of the masterplan, expanding the world class technology cluster with an additional 213,500sqm of employment space, creating further economic growth and high value employment in the region.

The masterplan illustrates the potential scale of buildings and, through the parameter plan, introduces the flexibility required to respond to market demand. The ability to deliver facilities in a form and scale which is bespoke to technology and manufacturing companies is central to the future success of the development. These buildings will be designed to accommodate the significantly larger clear spans required in manufacturing and similar operations, and also the height to house the associated equipment and processes. The parameter plans have therefore evolved diligently following detailed studies to work with the topography and characteristics of the site and mitigate any impact to the surrounding area. The form of the wider estate being created will resonate with the landscaped campus of the existing Technology Park to maintain and enhance the exceptional working environment which is a key ingredient for existing and new companies to successfully attract and retain talent.

It is entirely conceivable for the demand for facilities to emanate both from the rapid growth of companies on the existing Technology Park, with their R&D operations moving into the manufacturing phase. Equally, demand could derive from new entrants to the region and the UK and from an industry perspective from advanced manufacturing and industrial uses driven by the restoration and increased focus on localisation of supply chains. One of the hallmarks of MIRA Technology Park is its global reach and ability to bring inward investment from overseas.

The development will be phased with the early phases originating from the A5 access opposite the existing Technology Park. The links between North and South will benefit the proposed development from the outset with the existing underpass being enhanced allowing both connectivity and integration with the facilities and amenities which make MIRA Technology Park unique. These assets have been recently expanded and diversified with significant investment in leading autonomous test facilities and low carbon infrastructure with the UK's first integrated solar-powered battery charge farm and hydrogen production facility being delivered in 2022. With the global speed of change in low carbon technologies, this places MIRA Technology Park, both North and South, in a position to maintain its world class status in technological innovation.



The Southern Manufacturing Sector will deliver a number of Community Benefits:



- Seven new high-quality flexible employment units



- 2,500 good quality jobs to support local people



- Opportunities for apprenticeships



- Enhanced landscaping creating a high-quality visual appearance and supporting biodiversity



- Circular routes for recreation, fitness and dog walking, an outdoor gym and seating areas



- New and enhanced bus routes with bus stops at the northern and southern ends of the site



- New cycle routes including a connection to Weddington Walk



- Construction jobs



- On-site car parking, including electric charging spaces



- Investment into local services and infrastructure



- A sustainable scheme targeting a minimum BREEAM 'Very Good' rating and EPC 'A' rating.

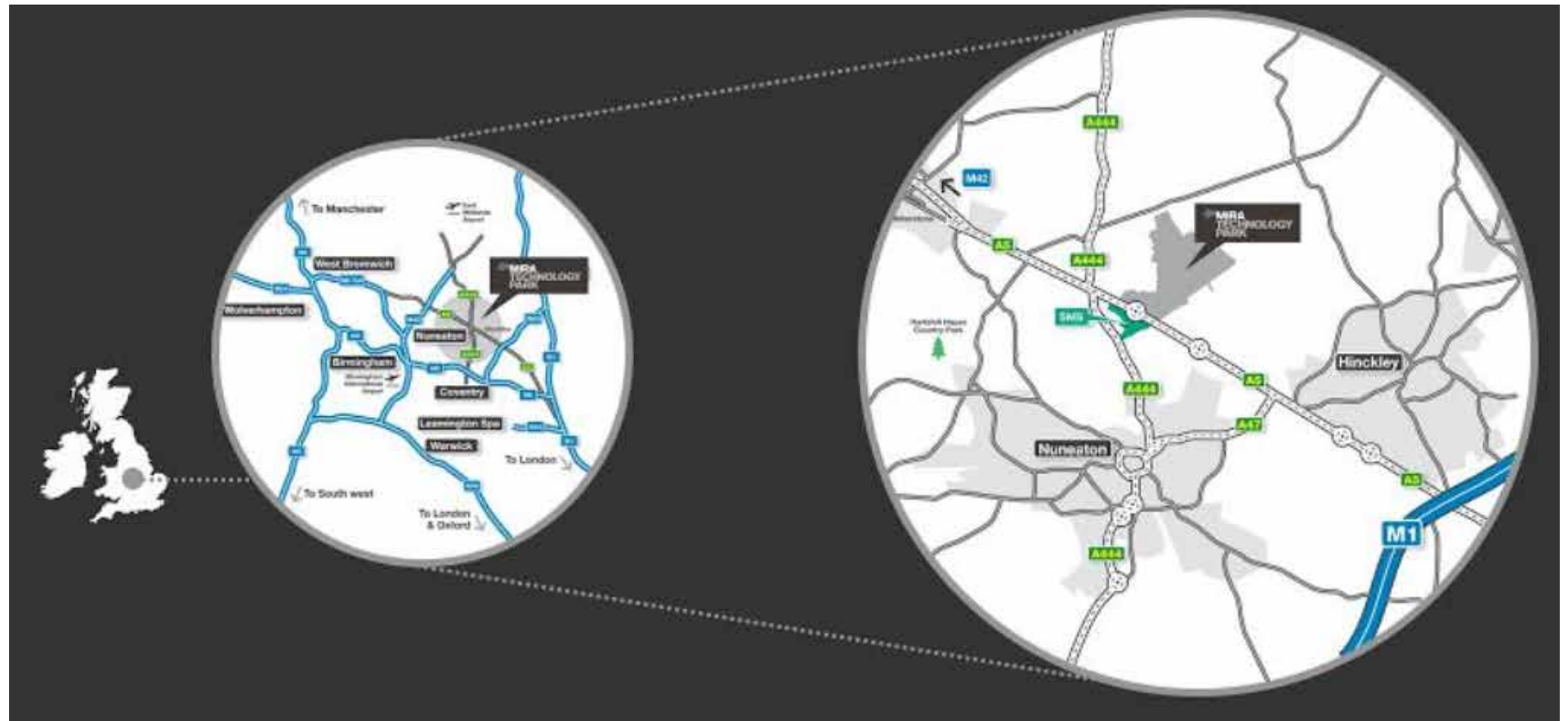
Location

The site comprises an irregular, broadly rectangular, area of about approximately 59ha of land to the north west of Nuneaton and around 500m north-east of the village centre of Caldecote. Located in the Hartshill ward of North Warwickshire Nuneaton and Bedworth District, of North Warwickshire the application site is considered to be undeveloped or 'greenfield' land.

The site consists of four enclosed arable fields, with Elms Farm located within the largest eastern field, and is bordered by the A5 (Watling Street) to the north and the A444 (Weddington Lane) to the south. Farmland lies to the north-west and south-east of the proposed development with the existing MIRA Technology Park to the north.

The south-eastern boundary is formed by the parish boundary with Weddington and there is a track leading up from Weddington Lane to the farm. Part of the former railway line borders the site along the north-eastern edge and contains a cycleway and footpath which forms the Weddington Walk and is part of the NCN 52 cycle path to Nuneaton.

Two existing properties (No 17 & 18) are adjacent to the site on the southern boundary and three further properties (Nos 15, 16 and the School House) are located on the western corner.



LOCATION PLAN



CONTEXT PLAN

Existing Topography

The site falls gently from north to south at a gradient of around 1 in 40. The high point to the north east corner of the site sits at around 92m AOD. The site generally falls towards the south-west corner of the site to a low point of +78m AOD.

The site dishes in the centre to follow the watercourse which sits at +83m AOD to the north and +79m AOD to the south.



EXISTING TOPOGRAPHY

Existing Watercourse + Flood

An FRA and Drainage Strategy has been prepared for the Site which demonstrates there is a low risk of flooding from tidal, pluvial, fluvial, groundwater and artificial sources. The site is located in Flood Zone 1 and is bisected by an ordinary watercourse.

The relatively impermeable nature of the underlying ground conditions means the ordinary watercourse is predominantly driven by overland flow from the surrounding catchment. The EA's surface water mapping does not accurately represent the watercourse, and overestimates the risk of flooding in this location.

Calculations of the flow rate within the channel show that the channel has sufficient capacity to manage the 1 in 100 year event including an allowance for climate change.

The watercourse will need to be retained through the site and surface water run off from the proposed development will need to be attenuated to match the greenfield run-off rate.



EXISTING WATERCOURSES

Existing Trees + Hedgerows

An arboricultural survey has been carried out by Bernie Harverson Arboricultural Consultant as part of the site evaluation and this report should be referred to for more detailed information.

There are few trees within the site boundary of significant arboricultural value. Most trees are of grade B - moderate quality with no Grade A - high quality trees. Most of the trees are located along the watercourse running north-south through the site. There are a number of class A hedgerows within the site and the potential for retention of the more significant hedge along the watercourse should be considered. Generally the hedges have low ecological value as they have been heavily managed.

More significant trees and hedgerows are contained within the site boundary and these, in the main, will be retained and enhanced as part of the site proposals.



EXISTING TREES AND HEDGEROWS

Existing Ecology

Habitats

The site is dominated by arable fields with associated hedgerows. The most ecologically important habitats identified on site comprise a small water course which dissects the site centrally on an approximately north to south axis, species rich hedgerows, two ponds located within the eastern field and scattered trees, primarily at the boundaries, some of which are mature or semi-mature. Other habitats on site include ephemeral / short perennial vegetation, scrub and poor semi-improved grassland, and those associated with the built environment of the farm complex at The Elms Farm.

Fauna

Ecology surveys carried out during 2021 identified the presence of bats on site including a day roost of common pipistrelle. Foraging and commuting activity was recorded by an additional ten species of bat, including infrequent passes by some uncommon and rare species. The two ponds have been identified as supporting great crested newt by eDNA analysis. Breeding bird surveys identified an assemblage of local or district value, including a number of declining species which are closely associated with farmland. Surveys have not identified any evidence of reptiles, and the brook is not considered suitable to support otter, water vole or white-clawed crayfish.

Mitigation

Mitigation is required in relation to protected species (with specific consideration to bats, great crested newts and farmland birds), as well as associated with losses of the existing arable habitats within the site.

Ecology + Biodiversity

Proposals should seek to provide enhancement of existing habitat resources, while retaining those of greatest conservation importance. The watercourse, species rich hedgerows and ponds are deemed the most important features on site. Where habitat loss is unavoidable, mitigation, compensation and enhancements are required to provide a Biodiversity Net Gain.

The existing brook and associated corridor will be retained and where crossing points are required, planting should be included to provide diverse nectar resources as well as shelter from adjacent roads and footpaths. The peripheral boundary hedgerows will be retained and enhanced with woodland planting to broaden and develop the boundaries. Use of native fruit and nut-bearing species has been prioritised to provide foraging resources for birds (as well as other species), and attention should be given to the ongoing management of these habitats to ensure that the site continues to support a wide range of breeding bird species, including those associated with adjacent farmland areas.

Survey work for great crested newts is ongoing and a review will be carried out following completion of the relevant assessments.

However, mitigation is currently provided in the form of four wildlife ponds situated along the southern boundary. Ponds will be set within a mosaic of native wildflower grassland and woodland planting. Bunds are also proposed in this area which provide opportunities for the creation of varying microclimates. The creation and management of these habitats should be designed to provide opportunities not only to amphibians, but also to a range of mammal, bird and invertebrate species.



Existing Landscape + Visual Baseline

A thorough landscape and visual baseline assessment was undertaken by landscape architects the Terra Firma consultancy who were also the authors of the LVIA undertaken for the MIRA Technology Park north of the A5 as part of the 2011 EIA and who have been involved with the masterplan and projects there ever since. This identified the fundamental characteristics of the site's landscape context and key sensitivities to be taken aboard in formulating the masterplan. Opportunities and Constraints were clearly set out, combining with the work of the team ecologists and arboricultarist in order that key areas and boundaries would be protected and a strategy for meaningful green infrastructure created from the outset.

