



Defence
Infrastructure
Organisation

MIDDLEWICK RANGES

VISION DOCUMENT

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Planning and Development



Masterplanning
Landscape



Technical



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Chapter 1: Introduction

This opening section of the vision document provides an introduction to the site, its wider extents, its history as well as the structure of this document. Design aspirations for Middlewick Ranges have informed the vision for the site.

1.1 Overview

Middlewick Ranges will provide a **sustainable** new community in a **highly accessible** location. With great **walking, cycling and public transport links**, the site is highly connected to nearby facilities and will offer an **attractive landscape setting**.

Middlewick Ranges offers the opportunity to reflect the best principles of sustainable design ensuring the highest quality of place-making to meet contemporary sustainable living requirements and enable climate change resilience for the future.

The new community will benefit from an **integrated approach to place-making** and **sustainable infrastructure** at the settlement scale. The design will be developed sensitively in relation to the site's existing ecology.

It will provide **affordable, healthy and beautiful homes**, set within walkable and highly **sociable neighbourhoods** encouraging residents to connect their community, street and home, creating a truly **inclusive community**.

Middlewick Ranges will be a sustainable, landscape and ecology led mixed use development of approximately 1,000 homes, supported by a local centre with community facilities, and a primary school.





Connection to Colchester's Orbital route to enhance and promote access to woodlands, country parks and recreational green areas as well as promote health and wellbeing.



Colchester Orbital is a 15 mile circular walk and cycle route around the periphery of Colchester.



High Woods Country Park is one of Colchester's main natural beauty spots, which has woodland, open spaces and a lake.



The Essex Urban Extension is an emerging garden community which will provide a generous amount of green space which promotes healthy life styles.



The University of Essex is the largest campus in Colchester and can provide tertiary learning opportunities to residents of Colchester and beyond.

Significant vegetation and enhanced ecological habitats.



1,000 new homes, a school and local centre. Residents are close to nearby employment areas, parks and green spaces.



Maintaining an accessible transport system with walking, cycling and public transport designed to be the most attractive forms of local travel.

1.2 Background & Representations

1.2.1 BACKGROUND

Middlewick Ranges has been identified for closure as part of the Defence Estate Optimisation (DEO) Portfolio – which is an ambitious 25-year Ministry of Defence ('MOD') portfolio of construction activity, unit and personnel moves, and site disposals that will deliver a better structured, more economical estate that more effectively supports military capability. The portfolio has several strategic objectives including to invest in modern facilities that enable military capability and consolidate expertise; reduce estate running costs; and by reducing its built estate release surplus sites in support of wider Government housing policy.

Middlewick Ranges has an important role to play in delivering the Government's surplus housing land agenda and making more land available for homes in the right places.

Middlewick Ranges is a live military firing range and training area located in Colchester, Essex. The proposed development site (referred to as "the Site") is approximately 84.31 hectares. The Ministry of Defence is seeking the inclusion of the Site within Colchester Borough Council's Emerging Local Plan 2017-2033. The Ministry of Defence aims to provide around 1,000 homes on this Site, subject to detailed assessment.

The Site currently comprises a shooting range used by both the military and a sporting rifle club - the Middlewick Range Association. It also contains grassland, scrub, and broadleaved woodland. The Site is surrounded along its northern, western and eastern boundary by residential development. As such, it would provide a logical extension to the existing suburb of Colchester.

A Consultant Team has been commissioned by the Defence Infrastructure Organisation (DIO) to produce an evidence base and high level masterplan for the Site. DIO and the principle consultant team have engaged with Colchester Borough Council (CBC) and other statutory consultees.

Middlewick Ranges is considered suitable for a residential led mixed use development comprising of the following:

- 26.94 hectares (ha) of net developable area for around 1,000 dwellings and a local centre at a density that takes account of the adjacent settlement character;
- Local centre;
- A new primary school;
- Community use and social facilities;
- Open space and playing fields;
- Sustainable transport connections provide a more permeable network, with new or enhanced bus services, and cycling and walking links; and
- Delivery of a new road link across the site to ease movement in the area for existing and new traffic flows.

KEY

— Site boundary

— Ecological mitigation land within MOD land ownership



1.3 Planning Context

1.2.2 COLCHESTER BOROUGH LOCAL PLAN

The Development Plan

The Development Plan consists of The Local Plan Part 1 and Local Plan Part 2.

The Local Plan Part 1 is a joint plan between Colchester Borough Council, Braintree District Council and Tendring District Council. These are known as the North Essex Authorities (NEAs).

Colchester is preparing the Local Plan Part 2 within which Middlewick Ranges is allocated.

Examination of the Local Plan Part 1 initially began in October 2017, with hearing sessions held in January and May 2018.

However, following the hearing sessions the Examination was then paused. The Planning Inspector wrote the NEAs, to identify aspects of the Part 1 Local Plan which required significant further work.

The NEAs submitted the extra work to the Inspector in early Summer 2019. Public consultation was then carried out and the Examination of Part 1 was reopened in January in 2020. On the 15th May 2020 the Inspector sent a letter finding the Part 1 Plan unsound. Subsequent to this Colchester made a number of amendments to the plan, including the removal of two of the garden communities and went out to consultation on the proposed modifications. The consultation started on 27th August and ended the 9th October 2020.

We are still awaiting the final adoption of the Plan.

Local Plan Part 2- Colchester Borough Local Plan 2017-2033

The Local Plan Part 2 was submitted to the Secretary of State (SoS) in October 2017. However, the EiP for Part 2 cannot commence until the EiP for Local Plan Part 1 has been concluded.

Therefore, due to the delays to the Local Plan Part 1, the Local Plan Part 2 has also subsequently been delayed. We had hoped that the Examination would open this summer, but due to firstly the delays and outcome of the Part 1 Examination, and secondly Covid-19 we do not anticipate this will open until early 2021 with the Local Plan being adopted in winter.

The Defence Infrastructure Organisation (DIO) and JLL are currently finalising the evidence base, including all the technical evidence, an updated masterplan and a vision document, for the examination submission. This is expected to be submitted in November 2020.



1.3.1 EMERGING DRAFT POLICY

Middlewick Ranges has a dedicated policy (Policy SC2: Middlewick Ranges) in the Emerging Version of the Local Plan Part 2. A copy of the policy text has been included below.

Policy SC1: The allocation shown on the Policies Map is expected to deliver approximately 1000 new dwellings. The final number of dwellings will only confirmed when full details of constraints are known.

In addition to the infrastructure and mitigation requirements identified in policy PP1, development will be supported on land within the area identified on the policies map which provides:

- i. Up to 1000 new houses of a mix and type of housing to be compatible with surrounding development;
- ii. Access and highway works on the local road network, including new junctions, to be agreed with The Highway Authority and delivered at the appropriate time commensurate with the development;
- iii. Detailed ecological surveys and appropriate mitigation to enhance the ecology of the remaining areas of the Local Site including the provision of compensatory habitat to replace habitat lost to development;
- iv. Strategic areas of public open space;
- v. Delivery of enhancements to sustainable travel connectivity including public transport, cycling and walking infrastructure;
- vi. Mitigation measures to address site contamination; and
- vii. Provision for retention or diversion of any existing public rights of way within the site.

A masterplan will be required to inform the detailed definition and mix of uses within the site.

1.4 Stakeholder Engagement

1.4.1 PUBLIC CONSULTATION

The Defence Infrastructure Organisation (DIO) ran a public consultation exercise from Wednesday 10th July to Monday 5th August 2019, in which circa 540 people attended two public consultation exhibition events, and 231 feedback forms were submitted during the consultation period.

Public Consultation Events

Two consultation events were held by the DIO as part of an inclusive programme of engagement to inform, explain and involve stakeholders and members of the community including local residents and businesses:

- Wednesday 10 July 2019 (2pm to 8pm), RCCG Stillwater Centre, Grange Way
- Saturday 13 July 2019 (10am to 3pm), Orchard Baptist Church, 23 Blackheath

These venues were chosen due to their accessibility and because they were known by the local community, providing straightforward access to members of the public.

The opening hours covered weekend and evening times to increase the opportunities for people to attend and provide the biggest potential audience of people living and working nearby. For those unable to attend the exhibition, a copy of materials available at the event and an online feedback form could be downloaded from the project website.

Both events were well-attended, demonstrating a strong level of engagement from the local community.

As well as local residents, a number of local businesses, community groups, key stakeholders and elected representatives attended the events to find out more about the proposals. These included:

- Will Quince MP (Conservative)
- Sir Bob Russell, former MP for Colchester
- Colchester Borough Council representatives
- North East Essex Clinical Commissioning Group (NEECCG)
- Colchester Civic Society
- Middlewick Ranges Association
- Birch Glen Neighbourhood Watch
- Abberton Rural Training
- Market Field School

Consultation Feedback Analysis

A total of 231 written statements of feedback were received during the consultation window, which ran from the first event. This included a combination of paper feedback forms submitted at the events, afterwards by post, online and feedback by email.

Transport and access issues were the most frequently raised theme, appearing in 141 written feedback forms. The majority of opinion was that the local road network would not be able to cope with a potential increase of people and vehicles.

After transport and access concerns, the most frequently cited issue was ecological and environmental concerns due to the potential new development impacting habitats for wildlife. In terms of the feedback received, 73 feedback forms directly referenced a desire to turning the area into a 'country park' with no development.

In total 121 feedback forms made reference to green space and parkland being included within the development proposals.

In many cases respondents listed the species they had personally observed on the Middlewick Ranges, particularly where they believed these to be protected.

Overall, the local community and stakeholders are engaged on the future of the site. The majority of respondents expressed their concerns towards development at the site, largely citing the impact upon the site's ecology and leisure space and concern for the ability of social infrastructure to cope with increased homes as primary issues for concern.

1.4.2 EXHIBITION BOARDS

1
Middlewick Ranges:
supporting sustainable growth for Colchester

Welcome

The Defence Infrastructure Organisation (DIO), part of the Ministry of Defence (MOD), is developing initial plans for the redevelopment of the Middlewick Ranges site in Colchester.

The MOD has identified Middlewick Ranges for disposal as part of its long-term Defence Estate Optimisation (DEO) programme. It will cease being a military facility when the firing operation relocates to Fingringhoe in 2021, though the army will continue to use the area south of Birch Brook.

This public consultation sets out our long-term vision for the site and initial concept plan. We welcome your views to help shape the proposals.

ABOUT THE DEO PROGRAMME

The DEO programme is providing long-term value for money for the taxpayer by disposing of sites it no longer needs, creating a smaller and more sustainable estate for the MOD over the next 25 years.

For further information, please visit:
<https://www.gov.uk/government/publications/better-defence-estate-strategy>

KEY FACTS

- The firing operation will stay within the area, being relocated to Fingringhoe in 2021.
- Middlewick Ranges is allocated for housing in Colchester Borough Council's Draft Local Plan
- The proposals are at an early stage and this consultation is on the initial concept plan

www.middlewickconsultation.co.uk

2
Middlewick Ranges:
supporting sustainable growth for Colchester

The Site

Middlewick Ranges is a live firing range on the southern edge of Colchester and is well-located near to key transport links, existing residential areas and amenities.