The green infrastructure is built around hydrological and ecological corridors and the potential to enhance and connect with the immediate network of public rights of way. The most sensitive receptors were identified as being to the south-west and the masterplan developed accordingly, affording generous open space and screening provision to that side of the development. Buffers are also proposed to the A5 and other outer boundaries. The most useful viewpoints toward the new development were then scoped and agreed with the local authority in order that verified visualisations could be produced to test the potential visual impact of the development and assist the process of defining the height, scale, and massing of the built form for the development, just as had been done in 2011 to the north. The assessment process and findings are described at p47.

The key sensitivities, constraints, and opportunities identified in the LVIA baseline study are:

- Inter-visibility from Caldecote should be carefully considered to ensure potential effects on the heritage assets are mitigated.
- Long distance views from sensitive receptors using Hartshill Country Park should be considered and mitigation should be included where possible.
- Existing drainage ditches and hedges should be retained and protected where possible.
- Any development should consider the impact on the users of the A5 and the effects of the traffic noise on the potential users of the site.
- Weddington Country Walk is a well-used and therefore highly sensitive landscape and visual receptor. Careful steps should be taken to avoid any potential negative effects on the users.
- Any development on the site should consider a large landscape buffer to the south of the site which could include ponds for ecological benefit, utilising the lowest part of the site.
- Where possible, any development on the site should work with the existing landform and any spoil from excavation is utilised on the site in the form of bunds.

Existing Heritage + Archaeology

An archaeological desk based assessment has been carried out by University of Leicester Archaeological Services.

The Historic Environment Record for Warwickshire and the Historic Environment Record for Leicestershire and Rutland indicate that there are several known archaeological sites in the vicinity.

The assessment area lies off the A5 Watling Street that follows the line of a Roman road. Excavations along the line of this road have shown that the actual structure may lie within nearby fields and excavations and other archaeological investigations during work at the main MIRA Technology Park to the north of the site on the Leicestershire side of the A5 have produced evidence of settlement along the road route as well as in the vicinity.

The site lies outside the medieval village cores of Caldecote and Weddington in the agricultural hinterland of the village of Caldecote. There is evidence of ridge and furrow earthworks nearby, although none are obvious within the site itself, probably due to long term ploughing.

Therefore, there is moderate to high potential for prehistoric and Roman remains and low to moderate potential for medieval and post-medieval remains within the assessment area.

The significance of the chapel at Lindley Park, a scheduled monument to the north-east of the assessment area is High but the new development will have a negligible impact on this heritage asset.

There will be no impact on the setting of conservation areas or listed buildings. The nearest listed buildings to the site are in the centre of Caldecote 600m to the west.

Existing Sensitive Receptors

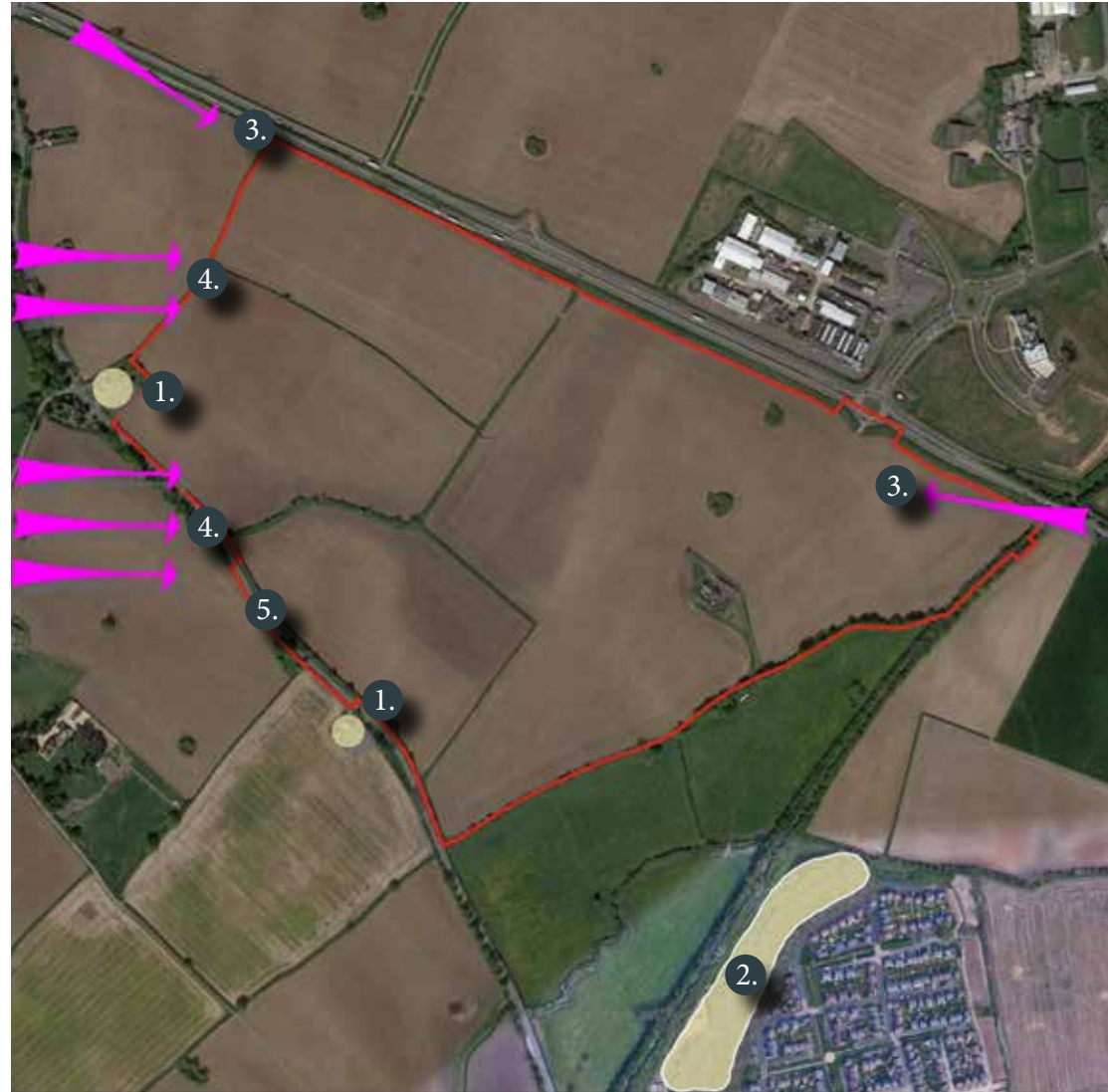
As part of the baseline assessment the adjacent land uses need to be considered to ensure that the development is sympathetic to its neighbours and immediate context.

In particular the adjacent residential uses need to be considered and building orientation, scale and landscape treatment will need to respond to these sensitive receptors.

The key receptors are indicated on the adjacent plan.

Key:

- 1. Adjacent residential properties
- 2. Potential views from Weddington
- 3. Impact of views along the A5 corridor
- 4. Impact of long distance views from Caldecote, particularly on the western end of the site
- 5. Impact on the rural character of Weddington Lane



SENSITIVE RECEPTORS

Existing Transport Links

The site is bounded to the north by the A5 and the south by the A444. The existing MIRA Technology Park is accessed from a roundabout on the A5.

The A5/A444 junction (Redgate Junction) is known to have limitations in terms of accommodating future traffic growth and will need to be considered as part of the highway mitigation strategy.

The A444 to the south is rural in character with a narrow, partly overgrown, footway on its northern side.



Existing Public Right of Ways

Part of the former railway line borders the site along the eastern edge and contains a cycleway and footpath which forms the Weddington Walk which is part of the NCN 52 cycle path to Nuneaton.

The site crosses under the A5 in an underpass and could provide connectivity between the proposed MIRA Technology Park South Site and the existing MIRA Technology Park to the north.

There are two existing PROW footpaths in the vicinity of the development site.

Footpath AE189 runs south-west for a distance of 575m from the A5 Watling Street at Hungry Hill to the existing agricultural track that serves The Elms Farm and then heads south (N27) across the Weddington Walk.

AE190 runs south-west for a distance of 454m from the A5 Watling Street towards the A444 Weddington Lane at Caldecote Village Hall.



PUBLIC RIGHTS OF WAY

Existing Utilities

The site is relatively free from existing utility constraints with the exception of the following:

1. Overhead electricity cables
2. 225 dia foul sewer
3. Foul pumping station
4. Utilities to existing farmhouse to be removed
5. Hinckley Trunk Sewer

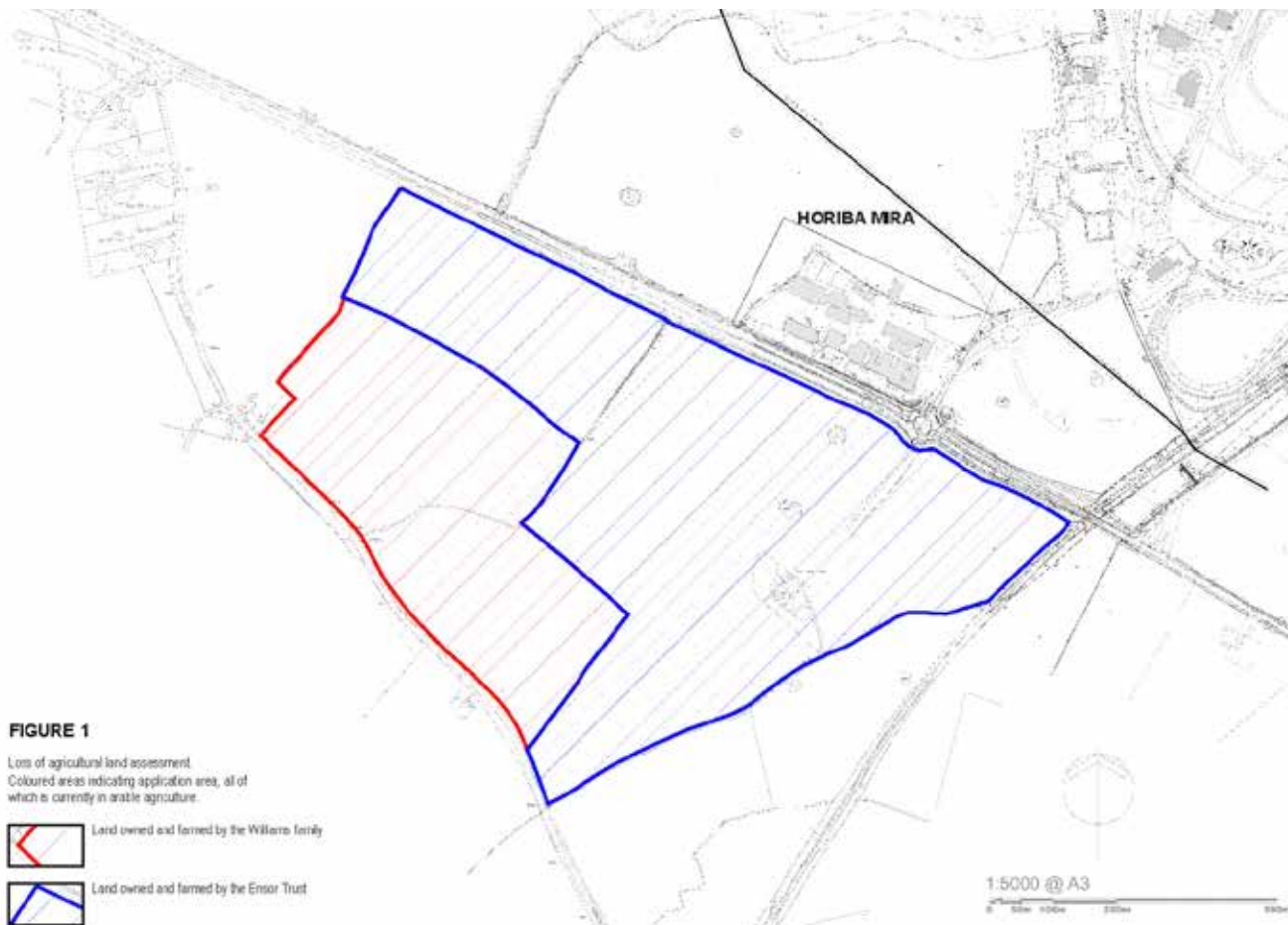


FOUL RISING MAIN AND PUMPING STATION

Existing Agricultural Land Use

The site area has been under agriculture for as long as historic maps and records have existed. The current land use is arable agriculture split between two landowners; the Williams family and the ENSOR Trust. Both were consulted at commencement of the landscape baseline assessment and an Agricultural Land assessment produced by Terra Firma accompanies the application. This discusses potential impacts with loss of farmland and mitigation through phased development and conservation of soils.