It would offer a sustainable expansion of Colchester to meet demand for housing.

The part of Middlewick Ranges that has been allocated in the draft Local Plan is approximately 76 hectares. Part of the northern area is used as a shooting range by both the military and a sporting rifle club – the Middlewick Range Association. Public footpaths run through Middlewick Ranges, as well as around the perimeter, and are used regularly by dog walkers.

Aerial photo showing local amenities, with MOD ownership outlined in blue and the draft Local Plan allocation outlined in red

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3
Middlewick Ranges:
supporting sustainable growth for Colchester

Draft Local Plan allocation

Due to its location, current site use and availability, Colchester Borough Council has identified Middlewick Ranges as a suitable site for future housing delivery and has allocated it in the Draft Local Plan for around 1,000 homes.

Plan showing Colchester Borough Council's draft Local Plan allocation of 1,000 homes at Middlewick Ranges

Following independent examination and approval, the Local Plan will guide development and land use policies in Colchester until 2033.

To support the site's allocation, the DIO is developing an initial concept plan to show it is a sustainable location for housing. A planning application may be developed following the adoption of Colchester Borough Council's Local Plan.

HOUSING NEED IN COLCHESTER BOROUGH

Colchester Borough Council has established that there is a need to deliver 820 new homes each year across the borough until 2033.

To ensure there is enough suitable land available to meet housing demand, the Council is identifying and allocating sites, such as Middlewick Ranges, that are suitable for residential development between now and 2033.

View of Middlewick Ranges

www.middlewickconsultation.co.uk

Defence Infrastructure Organisation
Middlewick Ranges: supporting sustainable growth for Colchester

Transport Links

Middlewick Ranges has access to good transport links. It is:

- Accessible by public transport with direct access into the town centre
- Accessible by foot and by bicycle
- Located near to Colchester Town, Hythe and Wivenhoe train stations

Using data from Essex County Council, the capacity of the local road network has been tested and the results show that traffic generated by development could be accommodated on the local road network. Any future plans for the site would link into the existing pedestrian, cycle and public transport routes.

Plan showing existing transport links and public footpaths

Key

- CBC boundary of draft housing allocation
- Site ownership boundary
- Sites of Special Scientific Interest (SSSIs)
- Colchester Local Wildlife Sites
- Coastal protection belt

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Defence Infrastructure Organisation
Middlewick Ranges: supporting sustainable growth for Colchester

Our commitments to Colchester

The DIO is committed to delivering a sympathetically designed, ecology-led, high-quality residential development for the community at Middlewick Ranges.

The redevelopment of Middlewick Ranges could deliver, subject to planning:

- Sensitively designed high-quality housing and community amenities, with potential for around 1,000 new homes.
- A large area of green open space for the community to enjoy
- Investment to improve local infrastructure

We are exploring community facilities and will deliver a range of housing types, including affordable homes, and provide opportunities for travel by a range of modes.

Access and footpaths through the site will be maintained, offering large areas of publicly accessible green, open space.

As part of the development, the DIO would also work with Colchester Borough Council to make appropriate provision for new local health and education facilities on site.

What would you like to see included in the plans? Please let us know by filling in a feedback form here or online.

Middlewick Ranges footpath
View of Abbot's Road from the site

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Defence Infrastructure Organisation
Middlewick Ranges: supporting sustainable growth for Colchester

Biodiversity

Any future development will need to be sensitive to its ecology. The development footprint has been, and will be, influenced by the results of any ecology surveys.

The majority of the site comprises grassland, with hedgerows and Birch Brook.

The wooded corridor of Birch Brook is a Local Wildlife Site, as is the grassed area in and around Middlewick Ranges. More widely Middlewick Ranges is close to other local wildlife sites, the River Colne, Sites of Special Scientific Interest (SSSI) and other areas designated for nature conservation.

We are currently completing a range of targeted habitat and species surveys, and consulting with Colchester Borough Council and Essex Wildlife Trust as the proposals are developed. The development proposals will need to ensure we deliver a net gain to biodiversity in accordance with national and local planning policy and ensure the continued ecological functionality of the designated areas.

Birch Brook Wood

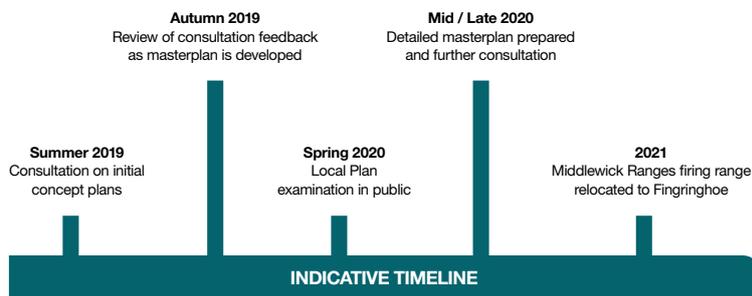
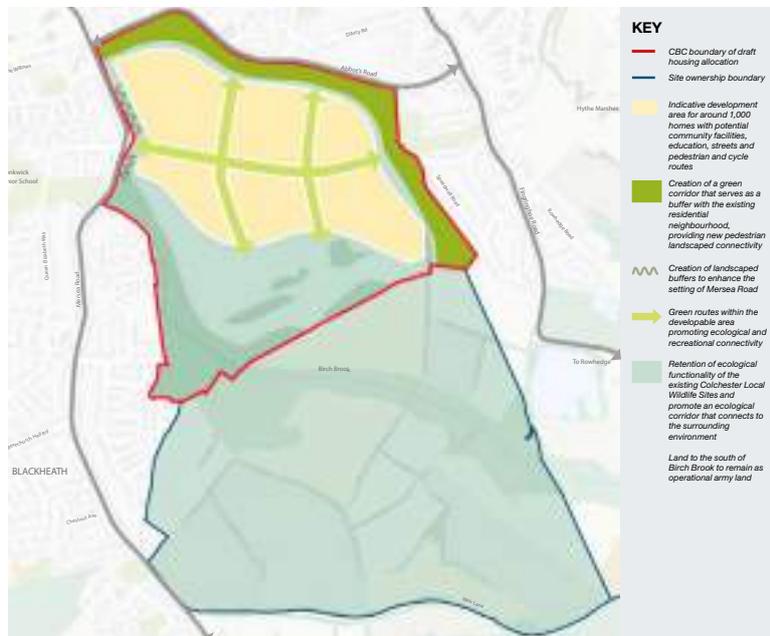
Plan showing ecological areas of interest

Key

- CBC boundary of draft housing allocation
- Site ownership boundary
- Sites of Special Scientific Interest (SSSIs)
- Colchester Local Wildlife Sites
- Coastal protection belt

www.middlewickconsultation.co.uk

Our initial concept plan



Feedback and next steps

Thank you for viewing the DIO's initial plans for Middlewick Ranges.

We are in the early stages of developing a high-quality masterplan for Middlewick Ranges and would welcome your feedback to help shape the plans.

The DIO is committed to consulting with the community and will continue to keep you updated on the plans as they progress.

We encourage you to provide feedback by filling in a form and handing it in today or returning it to us by post to the address below. Alternatively, you can submit your feedback via the project website or email address. Contact details are below.

Contact Us

By Post: Defence Infrastructure Organisation, c/o Camague, 11 Waterloo Street, Birmingham B2 5TB

By Email: info@middlewickconsultation.co.uk

Online: www.middlewickconsultation.co.uk

The deadline for feedback is 5pm on Monday 5 August 2019. We will then carefully consider all of the comments we have received to help us shape our plans for Middlewick Ranges and deliver its potential to support sustainable growth for Colchester.

Further consultation will take place before any planning applications are submitted to Colchester Borough Council.

If you have any questions, please call us on 03308 384 199.

1.4.3 RESPONSE TO CONSULTATION FEEDBACK

The feedback from the Public Consultation event held in 2019 has been used to inform amendments to the masterplan and ensure that the new development addresses issues raised by local residents.

Housing Need

Consultation Feedback

- Concerns about over-development in Colchester.
- There was a perception that the houses would not benefit local demand, and instead would be bought by commuters.



Our Response

- The Middlewick Ranges proposals support the site's housing allocation in the Local Plan, by providing approximately 1,000 homes. These new homes will help contribute to the estimated 920 homes per year which are needed in Colchester, as independently assessed.
- With the built elements and supporting infrastructure, there is a strong commitment to providing open space and enhancing existing ecology in the site.
- The proposals will provide affordable housing, to help the development cater to local housing demand including schools and infrastructure.
- Opportunities for innovative and modern types of housing, including intergenerational living and multi-generational homes, will bring together different generations and enable them to live harmoniously together.

Traffic & Transport

Consultation Feedback

- Concerns that the local road network would not be able to cope with an increase of people and vehicles, particularly roads directly surrounding the site. Concern about the build up of traffic centred around peak hours and school drop-offs and collections.
- Accordingly, it was suggested that any new development would need to have multiple access roads.
- In relation to local transport services, a significant number of respondents commented that the existing bus services would not be able to service demand.



Our Response

- The masterplan proposes a comprehensive and wide-ranging approach to address transport through the site, which not only includes road improvements but also sustainable transport solutions, including improved bus services and a network of footpaths and cycle routes. These routes comprise existing Public Rights of Way and additional footpaths which connect with the surrounding residential area.
- Highway proposals include a new road through the site, to reduce pressure on the existing roads. New pedestrian crossings on these existing roads are also proposed and will enhance connectivity between the new development and the surrounding area.

Public Amenities & Social Infrastructure

Consultation Feedback

- There is a perceived lack of accessible green spaces elsewhere in south Colchester.
- Despite its restricted public access, Middlewick Ranges is regularly used by walkers, and contributes to the community's mental and physical wellbeing and relates to the need for natural outdoor play spaces for children.
- Concerns regarding sufficient school places or GP services to cater for population growth.



Our Response

- The masterplan recognises the value of Middlewick Ranges to local residents as a public open space. The proposals would retain over 63% of the site as public open space, including children's play spaces, sports pitches and allotments.
- Large, accessible and usable green spaces will be provided within the masterplan, opening up the site to the public, which is currently restricted by the fenced off firing range area. This network of open spaces and walking connections will also encourage walking and a healthy lifestyle.
- Creating an inclusive community is a major commitment in the proposals. A local centre is proposed at the heart of the new community, which will include small-scale retail. Other community facilities include a 2 ha primary school, within walking distance of residents.
- The need for health care facilities will be discussed with the relevant health authorities as the proposals progress further.

Ecology & Climate Change

Consultation Feedback

- Concerns regarding the impact on existing ecology and climate change. Many species have been observed at Middlewick Ranges.
- Concerns also about a perceived reduction in biodiversity for the Local Wildlife Site. These concerns also referenced Colchester Borough Council's commitment to delivering an overall net gain to biodiversity in the implementation of its new Local Plan, stating that the Middlewick Ranges Local Wildlife Site would play a key part in this.