The area is predominantly heavy clay Grade 3 under Agricultural Land Classification (and felt to be at the lower 3B end of the quality spectrum by those who farm it) with rather better free draining and even Grade 2 quality to the west. The summary of assessment findings under Residual Effects after mitigation was that there would only be minor adverse effect on the area's quantity and quality of agricultural land taken and that the impacts on land loss and severance to the farm businesses would be negligible.

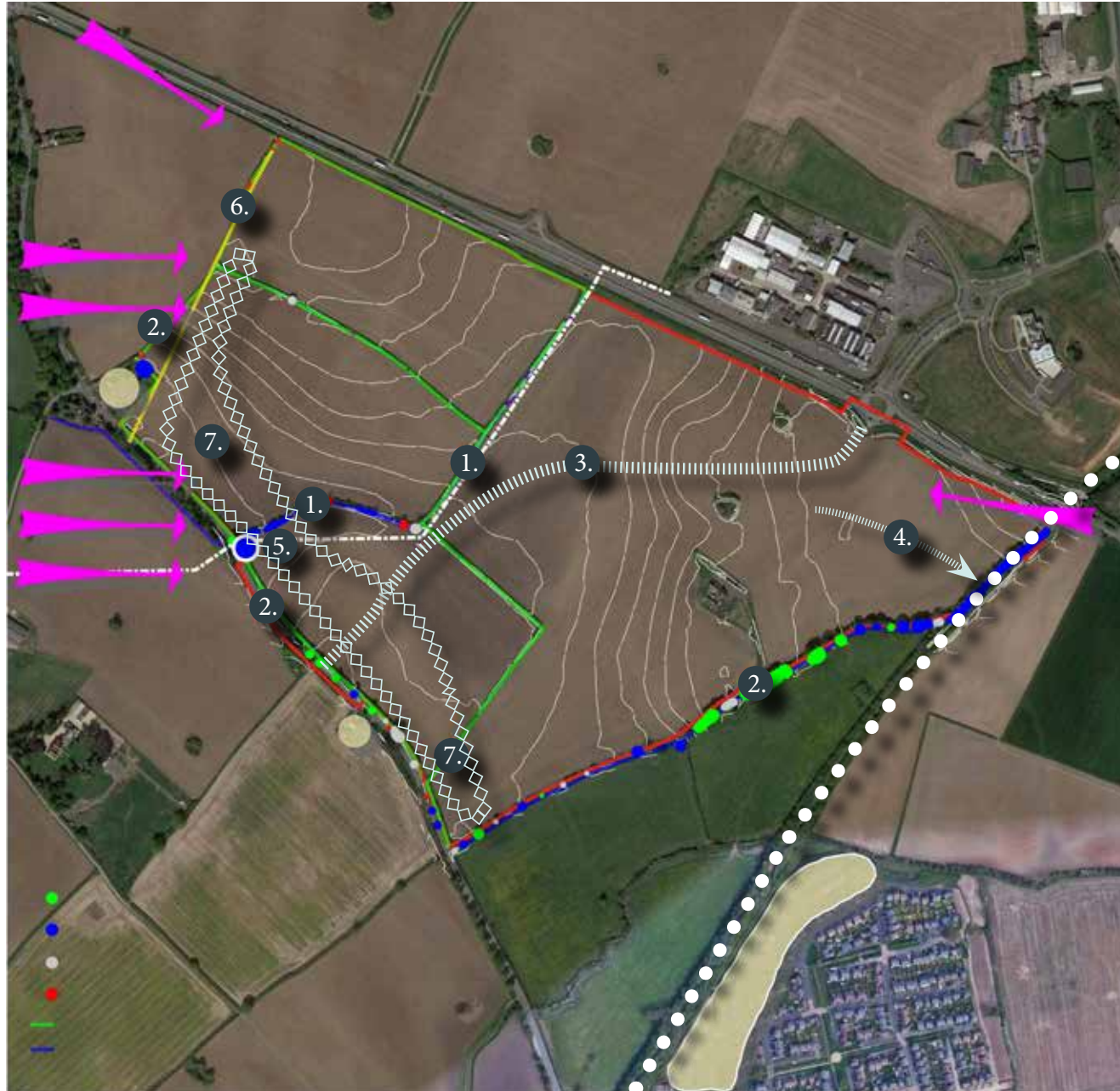


Summary of Design Influences

The site has relatively few major physical constraints that would prevent development. However, an assessment of the influences has been used to inform the design of the development, including in terms of scale and height. Identified sensitive receptors has also informed the built form of the scheme and the landscape strategy in order to minimise impact on its neighbours.

In summary, the most significant influences are:

1. Watercourse - running north south through the site could be retained.
2. Existing hedgerows - the perimeter hedgerows will be in the main retained and enhanced to create structure to the site boundaries. A number of the internal hedgerows will need to be removed as part of the development works but where possible, particularly running along the line of the watercourse, these will be retained. To compensate a significant number of new, species rich, hedgerows will be planted through the development.
3. A5 / A444 Link - A new linkage could be provided to serve the site and relieve traffic pressure from the Redgate Island and the western stretch of the A444.
4. Connectivity to MIRA Technology Park - the opportunity to provide pedestrian and cycle linkages to the existing MIRA Technology Park and the potential for autonomous vehicles. Preservation and enhancement of existing Public Rights of Way connecting to and running through the site along with additional interconnecting routes.
5. Foul pumping station and sewer - retained by Severn Trent Water and the foul water sewer will be diverted to connect to the Hinkley Trunk sewer.
6. Electricity cables - these could be retained or diverted.
7. Landscaped parkland - A substantial landscape buffer / park could be provided to the south-west to provide screening to the adjacent properties, longer views from Caldecote and to retain the rural character of Weddington Lane. This could also provide amenity space for occupiers and local residents.
8. Green Infrastructure - Opportunity to build masterplan up around substantial multi-functional Green Infrastructure that can set the tone for the site as a green development, a pleasant environment in which to work and move through that integrates amenity, flood and water management, soil conservation, ecology and climate resilience while minimising landscape and visual impacts.



COMPOSITE OPPORTUNITIES AND CONSTRAINTS PLAN

Development Proposals

The Vision

The proposed development represents an opportunity for a high quality manufacturing campus encompassing a range of building sizes, mainly manufacturing, with secondary office and warehouse space. The range of employment unit sizes will be carefully judged to complement existing and proposed future land uses in the area and to meet the increasingly high quality requirements of a growing hi-tech manufacturing industry.

Occupiers will 'buy into' a long-term vision. Creating the right environment in which to work is important to enable staff to enjoy work, be more creative, more productive and to improve mental well being. It will help to attract and retain the best people in the future. A sense of community created by building design, landscape and the public realm, with active on-site management will ensure an environment which is both relaxing, yet with a bustle and energy through interaction which is attractive to occupiers.

The vision is to provide a high quality manufacturing campus based on good sustainable principles creating new employment opportunities that will best secure development. The scale of the development will accommodate a range of business sizes, thus providing a sustainable and holistic development.

The development will be a direct response to both the physical constraints of the site, and hierarchy of scale, created to establish a visual order to seek to enhance the visual aspect of the site.

Although the site is physically separated from any major residential settlement, landscape boundaries to the site will provide screening for the residential properties immediately adjacent and will help break down the massing of the various development plots.

The building design will seek to create a new identity for the site with consistency in quality, scale and colour to provide an attractive cohesive environment.

This is seen as a key factor to create a distinctive and high quality scheme, that will attract inward investment, whilst retaining expansion capacity for local business.

Flexibility is key and the site will be able to accommodate units ranging in size from 9,300 sq m (100,000 sq ft) up to 93,000 sq m (1,000,000 sq ft).

Specifically the scheme will accommodate:

- A layout which is flexible enough to accommodate a wide range of sizes, integrated into a landscaped setting.
- An access strategy that is sympathetic to the existing highway layout and maximises opportunities for modal shift and permeability.
- Integration of built forms into the landscape both visually and physically.
- A high quality landscape setting which enhances bio-diversity, well being and amenity value.
- The use of appropriate building design striking a balance between expressions of individual identity whilst providing an overall harmonious built form.

In order to achieve a consistent, coherent and high quality scheme the development will be undertaken in accordance with a strong masterplan ensuring quality, longevity and a structured approach to estate management.



DEVELOPMENT PROPOSALS

Development Parameters

Based on the constraints, opportunities and design influences set out on pages 22 and 23 a set of parameters has been established which form a framework for future development of the site.

This Parameter plan sets out the maximum envelope for development and identifies the following key parameters:

- Development Zones
- Structural Landscape
- Movement Infrastructure
- Maximum Heights and Floor Areas
- Removal and Retention of existing hedgerows
- Pedestrian and cycle linkages

Whilst it is important that there is flexibility within the site to accommodate varying user requirements, future reserved matters applications will be tested against the parameters set out in the plan to ensure that each plot is developed in accordance with the approved parameters. This will ensure a overall cohesive and coherent development is achieved.





DEVELOPMENT PARAMETERS

Design Evolution

As part of the design development process a number of masterplan scenarios were developed to test and inform the parameters plan. These options considered the constraints and opportunities presented by the site along with a market based assessment of the overall requirements in terms of scale and layout for the units.

The options shown on the following pages illustrate the design journey that led to the final parameters plan submitted as part of the outline application.

Whilst these options show ways in which the site could be developed they are indicative and the Development Parameters Plan is the formally submitted drawing which sets out the overall development limits. Future reserved matters applications will fit within these overall parameters.



Option 1

The initial concept for the MIRA Technology Park South Site considered development across the entire site bounded by the A5 and A444, but largely based on the employment designation, for a development of a range of building sizes from 25,000 m² to 100,000 m². The principle of a central spine road was established and indicated on the plan along with a generous landscape buffer to the west and south of the site.

Following more detailed assessment of the site this option was discarded as both the central 25,000m² unit and the 100,000m² unit locations would require a substantial diversion to both the watercourse running north south through the site and the adjacent sewer along with the loss of an important hedgerow along the line of the watercourse.

In addition the 25,000 m² unit was felt to be too dominant on Weddington lane and the development extended too far to the north west.



Option 2

Option 2 considered a range of unit sizes up to 50,000m² which respected the alignment of the existing watercourse, hedgerow and adjacent sewer.

The central spine road was realigned to create a dual frontage and a roundabout junction added to Weddington Lane. Pedestrian and cycle linkages to the existing MIRA Technology Park were also considered, and in particular, the link utilising Weddington Walk and the underpass below the A5.

Additional landscape was also added along Weddington lane.



Option 3

Option 3 followed the general principles of option 2 but looked at a realigning the link road to follow the retained hedgerow to create a stronger green corridor through the site. Two smaller units were placed on the A5 frontage with the south east of the site accommodating a 100,000 sq m unit.



Option 4

Option 4 considered a more market facing range of unit sizes with buildings between 10,000 m² and 50,000 m². The northern portion of the link road was realigned to create a better, smoother flowing, highway geometry.



Option 5

Following detailed input from the highways consultant the link road alignment was revised to comply with adoptable standards and, in particular, a roundabout was added to improve the highway geometry and act as passive traffic calming.

This option also addresses concerns about visual impact from both Caldecote and the residential units on the western corner of the site.

Units on the west part of the site have been revised to create a much stronger landscape buffer on the south west and to move the mass of the buildings away from the more sensitive western corner.

The larger landscape buffer to the south west will contain a trim trail and walking routes to act as an amenity space (country park) for occupiers of the park and also local residents.