Our Response

- The proposals seek to minimise impacts on ecology and climate change. New development will focus on areas of lower ecological value and new green corridors will include existing and new habitats for bats, birds and other species.
- A sustainable drainage system will be considered, allowing ecological habitats to thrive in new swales and wetlands.
- Sustainable energy solutions will be developed, maximising opportunities for clean energy, on-site renewable energy generation, energy storage and consideration of district energy systems.
- An ecological mitigation area to the south of the development area is proposed, which includes the retention of Birch Brook and the remaining Middlewick Ranges Local Wildlife Sites. This area will have more limited public access, which will be restricted to footpaths to reduce impacts on ecological habitats.





Chapter 2: Context & Site Analysis

Urban design analysis is a foundation of the design process. Broad site and local scale analysis are undertaken to clearly establish the key contextual factors affecting the site and to inform the development's design in terms of current conditions, risks, opportunities and constraints of the area forming a responsive Development Framework.

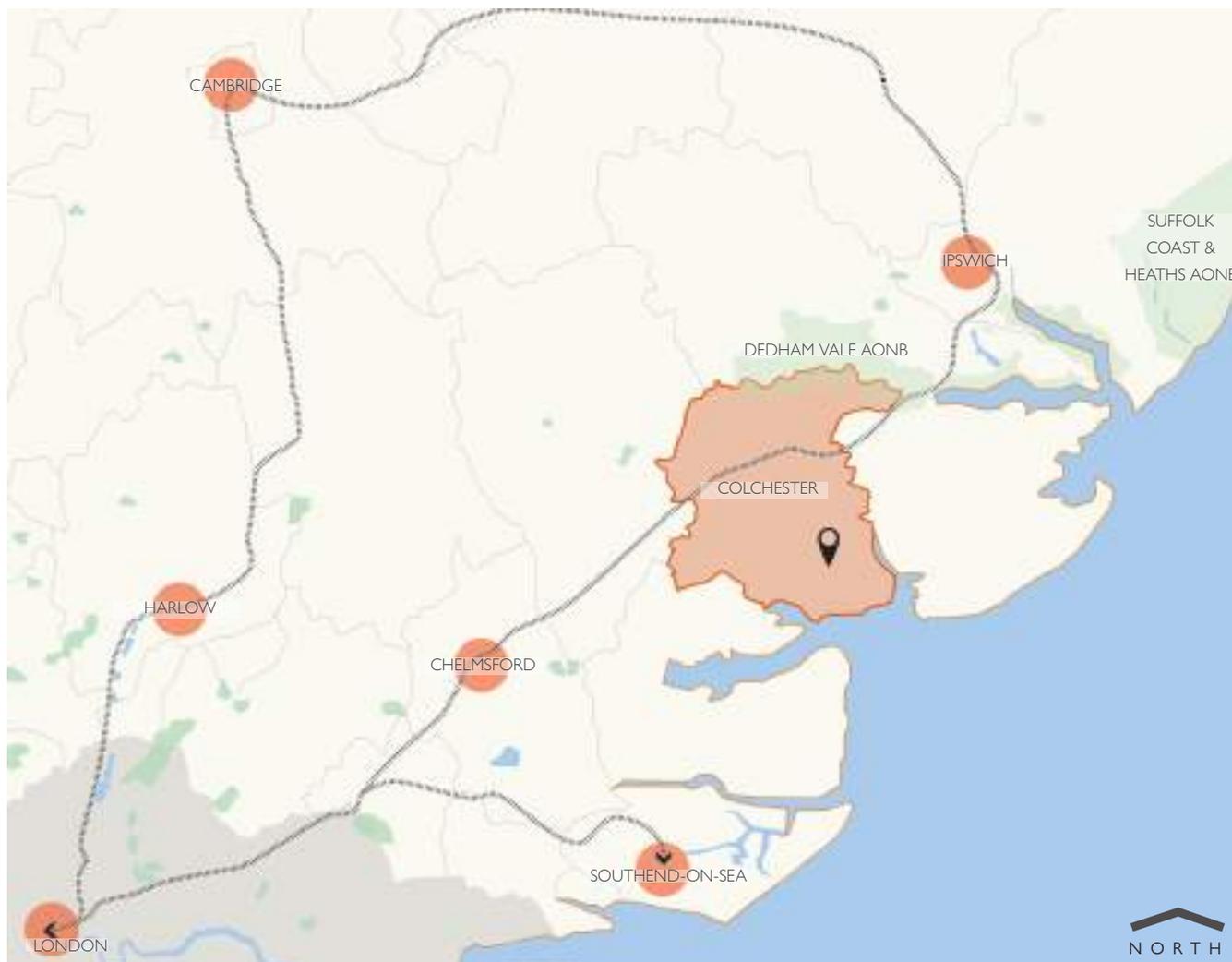
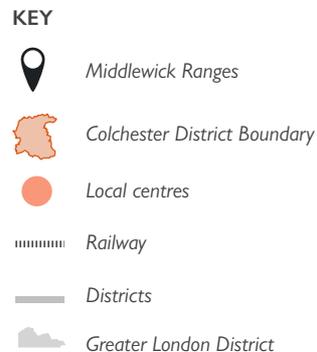
2.1 National Setting

2.1.1 COLCHESTER IN ITS CONTEXT

Colchester is located in the East of England within the County of Essex. Situated close to the coast in East Anglia bordering Suffolk, Colchester is approximately 51 miles north-east of London.

The town of Colchester sits on the edge of a designated Area of Outstanding Natural Beauty (AONB) within the Dedham Vale. In addition there are many historic towns and villages in close proximity.

Colchester can be reached from Central London in under an hour by train and has frequent services to London Liverpool Street, Norwich, Clacton-on-Sea and Ipswich.



2.2 Wider Location

2.2.1 COLCHESTER SETTING

Middlewick Ranges is a military training area located in Colchester, Essex. The Site is situated to the south of the town in-between the built up areas of Old Heath and Blackheath which is approximately 1.5km from the Colchester town centre. The villages of Rowhedge and Wivenhoe are both located 1.5 and 2 km respectively south of the Site. The main primary road within Colchester is the A12 which starts in Brentwood and ends in Ipswich.

There are four railway stations within the wider area, which are Colchester, Colchester Town, Hythe and Wivenhoe, with frequent services to Central London.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Urban areas/surrounding villages
-  Railway
-  Railway stations
-  Primary road



2.3 Colchester Orbital

2.3.1 ORBITAL ROUTE

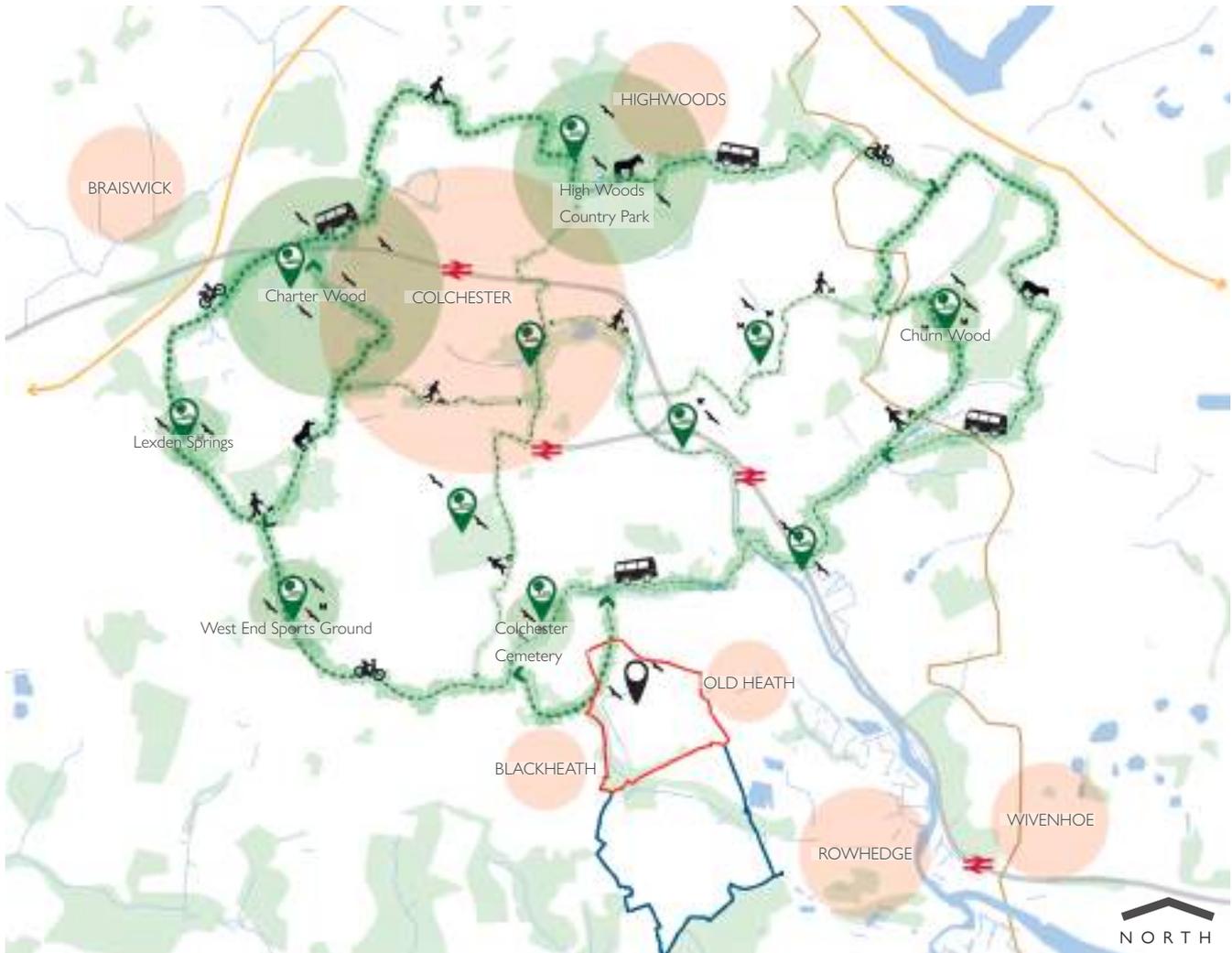
The Colchester Orbital is a circular walking and cycling route around the town's periphery, which is approximately 14-15 miles in its length and appeals to a diverse range of non vehicular users. The Orbital route has been progressed by members of local action groups as well as Colchester Borough Council who have been active members since 2015. The Orbital route connects some of Colchester's open spaces, key links, heritage sites, existing Public Rights of Way (PRoW), existing cycle routes and bridleways.

Anticipation and aims of the Orbital route are the creation of new pathways in and out of Colchester town centre and a network of connected green walking routes.

The Orbital aims to encourage engagement with the local landscape by foot and other car free transport modes with pathways leading around and into the local urban centres.

KEY

-  Middlewick Ranges
-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Colchester district boundary
-  Railway stations
-  Railway line
-  Greater London District
-  Orbital routes
-  Local centres
-  Key open spaces
-  Parks / open spaces



2.4 Site Location

2.4.1 LOCAL SETTING

Middlewick Ranges is a military training area located in Colchester, Essex. The proposed development site (referred to as “the Site”) is approximately 84.31 hectares, and is shown outlined in red on the plan below.