Option 6

This option responds to comments raised during the consultation period. Key changes are:

- Upgrades to the Redgate Junction shown to improve traffic flows
- Landscape buffer to the south western boundary significantly increased to provide screening to adjacent residential properties
- Landscape bund added to north west corner to provide additional screening to adjacent residential dwellings and PRow diverted into the site
- Roundabout onto A444 changed to a priority junction to retain the rural character of Weddington Lane and to focus traffic movements heading west onto the A5



Option 7

Option 7 forms the basis of the indicative masterplan used as a proving layout for the site. This option responds to comments raised during the consultation period. Key changes are:

- Landscape to the north west of the site revised to an ecological zone with limited public access to aid bio-diversity and help retain the rural character of the adjacent residential properties
- A444 access revised to an off-line roundabout making the link road between the A444 to A5 the primary link between Redgate and Nuneaton
- Proposed new signage/traffic orders directing HGVs over 7.5T through the site, effectively removing HGV traffic from the western portion of Weddington Lane

Illustrative Masterplan Components

The illustrative masterplan is made up of a combination of layers. Each layer, or component, is overlaid and combines to create a comprehensive, cohesive and integrated masterplan strategy.

The key masterplan components, described in the following pages, are:

Movement Infrastructure

How you arrive at, and move through, the site either walking, cycling, by public transport or private car. How the site creates connectivity and permeability within a logical hierarchy of transport options.

Blue Infrastructure

An integrated surface water drainage strategy that provides an integrated Sustainable Urban Drainage System (SUDS) that provides a technically robust strategy, enhances landscape and amenity, and provides opportunities for bio-diversity improvements.

Green Infrastructure

A network of green spaces that create character areas, a strong setting for the built form, visual screening and interest and enhanced ecology and bio-diversity.

Social Infrastructure

Spaces that help foster a sense of community, improve well-being and provide space for health and fitness.

The Built Form

The buildings themselves, how they create focal points, address public areas, are sustainable and, through good design, help create a sense of place.

The various elements of infrastructure are joined together by the overall landscape structure which will unify the development into a cohesive and consistent framework.

The input into each of these layers, the illustrative proving masterplan and the outcomes of consultants technical reviews and recommendations have shaped and informed the overall design parameters plans.



ILLUSTRATIVE MASTERPLAN

Movement Infrastructure

General Principles

The development adopts a hierarchical approach to movement and access that ensures priority is given to more sustainable forms of transport and opportunities to reduce travel demand over motor vehicle access.

This will be delivered through a comprehensive package of combined hard interventions (infrastructure such as improved footways, cycleways and crossing facilities as well as amendments to existing bus service routing) and soft interventions (travel planning, promotions and marketing) to achieve meaningful changes in travel behaviour and an ambitious shift in modal share targets.

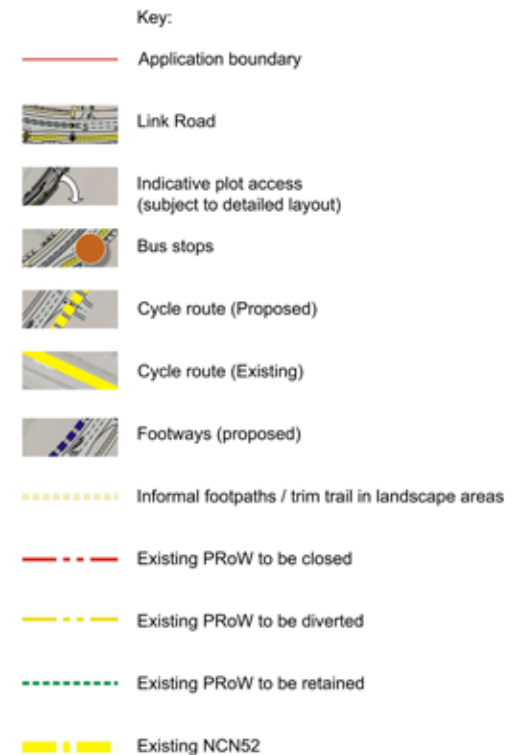
Promoting Smarter Choices

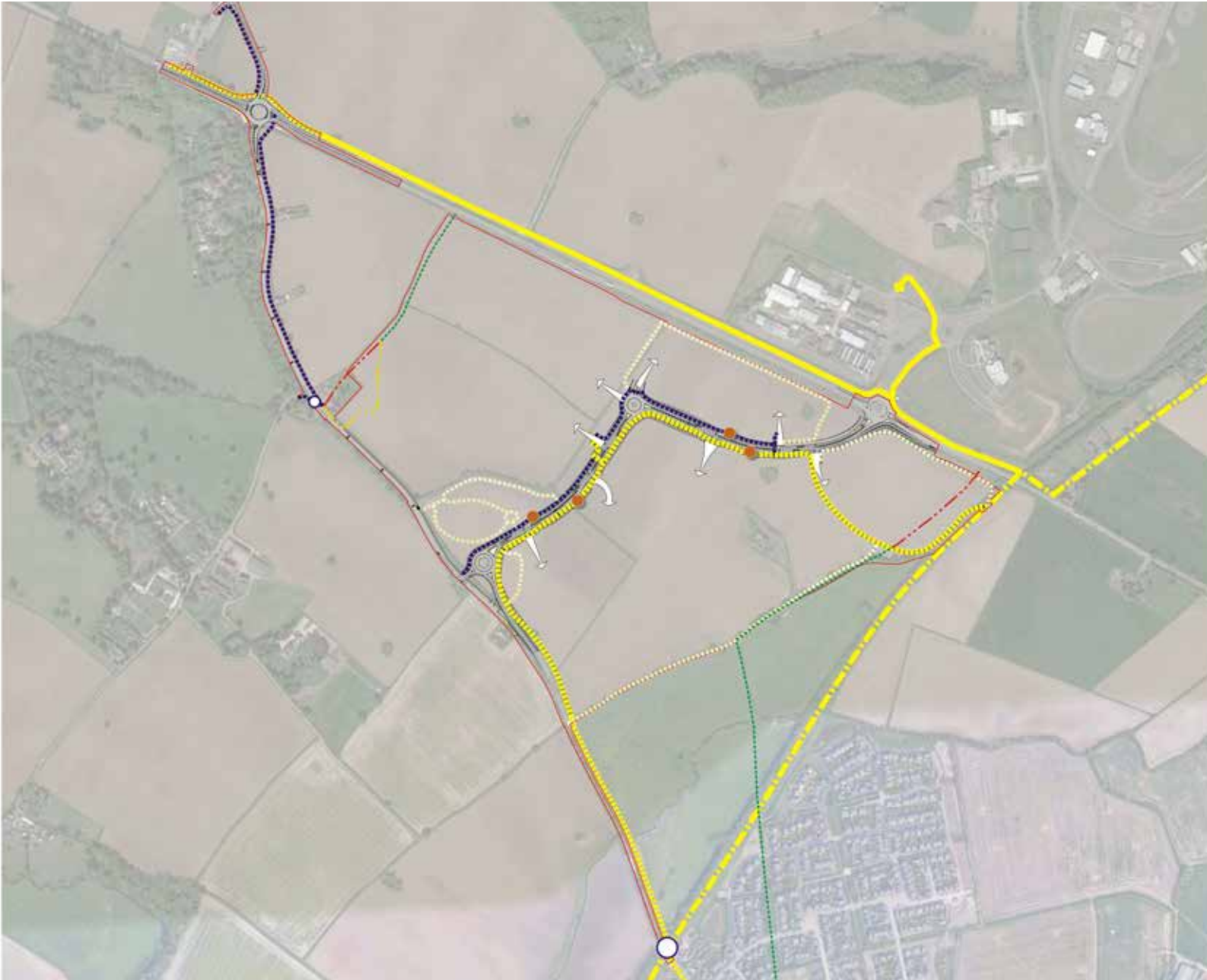
The development will deliver real incentives to encourage people to change their travel behaviour and to sustain these changes over the long term. A framework of effective measures and smarter choices through the delivery of a Framework Travel Plan (FTP) underpins the development to achieve an overall goal of reducing the impact of generated traffic and to improve accessibility.

The FTP will be implemented in conjunction with the phased delivery of the development, to ensure integration into the local transport network, promotion of healthier lifestyle choices and wider social / community benefits and to assist in minimising the environmental impacts of the development.

The FTP includes suite of techniques such as the implementation of a community website, travel packs, car sharing promotional strategies and personalised travel planning designed to deliver on these objectives. Such measures will be underpinned by taking advantage of the proximity to facilities and services as well as the planned physical improvements to the built environment delivered through the development for enhanced infrastructure for pedestrians, cyclists and public transport users.

The FTP will be an organic document that will grow and develop as land is released for the phased development. Measurable targets and over-riding objectives will be continuously monitored and reviewed over the lifetime of the Plan.





MOVEMENT INFRASTRUCTURE

Pedestrians & Cyclists

On-Site Infrastructure

Active travel, in particular the freedom of movement for pedestrians and cyclists to access a broad range of local origins and destinations both within and through the development, is a priority of the Movement Infrastructure Strategy. The development is supported by a comprehensive active travel strategy that seeks to deliver a good quality environment for access to / from the site that is:

- Attractive.
- Well-connected and permeable to encourage walking and cycling to local destinations.
- Able to encourage activity thereby improving personal security and safety.

Street corridors within the development not only provide a permeable, legible circulation pattern but also have important functions beyond just the movement of traffic, i.e., multi-functional spaces with a much higher 'place' function that are integrated within their surroundings and where pedestrians and cyclists are, in general, afforded greater priority than vehicular traffic.



Specifically, with regard to the provision of new and improved active travel infrastructure, the Movement Infrastructure Strategy comprises the following:

- The creation of a high quality environment that provides direct connections to destinations within the developable area and beyond that are permeable, coherent, safe and reflect desire lines.
- The provision of key landmarks as well as easy to understand wayfinding both within and on key routes to / from external destinations to provide legibility.
- The protection and enhancement of the Public Right of Way network in the immediate vicinity and integration into the new development.

Based on this framework, the aim is to:

- Provide a continuous network.
- Maximise convenience by ensuring that all routes are direct and reflect desire lines of movement.
- Ensure that usable, comfortable places are created and that crossing places are level.
- Make routes clear and easy to follow with good sightlines and signage.
- Create spaces that are safe, active and accessible to all.

The principal, formal access active travel corridors will be lit and will be accompanied by a legible signage strategy. Crossing points are intended to be uncontrolled and will tie in with desire lines with refuge islands provided where appropriate.

All formal footways and cycleways within the development will be constructed to full highway standards with sealed asphalt surfaces and concrete edging.

Formal cycleways will take the form of segregated, stepped off-highway two-way routes that are designed to accord with the principles of LTN1/20 and will be 3.0m in width. Cycle priority crossings will be provided at side road junctions with set-backs and in proximity of bus stop boarding areas.

Footways will generally be provided on both sides of all streets within the development. Footways will be provided to a width of at least 2.0m.

Hedges and fences will be set back at least 0.5m from footways or cycleways. Inter-visibility splays of 2m x 2m will be provided at crossovers, path junctions to maintain pedestrian safety. Where cycle traffic crosses a road, footway or PROW, visibility splays of 2.4m x 31m will be maintained.

Formal footpaths and cycle routes will be supplemented by a network of informal footpath routes running through the landscaped areas which will provide opportunities for walking and running. These routes will be accessible to both park occupiers and residents in the wider community.



Off-Site Infrastructure

Beyond the development boundary, the focus is to provide direct, cohesive, attractive active travel connections to key local origins and destinations and existing, established infrastructure. Key strategic corridors are identified to meet this objective, these being:

1. *Weddington Walk(NCN52)*

Extension of formal active travel corridor to the north-east providing a direct connection to the Weddington Walk (former railway line and part of the National Cycle Network, Route 52). This will then provide grade separated, traffic-free access via the subway under the A5 to MIRA Technology Park, and the existing shared footway / cycleway along the eastern side of the A5 corridor. NCN52 is then signed northwards via Wood Lane towards Higham-on-the-Hill and Stoke Golding. Southwards, the NCN52 continues as a traffic-free route towards the A444 Weddington Lane and then continues as a traffic-free route to connect with Camp Hill and the towpath along the Coventry Canal.