The Ministry of Defence is seeking the inclusion of the Site within Colchester Borough Council’s Emerging Local Plan 2017-2033. The Ministry of Defence aims to provide around 1,000 homes on this site.

The development area contains grassland, scrub, and broadleaved woodland, and is surrounded along its northern, western and eastern boundary by residential development.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Urban areas / surrounding villages
-  Railway



2.5 Heritage Designations

2.5.1 WIDER AREA

The site is in close proximity to several built heritage designations. To the north of the site beyond the immediate residential area are Bourne Pond (a Scheduled Monument) and the Distillery Pond Conservation Area. There are also listed buildings in the wider surrounding area, the most significant concentration of which are located in the village of Rowhedge to the south east. The eastern portion of the village is also a historic conservation area.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway
- Colchester local list
- Conservation area
- Listed buildings
- Scheduled monument
- WWII pill boxes
- Historic WWII tank line
- Redoubt



2.5.2 THE SITE

At the site level, there are no historic designations, but there may exist remains of potential historic significance.

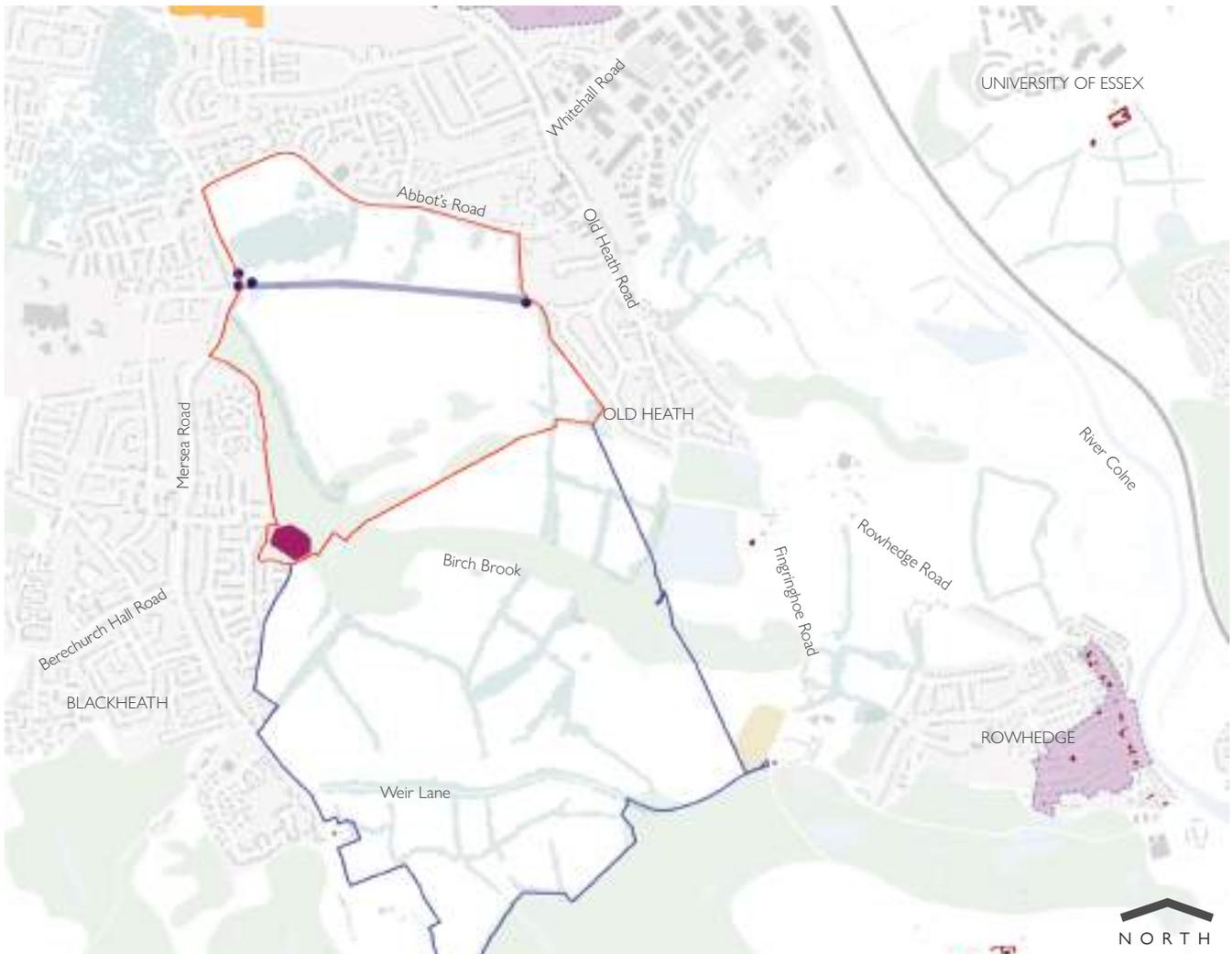
Middlewick Ranges has had a long military association. Within the site there are World War II pill boxes; three on the western boundary near Mersea Road and one on the eastern boundary. These are connected to a former World War II tank ditch cropmark.

In the south west corner of the allocation boundary lies the remains of a redoubt dating to the English Civil War.

There is a Public Right of Way that runs through the site, however there was an old alignment which pre-dates the current firing range.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway
- Colchester local list
- Conservation area
- Listed buildings
- Scheduled monument
- WWII pill boxes
- Historic WWII tank ditch
- Redoubt



2.6 Archaeology

2.6.1 THE SITE

A desktop study and site walk over was conducted, which concludes that there are no listed structures or scheduled monuments within the development boundary.