2. *Caldecote*

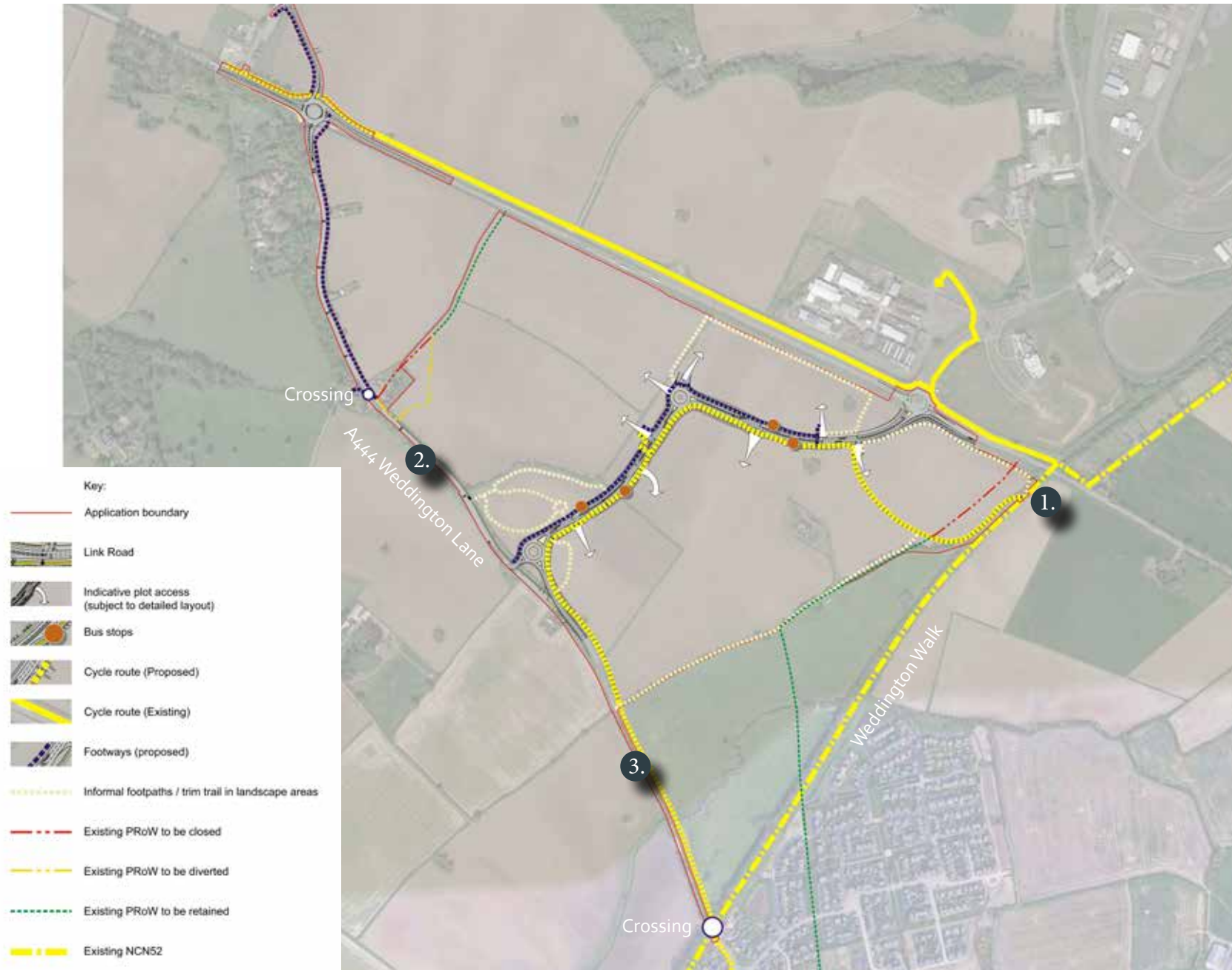
Improved connectivity is proposed north along the A444 Weddington Lane from the proposed Site access roundabout to Caldecote Village Hall, parallel to the main carriageway. This will comprise a widened footway to at least 2.0m in width accompanied by a lighting upgrade. It is also proposed to provide a lit pedestrian crossing with refuge island in the vicinity of the Village Hall accompanied by a footway connection to Caldecote Lane on the western side of the A444 Weddington Lane.

With through traffic diverted along the main spine road through the development to the A5, the retained section of Weddington Lane up to Caldecote village and the Redgate Island will be retained and enhanced as a Quiet Lane with associated infrastructure to provide priority for active travel modes.

3. *Weddington/ Nuneaton*

Improved connectivity is proposed south along the A444 Weddington Lane. From the proposed Site access roundabout to the development boundary this will take the form of a continuation of the formal, lit active travel corridor, set back from the main carriageway.

Beyond the development boundary, the route will continue as a lit shared footway / cycleway, adjacent to the main carriageway to link into the existing A444 / Weddington Walk crossing that will be upgraded to traffic signal control. This will then continue via the recently constructed shared footway / cycleway to the Adderley Park / Lower Farm Way housing developments and onwards in the direction of Weddington village and Nuneaton town centre.



ILLUSTRATIVE MASTERPLAN COMPONENTS

Public Rights of Way (PROW)

There are two existing PROW footpaths in the vicinity of the development site.

FP 144/AE189/1

Runs south-west for a distance of 575m from the A5 Watling Street at Hungry Hill to the existing agricultural track that serves The Elms Farm. At a point 140m west of The Elms Farm, the footpath turns south and is redesignated as FP 330/N27/1 that extends for 818m, crossing the Weddington Walk and passing through the Lower Farm housing development to Weddington Village.

The initial section of FP 144/AE189/1 for a distance of approximately 270m would need to be extinguished in order to accommodate the proposed development.

The remaining section of FP 144/AE189/1 will be upgraded to provide a 3.0m width unsealed surface with timber edging and 1.0m amenity margins on both sides between hedgerows where the cross-section width permits. Additional wayfinding will also be provided.

The formal active travel corridor connection between the proposed development and Weddington Walk and the network of informal recreational paths around the perimeter of the Site are a replacement and significant upgrade for all PROW users to the existing section of FP 144/AE189/1 that will require extinguishment.

FP 144/AE190/1

Runs south-west for a distance of 454m from the A5 Watling Street towards the A444 Weddington Lane at Caldecote Village Hall. The footpath runs between two residential properties and as part of the site redevelopment it is proposed to reroute AE190 to the south of the residential properties to allow for a wider, more attractive route through the proposed 'ecological zone' and will be upgraded to provide a 3.0m width unsealed surface with timber edging and 1.0m amenity margins on both sides between hedgerows where the cross-section width permits. Additional wayfinding will also be provided.



- - - - - Existing PROW to be closed
- - - - - Existing PROW to be diverted
- - - - - Existing PROW to be retained

Passenger Transport

In respect of public transport, a fundamental deliverable of the Movement Infrastructure Strategy is that, where practicable, all building accesses will be within 400m walk distance of regular public transport services that provide competitive journey times to key destinations and present a realistic alternative to private car use for employees within the MIRA Technology Park South Site development.

The proposal is to collaborate with the bus operator, Arriva Midlands, and the WCC Passenger Transport Operation team to instigate the diversion of Service 65 via the new spine road within the development as part of its route between Tamworth and Nuneaton via Atherstone and MIRA Technology Park. The diagram shows the current and proposed future routing of Service 65.

At present, under COVID-19 conditions, the service operates on an hourly frequency throughout the day, Monday to Saturday with journey times of 10 minutes to Nuneaton, 11 minutes to Atherstone and 65 minutes to Tamworth. Pre-COVID, the service provided a 30-minute frequency at certain periods of the day, particularly on the section of the route between MIRA Technology Park and Nuneaton.

Subject to agreement with the bus operators and WCC Passenger Transport Operations team, the intention is to restore a 30-min frequency on Service 65 on weekdays on the core element of the route between Atherstone and Nuneaton. The phased introduction of the revised Service 65 bus service will be linked with the phased build programme within the MIRA Technology Park South Site development.

Within the MIRA Technology Park South Site development additional bus stop infrastructure will be provided with the phased construction of the new spine road linking the A5 to the A444. The bus stop infrastructure will incorporate wide footways at bus stops, passenger waiting facilities, flag, timetable and mapping, provision of infrastructure to enable real-time information (RTPI), low-floor kerbs and bus cage markings. The RTPI will also be incorporated into accessible locations within each of the building units.



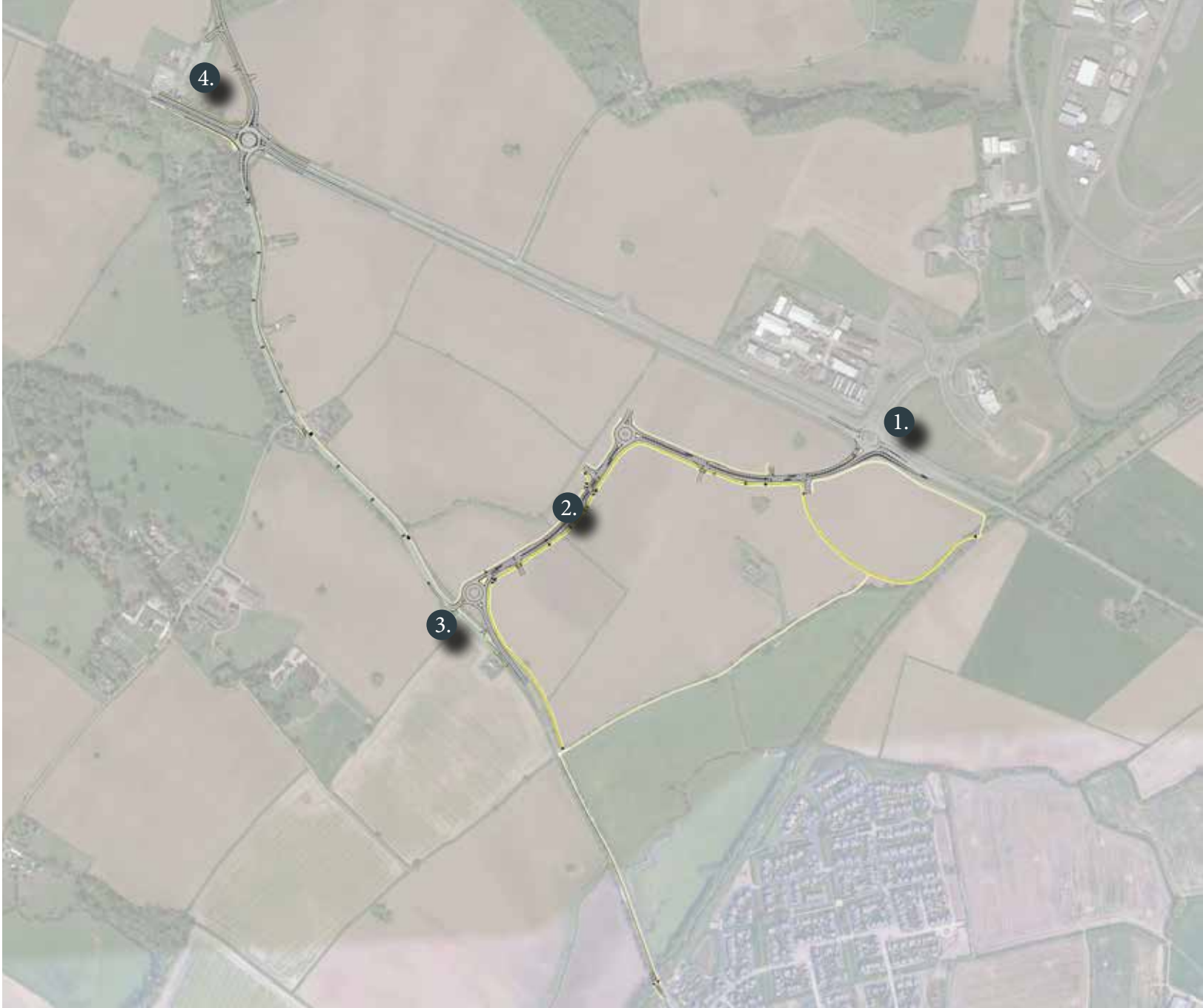
CURRENT + PROPOSED FUTURE ROUTING OF SERVICE 65

Vehicular Access Strategy

The scale and form of the MIRA Technology Park South Site development is such that it has the potential to generate both light vehicle movement (i.e., cars / vans) as well as heavy goods vehicle movement throughout the day, primarily during weekdays. The nature of such development is that there is likely to be a concentration vehicular movement, particularly light vehicles, during the traditional weekday AM and PM peak periods (typically 07:00 – 10:00hrs and 16:00-19:00hrs) coinciding with peak periods of background vehicular activity on both the A5 and A444 corridors.

The vehicular access strategy therefore seeks to deliver the most efficient movement of vehicles between the Site and the surrounding road network.

1. A5 Mira Roundabout
2. A5-A444 Spine Road Link
3. A444 Weddington Lane / MIRA Roundabout
4. A5 Redgate Junction



A5 MIRA Roundabout

The primary access to the development is based around the construction of a fourth arm to the southern side of the existing MIRA Roundabout on the A5 Watling Street.

The geometric design of the existing MIRA roundabout is such that it can be easily adapted to accommodate the DMRB requirements for a full access road in place of the existing field access track that can accommodate the anticipated volumes of light vehicles and HGVs without requiring any Departures from Standard.

To aid with the junction capacity assessments the Site will be provided with a left slip from the A5 (east) to the A5-A444 link road. Additionally, and as part of the Site access proposals, increased entry widths will be provided on both the A5 (east) and A5 (west) arms of the roundabout.

The site access will comprise a flared two-lane approach to the MIRA roundabout over a distance of approx. 40m, accommodating a minimum of 5 vehicle queuing length in each lane. On exit from the MIRA roundabout, the left slip merges from the A5(east) with main carriageway approx. 45m south of the roundabout.

A 3.0m wide shared footway / cycleway will extend from the A5-A444 link road to the A5 (east) around the south-eastern sector of the MIRA roundabout. This shared footway / cycleway will extend to the Weddington Walk underpass to accommodate the movement of pedestrians and cyclists between the MIRA Technology Park South Site and the existing North Site. No additional pedestrian / cycle crossing facilities are proposed at the A5 MIRA roundabout.



A5-A444 Spine Road Link

The two external accesses will be connected by a new, adoptable link road, designed to standards applied by the Highway Authorities, namely the Design Manual for Roads & Bridges (DMRB) and the Warwickshire Design Guide, from which direct access will be taken to individual plots.

In cross-sectional terms, the A5-A444 link road will have a minimum width of 7.3m (10.5m where ghosted right turn lanes are provided) flanked by verges (min. 2.0m width) and footways (min. 2.0m width). Segregated two-way cycle facilities (min. 3.0 width) will also be accommodated on at least one side of the carriageway.

There will be a combination of side road connections and direct accesses to development plots off the A5-A444 link road. These junctions are designed to accommodate the turning movement requirements of light vehicles and HGVs and will be give-way priority controlled with ghosted right turn lane facilities, as appropriate.



A444 Weddington Lane / MIRA Roundabout

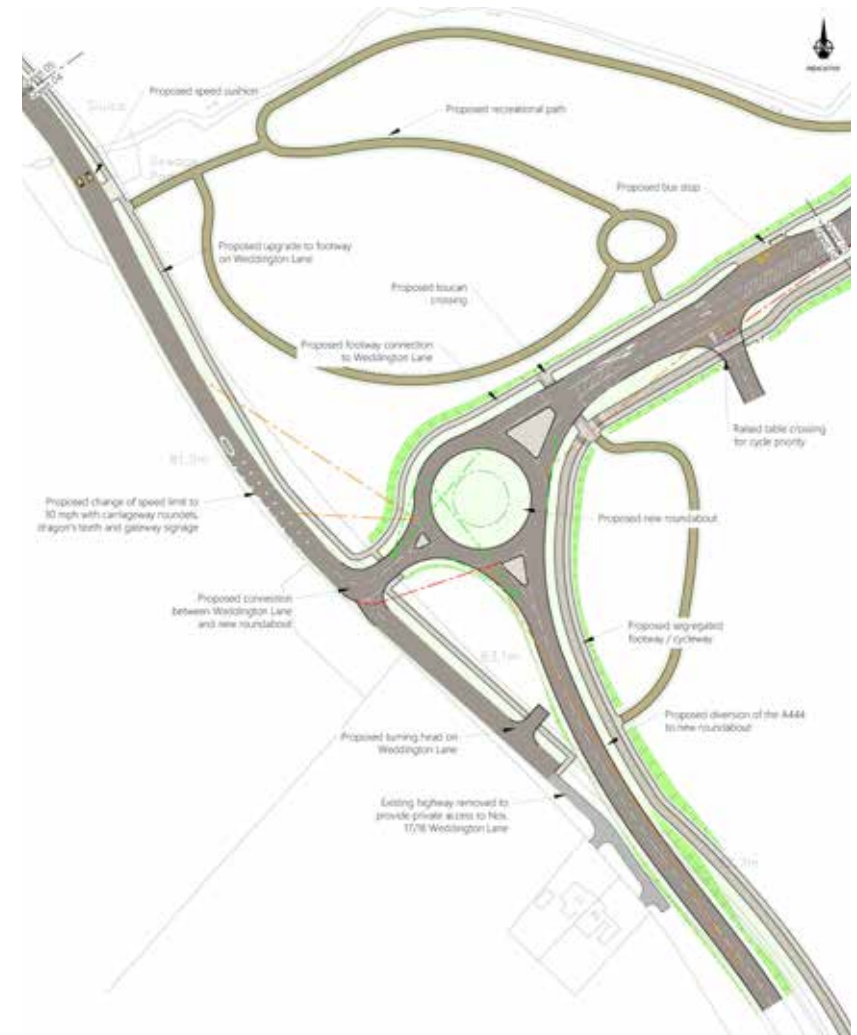
A new 3-arm roundabout will be constructed on the A444 Weddington Lane to the south-east of Caldecote, providing a second primary access to the Site.

As part of the construction of the second primary access, the A444 Weddington Lane will be diverted from its existing alignment just south-east of Nos. 17/18 Weddington Lane to a new 45m ICD roundabout offset approx. 52m (centre to centre) from the existing A444 Weddington Lane.

All three approach arms of the roundabout will be provided with single lane entries and exits. A 5.0m wide segregated footway / cycleway will extend around the north-eastern sector of the roundabout connecting the A5-A444 link road with the A444 Weddington Lane. A 2.0m wide footway is also accommodated on the north-western sector of the roundabout connecting the A5-A444 link road with Weddington Lane.

A toucan crossing is proposed on the A5-A444 link road arm of the roundabout that is set back some 20m from the give-way line.

The realignment of the A444 and positioning of the roundabout form part of a proposal to direct all through traffic along the A444 corridor to use the A5-A444 link road, facilitating the downgrading of Weddington Lane to a local access road.



The downgrading of the existing section of Weddington Lane between the Site access roundabout and the Redgate junction to a local access road will be supported by a package of traffic calming / management measures to redirect through traffic away from Caldecote village and will comprise:

- A comprehensive package of revised Advanced Direction Signage (ADS) to direct 'A' road traffic, including HGVs via the A5/A444 spine road through the Site, with associated additional / altered ADS at the MIRA roundabout and Redgate junction;
- A reduction in the speed limit on Weddington Lane through Caldecote village (between the Site access roundabout and the Redgate junction) from 50mph to 30mph;
- Additional traffic calming measures to reinforce speed limit change to include 'Gateway' road markings / signage, speed cushions and carriageway narrowing;
- A raised table crossing adjacent to the village hall.



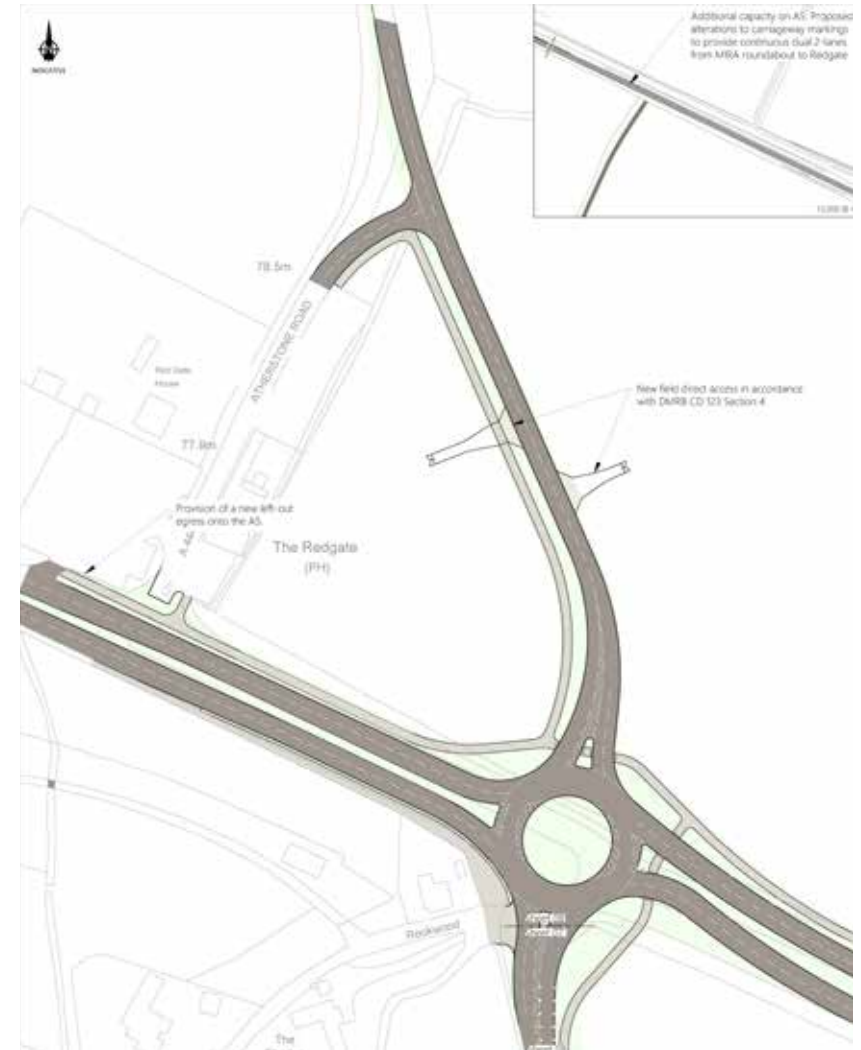
A5 Redgate Junction

The proposed development will deliver substantial upgrades to the A5 / A444 Redgate Junction through the construction of a new 4-arm 50m ICD roundabout that replaces the existing elongated roundabout junction. These mitigation works ensure that the junction will operate within capacity with substantial improvements in queuing conditions and delays during both AM and PM peak periods.

As part of these works, the existing A444 Atherstone Road approach, adjacent to the Redgate PH, will be closed up and replaced with a new link road across land to the east of the public house to connect into the new 4-arm roundabout. There will also be a new give-way controlled junction to serve the Redgate PH and adjacent business units and new field gate accesses onto the A444 link road to serve the adjoining, retained, agricultural fields.

It is also proposed to widen the existing A5 carriageway between the MIRA roundabout and the new Redgate junction to provide a continuous two lanes in a westbound direction between the roundabouts. Likewise, and with the closure of the existing A444 Atherstone Road / removal of the elongated roundabout, an extending two-lane approach and exit is delivered on the A5 towards Atherstone.

The proposed mitigation includes the provision of uncontrolled pedestrian crossing points with dropped kerbs, tactile paving, and pedestrian refuge islands on the A444 Atherstone Road and the A5 (East) arms. The proposed mitigation also increases the entry width and flare length on Weddington Lane to improve the length of carriageway for vehicles to queue side-by-side.



PARKING

Cycle Parking

Cycle parking is a key deliverable within the Movement Infrastructure Strategy and will accord with the NWDC Adopted Local Plan policy. Recognising the need to prioritise this mode of travel it is recognised that it is not just the quantity of cycle parking provided for each land use but also the quality of such provision in respect of location, convenience and security.

Cycle parking will be located close to the main entrance of the respective building where natural surveillance is available. Both long term spaces (staff) and short term spaces (customers / visitors) will be secure (using 'Sheffield-type' stands), covered and lit. In support of the long term (staff) cycle spaces, showers, changing and equipment storage facilities will be provided in the respective buildings. Short term (customer / visitor) spaces will be clearly signed.

Car Parking

A balanced approach has been taken to car parking provision within the development recognising the need to encourage sustainable transport access and reduce car use whilst at the same time ensuring that operational needs are met and that inappropriate overspill of parking onto surrounding roads is avoided. Car parking provision will therefore fall within the maximum standards as set out within the NWDC Adopted Local Plan policy.

Parking zones for each plot within the development will be overlooked and will incorporate the use of differing materials and landscape features to improve attractiveness to end users.

As per policy LP34 of the NWDC Adopted Local Plan, active electric charging points to an agreed technical specification and location will be provided at a ratio of 20% of the total number of spaces within each plot. This will include employee and visitor rapid charging points. The remaining 80% of spaces will be provided as passive provision, incorporating the underlying infrastructure necessary for connection to be activated in the future as technologies evolve and uptake increases.

Disabled car parking will be provided in accordance with BS 8300-1: 2018 and will be located close to building entrances at a ratio of 6 bays plus 2% of total capacity. Motorcycle provision will be provided at 1 space plus an additional space for every 10 spaces required by maximum car parking standard.

Blue Infrastructure

An FRA and Drainage Strategy has been prepared for the Site which demonstrates there is a low risk of flooding from tidal, pluvial, fluvial, groundwater and artificial sources. The site is located in Flood Zone 1, however, the site is bisected by an ordinary watercourse. The relatively impermeable nature of the underlying ground conditions means the ordinary watercourse is predominantly driven by overland flow from the surrounding catchment. The EA's surface water mapping does not accurately represent the watercourse, and overestimates the risk of flooding in this location. Calculations of the flow rate within the channel show that the channel has sufficient capacity to manage the 1 in 100 year event including an allowance for climate change.

Changes to land levels across the site mean that the area draining to the watercourse near Weddington will reduce as a result of the proposals, thereby reducing the risk of flooding to Weddington. The runoff from the proposed development will be restricted to QBAR through the use of SuDS.

It is proposed to utilise a range of SuDS including permeable paving, swales, filter strip, underground storage and detention basins to attenuate runoff from the development.

Two outfalls are proposed into the ordinary watercourse at the site; one to serve the land north of the watercourse, and the second to serve land south of the watercourse. The volume of attenuation required across the site has been estimated using Micro-drainage Network based on the indicative masterplan for the site, through the detailed drainage design will need to be developed further. This will need to accommodate the steeply sloping land levels across the site with the requirement for check dams.

Using the CIRIA pollution indices methodology, it has been established that the development has a high hazard rating, but that the proposed SuDS will provide sufficient level of treatment for runoff from the development through the use of permeable surfacing and detention basins. In the event that runoff does not flow through both features before reaching the watercourse, additional measures, such as downstream defenders and petrol interceptors, will be required. A company will be appointed to manage the proposed SuDS, and details of typical maintenance measures have been included within this report.

The rate of foul discharge from each zone of the development, as set out in the Parameter Plan, has been calculated to total 24.0l/s. The proposals include the diversion of the existing foul sewer which currently runs alongside the eastern bank of the ordinary watercourse. Severn Trent Water has been consulted on the proposals which include connecting to a new foul trunk sewer being constructed to the south of the development site.

In conclusion, the site is at low risk of flooding and will not increase the risk of flooding elsewhere as a result of the proposed SuDS strategy, in line with the requirements of local and national planning policy.

In addition to the functional requirement the surface water strategy integrates with the overall green infrastructure strategy to provide opportunities for amenity planting and enhanced bio-diversity.

The larger water bodies will also form part of the well-being social infrastructure creating opportunities for seating areas and contemplative spaces.





Green Infrastructure

Vision

The Green Infrastructure strategies are all brought together within the landscape masterplan proposals.

The fundamental vision is to provide a setting for the new development that can address the potential landscape and visual impacts of its scale and provide a naturalistic parkland surrounds that provide a multi-functional green infrastructure. Large scale indigenous woodland planting will predominate with open glades of wildflower meadow, waterbodies and rurally designed routes and amenity areas throughout. Screening will be provided to boundaries and sensitive receptors. Gateways and arrival will be announced by opening and framing views with specimen tree and avenue plantings.

Existing Trees + Hedgerows

Existing trees and hedgerows; These are maintained and protected wherever possible and become the building blocks for further landscape proposals, integrating them within an extensive plan for landscape enhancement.

Levels + Water Management

Levels and Water management; working with the existing hydrology and falls of the land, the existing watercourse is maintained, and a new network of ditches and drainage basins are proposed with the Drainage and Blue Infrastructure Strategy that will attenuate water flow, avoid flooding, and also provide areas that deliberately hold water all year for biodiversity and amenity benefit.



Vehicular + Pedestrian Movement

Vehicular and pedestrian movement; Highways design, access, delivery/ collection areas and parking have been worked through with all the various specialisms in the masterplan design team until alignments, levels and best possible landscape integration and enhancement agreed. Footpath and cycle routes are created so as to connect with the existing network but also to increase connectivity and encourage exploration and enjoyment of the new parkland.

Soils + Landform

Soils and Landform; site area has been under agriculture for as long as historic maps and records have existed. The soils are one of the site's most valuable resources and will be surveyed, stripped, and handled for re-use in accordance with very best practice. The masterplan envisages considerable areas of raised landform to utilise these and compensate for the areas taken by both built development and waterbody excavation. This is to be done in combination with planting and route alignments so as to provide interest for park users and screening for neighbours.

Proposed Planting

Proposed planting; worked out with the ecologists, the species lists plan to reflect local landscape character and plant communities, maximise biodiversity and address factors of function, aesthetics, and climate resilience. Fully detailed plans would expect to be developed further as the scheme progresses and can be informed by soils surveys and further research. A landscape and Ecology Management Plan would be envisaged at that stage to inform long term implementation and management.





Social Infrastructure

Whilst the physical infrastructure is crucial, of equal importance is the social infrastructure. The social infrastructure provides spaces for the community, for relaxation and for health and fitness, it is these spaces that forge a sense of community and place within the development. The social infrastructure is made up of three key elements:

Health + Fitness

Landscape can positively contribute to a healthy lifestyle encouraging exercise at all levels. The health and fitness strategy integrates with the landscape and movement infrastructure and could contain:

- Walking and fitness trails through the landscaped areas
- An outdoor gym
- Space within the landscape for organised sports or fitness classes



Mindfulness

In addition to physical well-being, mindfulness is becoming a key area of focus. Practising mindfulness offers a way to pay attention to the present moment. Mindfulness can help to reduce stress, anxiety and increase resilience and emotional intelligence. Creating space for this is essential and the park could include:

- Gardens adjacent to the units for relaxation
- Seating areas around the wetland SUDS areas
- Woodland walks



Community

Creating space for, and enabling, community activity is key in developing a sense of community and the park could provide:

- Space within the landscape for office or family events
- On site community co-ordinator to arrange events
- Strong linkages, physically and virtually between the north and south campuses
- Community orchard





Illustrative Masterplan

The key elements of the masterplan are shown overleaf. The proposed masterplan brings together the various infrastructure components to create a cohesive, legible, flexible and high quality masterplan layout that delivers the aspirations set out in the vision, namely:

- A layout which is flexible enough to accommodate a wide range of sizes, integrated into a landscaped setting
- An access strategy that is sympathetic to the existing highway layout and maximises opportunities for modal shift and permeability.
- The use of appropriate building design striking a balance between expressions of individual identity whilst providing an overall harmonious built form.
- Integration of built forms into the landscape both visually and physically.
- A high quality landscape setting which enhances bio-diversity, well being and amenity value.
- A layout which promotes and enables social interaction to create an on site community.

Key:

1. New site access from existing A5 roundabout with feature landscape;
2. New access from the A444 with feature landscape;
3. New link road / estate road forming a landscape boulevard through the site;
4. Pedestrian / Cycle link via enhanced Weddington Walk underpass to MIRA Technology Park;
5. Extensive woodland buffers to the site perimeter;
6. Countryside Park with seating areas, woodland walks and trim trail;
7. Ecological Zone, limited public access with a focus on Biodiversity and Ecology;
8. Extensive SUDS strategy to provide a robust drainage strategy and enhanced bio-diversity;
9. Trim trail running around the site perimeter to give 3 and 5km circular routes;
10. Offices located, where possible, to provide passive surveillance of the public realm;
11. Service yards located internally where possible to provide acoustic screening.
12. Upgraded Redgate Junction
13. New signage/traffic orders directing HGVs over 7.5T through the site, effectively removing HGV traffic from the western portion of Weddington Lane



ILLUSTRATIVE MASTERPLAN COMPONENTS

Ecology + Biodiversity Mitigation

It recognised that residual habitat losses would arise in the absence of mitigation and habitat creation/enhancement measures have therefore been identified to mitigate potential harm and allow for an enhancement to be realised over the existing situation.

The development will maximise biodiversity and habitat creation with the landscape proposals providing opportunity to create extensive areas of new woodland, connected by the existing and new green infrastructure. Ecological ponds, wetlands and meadow grassland provide varied habitat and will be developed in close coordination with the ecologists to provide maximum biodiversity gains.

Native species will be used throughout the site, to encourage local wildlife to colonise the site by providing food and shelter and mitigating any lost habitat.



Landscape + Visual Impact

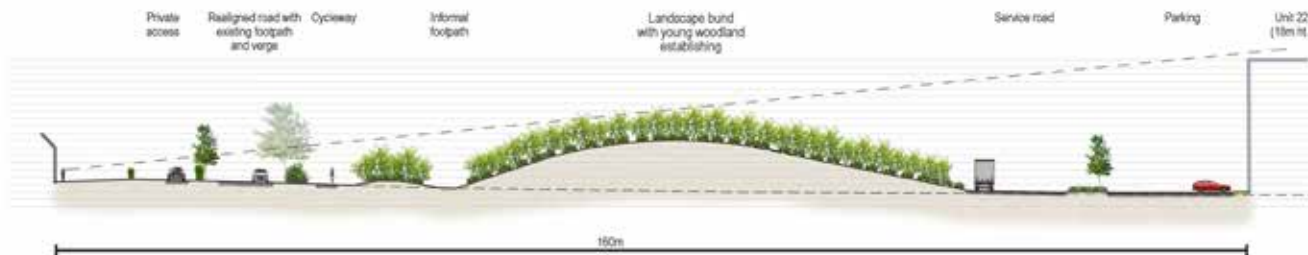
The Landscape and Visual Evidence and Impact Appraisal (LVIA) concludes that the site is broadly representative of the wider landscape character, with far reaching views to the south, is entirely dominated by agriculture, and suffers from the negative influence of the A5 travel corridor. The proposals have sought to integrate the development into the landscape through an iterative process and result in five major/moderate adverse landscape effects (which are considered to be significant) out of nine identified landscape receptors. The anticipated residual landscape effects lessen over time to become deemed not significant.

The LVIA report has shown that the site is visually prominent from a number of public views, including Weddington Country Walk, Hartshill Country Park, and local footpaths. Existing boundary vegetation and proposed woodland planting goes some way in helping to lessen the effects of the built form but, due to the scale of the buildings, this is not possible from a number of public views. Six of the identified eight view receptors are considered to have significant effects. The residual effects identified are judged to lessen after 10 years as the proposed vegetation establishes.

Section B-B'



Section K-K'



INDICATIVE SECTIONS THROUGH ADJACENT PROPERTIES

Built Form

The form of the buildings is a function of their scale, massing, and uses, such as manufacturing, storage, research and development or offices, and the servicing of the buildings of the uses within, which affects their external appearance and the location of service yards, offices and such like.

Whilst the buildings are large by comparison with their context, the impression of the mass of the building can also be reduced by softening the line of the buildings through the design of the roof form. Roof forms that follow soft curving lines reduce the impact against the sky and provide a more interesting and varied form as opposed to single strong horizontal roof lines.

This can be achieved, for instance, with a series of vaulted roofs, with shallow vaults running lengthways along the buildings.

The materials would typically be standard profiled and coated sheet materials, laid as panels over the building frames, and similar sheet materials for the roof forms. The office elements would use glazing and could use other materials such as block or brick or timber cladding to soften the appearance further. Innovative finishes such as planted 'green-walls' may also be possible and help to soften the appearance.

The aim is to achieve a coherent and consistent appearance to all the buildings across the site, so that similar materials and colours would be encouraged between buildings, although buildings may be implemented to meet different operational and corporate requirements, and some may wish to apply their standard specifications and the flexibility is needed to accommodate these requirements too.

The design of the infrastructure includes the internal roads, lighting, public signage, and street furniture such as seating, bins, bollards, cycle stands etc. is an important aspect of the design and a key component in unifying the character of the site as a whole. The infrastructure would be designed to have a consistent treatment with items and finishes drawn from a common high quality public realm palette. The design would be developed to offer a simple but distinctive design and ensure there is a clarity and legibility to the public realm within the site.

Flexibility is key and the development parameters allow for a range of unit sizes and occupier requirements which will undoubtedly change over time. Units will be designed to allow for future changes to suit evolving occupier requirements which is particularly important in the fast evolving manufacturing sector.



BUILT FORM

Sustainability

Energy Strategy

The North Warwickshire Local Plan 2021 – Local Plan (Policy LP35& E4) states that all developments will be required, where viable, to:

- Produce at least 10% of a development's operational energy from on-site renewables; and
- Provide a means to maximise on-site solar generation within the masterplan.

The Energy Strategy for the MIRA Technology Park- South Site has been developed using a 'fabric first' approach through the 'Be Lean', 'Be Clean', 'Be Green' energy hierarchy.

Be Lean

This includes the use of passive design and energy efficiency measures. Passive design measures are those which reduce the energy demand within buildings. These are the most effective and robust measures for reducing CO₂ emissions as the performance of the solutions is unlikely to deteriorate significantly with time or be subject to change by future property owners.

Be Clean

Integrated infrastructure, including decentralised energy networks (DEN) and Combined Heat and Power (CHP), can be the key to achieving the target reduction in regulated CO₂ emissions beyond the requirements of the Building Regulations Part L (2013).

Be Green

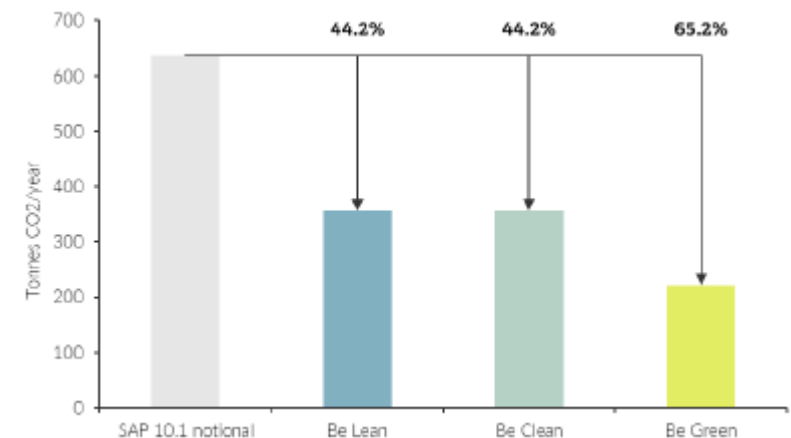
Low and Zero Carbon (LZC) technologies are those which can move or generate energy renewably. These technologies should be deployed only after the benefits from Lean and Clean stages of the hierarchy are maximised in the context of the building.

Conclusion



The 'Be Lean, Clean and Green' assumptions are set out overleaf and through the utilisation of this energy strategy the current design is on average delivering a 65.2% betterment against the SAP 10.1 notional baseline showing a carbon saving before renewables are considered.

Furthermore, following a feasibility review of different LZC technologies, it has been shown that the development can meet its obligation to deliver a minimum of 10% of development's predicted operational energy needs from renewable energy (Policy L35) through the specification of roof-mounted PV panels alone.





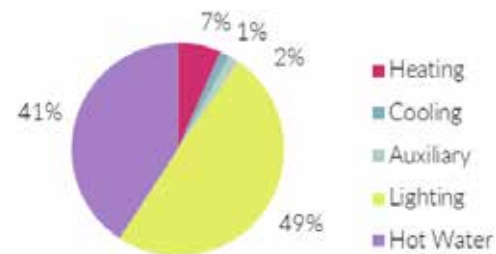
Passive design and energy efficiency measures form the basis for the reduction in overall energy demand and carbon emissions for the Proposed Development. This energy strategy aims to reduce the energy demand initially by optimising the envelope and building services within the development. The 'Be Lean' measures would include:

- Insulated building fabric & low air infiltration.
- Glazing performance.
- Optimising the use of natural daylight and specifying efficient artificial lighting.
- Efficient building services systems.
- Heat recovery ventilation

The 'Be Lean' results show that the site-wide development achieves an approximate 44.2% betterment against the SAP 10.1 baseline. This demonstrates that energy demand and CO₂ emissions have been reduced prior to the consideration of Low and Zero Carbon options.



The graph below provides a breakdown of the thermal and non-thermal demand. The site-wide results show that the development is lighting-led with the greatest proportion of energy associated with the demand associated with lighting requirements. Hot water demand is quite high, but this is a known overestimate in Part L 2013 for buildings of this type especially for changing areas. It should also be noted that the sample building used for this report has showers and changing rooms so when the details are known for the development, it is likely the lighting energy demand will increase.



Due of the limited benefit and potential negative impact with the consideration of realistic carbon factors, the creation of a CHP led heat network for the development is not recommended. As such there is no impact on the overall emission reduction at this stage of the energy hierarchy.



The final step of the energy hierarchy explores the feasibility of Low and Zero Carbon (LZC) technologies to allow for the production of renewable energy on-site to offer a further reduction in carbon emissions.

The 'Be Green' results show that the site-wide development, achieves a further betterment of 21% in CO₂ emissions over 'Be Lean' levels by introducing LZC technologies. This results in an overall betterment of 65.2% against the SAP 10.1 notional baseline. The proposed LZC would also deliver a minimum of 10% of the overall predicted operational energy (regulated and unregulated) needs of the development.

This demonstrates that the proposed energy strategy satisfies the requirement to deliver a minimum of 10% of the development's predicted energy needs from decentralised and renewable or low carbon energy as required by Condition LP35 of the Local Plan.

Sustainability

Individual Building Commitments

As part of an effort to reduce the environmental footprint of the buildings they will be designed to maximise the efficiency and sustainability of the envelope and the materials used, resulting in significantly lower levels of embodied carbon.

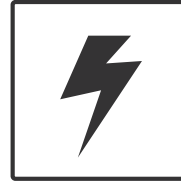
A wide range of features will be employed to optimise the sustainability of the buildings on the MIRA Technology Park South Site. These will help to ensure that the buildings go well beyond what would be required by simply following Building Regulations and will take a holistic approach based on the themes identified by the North Warwickshire: Local Plan (2021) and National Planning Policy Framework (2021).

All particular all buildings will achieve

- A minimum Breeam Very Good rating
- An EPC 'A' rating

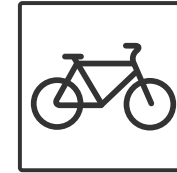


Energy



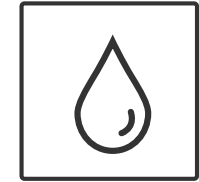
- EPC A rating targeted
- BREEAM 'very good' rating to be targeted.
- Efficient heating and hot water production.
- Low energy lighting.
- 'Smart' user controls for performance reporting and ongoing monitoring.
- Efficient thermal envelope
- Proposed design using high performance building services design
- Proposed design includes Solar PV across the site to produce 10% of the unregulated and regulated energy.

Transport



- Travel Plan for the site and individual site users to encourage travel on foot or by cycle.
- Introduce no 65-bus route every 30 minutes to site
- Provide cycle facilities for each building.
- Electric car charging infrastructure to 20% of car parking spaces with capacity to increase the remaining 80%
- Promote sustainable means of transport.

Water & Flood Risk Management



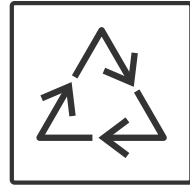
- Flood Risk Assess meet and Drainage Strategy completed
- Located in Flood Zone 1
- Low Risk of flooding and not increase the risk of flooding elsewhere
- Channel has sufficient capacity to manage the 1 in 100-year event
- Range of SuDS including permeable paving, swales, filters strip and underground storage and detention basins proposed to attenuate runoff

Health & Wellbeing



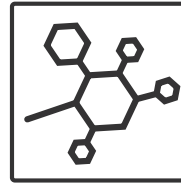
- Install large windows to provide natural daylighting
- Use of mechanical ventilation to ensure good IAQ
- Ensure good building design and provide green infrastructure
- Encourage active lifestyles by providing walking/cycling trails and outdoor fitness area.

Waste Management



- Waste Management Plan to be developed by contractor in line with BREEAM 2018 Wst 01 aiming to promote resource efficiency via the effective management and reduction of construction waste.

Materials



- Life Cycle Assessment (LCA) for BREEAM 2018 to lower embodied carbon.
- Low environmental impact materials selected in line with BRE's Green Guide to Specification.
- Responsibly sourced materials with relevant certification:
- Forest Stewardship Council (FSC) or similar for Timber.
- Environmental Management System (EMS) for non-timber.
- Consideration of material delivery methods
- Insulants with a low global warming potential (GWP < 5).

Ecology



- Proposals will seek to provide enhancement of existing habitat resources, while retaining those of greatest conservation importance.
- Mitigation is required in relation to protected species.
- The two ponds have been identified as supporting great crested newt.
- Survey work for great crested newts is ongoing and to be reviewed.

Development Benefits

The potential to deliver up to 213,500 sq m (GEA) - (2.3million sq ft) of new employment floorspace at MIRA Technology Park South Site represents a significant opportunity to deliver social and economic benefits to North Warwickshire. Creating new, good quality jobs is a strategic priority amplified by the effects of the COVID-19 crisis which have seen unemployment levels rise sharply and where recovery is essential.

The scale of benefits to be delivered on the site are expected to include:



- **Seven new high-quality flexible employment units**



- **2,500 good quality jobs to support local people**



- **Opportunities for apprenticeships**



- **Enhanced landscaping creating a high-quality visual appearance and supporting biodiversity**



- **Circular routes for recreation, fitness and dog walking, an outdoor gym and seating areas**



- **New and enhanced bus routes with bus stops at the northern and southern ends of the site**



- **New cycle routes including a connection to Weddington Walk**



- **Construction jobs**



- **On-site car parking, including electric charging spaces**



- **Investment into local services and infrastructure**



- **A sustainable scheme targeting a minimum BREEAM 'Very Good' rating and EPC 'A' rating.**

In addition to these specific factors a modern, high quality manufacturing campus located on the A5 would be expected to generate wider and more general benefits including:

- Sending positive signals to the commercial development market about the area's appetite for business growth and inward investment;
- Attracting new businesses to the area, with developments of this type likely to appeal to companies seeking a location with first rate access to the strategic road network and with the ability to serve a large catchment area.
- Contributing to the objectives of the district and the wider area to strengthen the portfolio of modern employment sites and capitalise on the strategic position of this junction as a business location.
- Widening the offer at MIRA Technology Park South Site to create a synergy with the research and development campus to the north.

These factors can be expected to generate catalytic impacts; spin-off benefits for the wider area such as increased interest from commercial investors and rising commercial property values.



DEVELOPMENT BENEFITS



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