- 1 Two undated areas in purple within the site boundary have been identified as having archaeological features identified from crop-marks;
- 2 Earthworks associated with a redoubt are located within the south western corner of the allocation site. This will be retained within Birch Brook woodland as green space
- 3 The area south east of the boundary could possess more archaeological significance. Crop marks show linear features and possible track ways and ring ditches within the south eastern corner of the Site.
- 4 The linear feature in the northern part of the Site represents the crop marks from the World War II anti tank ditch cropmark and should be retained.
- 5 Historic pillboxes are located at eastern and western edge of the Site respectively as well as two spigot mortar gun emplacements. The World War II tankline which is considered a heritage asset, connects to the pill boxes. These assets are to be retained and incorporated into the development.
- 6 Isolated finds which have been recovered in the site but the exact locations and method of recovery are not recorded.





KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Railway
-  Post Medieval
-  Undated
-  Iron Age
-  Civil War
-  Medieval to Post Medieval
-  World War II
-  World War II pill boxes
-  Anglo Saxon
-  Bronze Age
-  Mesolithic
-  Neolithic
-  Multi-period
-  NMP Cropmark Polygons



2.7 Landscape Designations

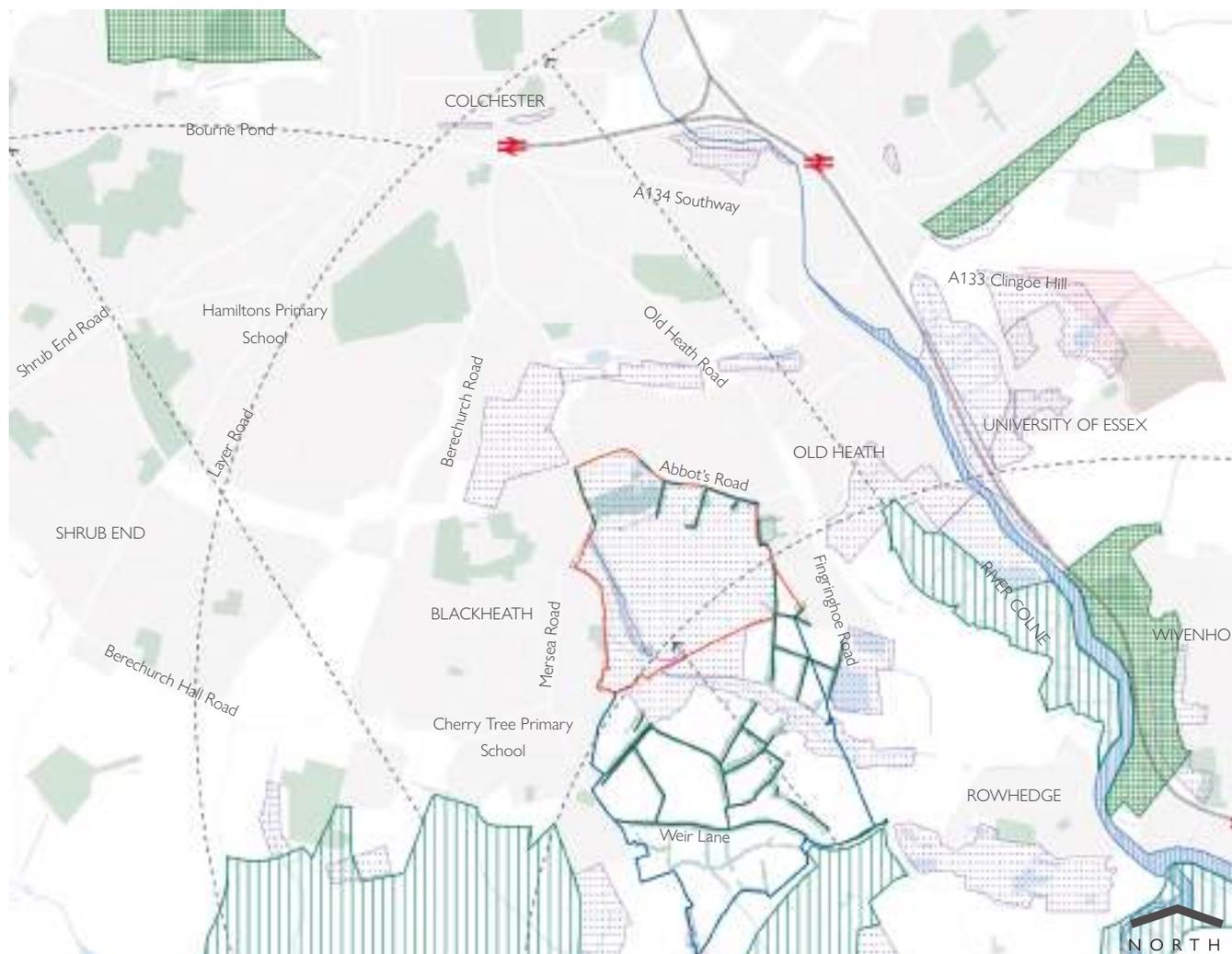
2.7.1 WIDER AREA

In the wider area, the Site is in close proximity to several local wildlife sites and local nature reserves, some of which are centred on the River Colne to the east. The river itself forms a coastal protection belt. The University of Essex campus, which forms part of this cluster of local wildlife, also partly forms a historic park and garden.

The Site lies in Site of Special Scientific Interest (SSSI) impact zones which centres on three SSSI sites to the south and east, which will be material considerations in the determination of planning applications.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway
- Coastal protection belt
- Colchester Local Wildlife Sites (LWS)
- Historic parks and gardens
- Site of Special Scientific Interest (SSSI)
- Local nature reserve
- SSSI impact risk zones
- Protected hedgerows



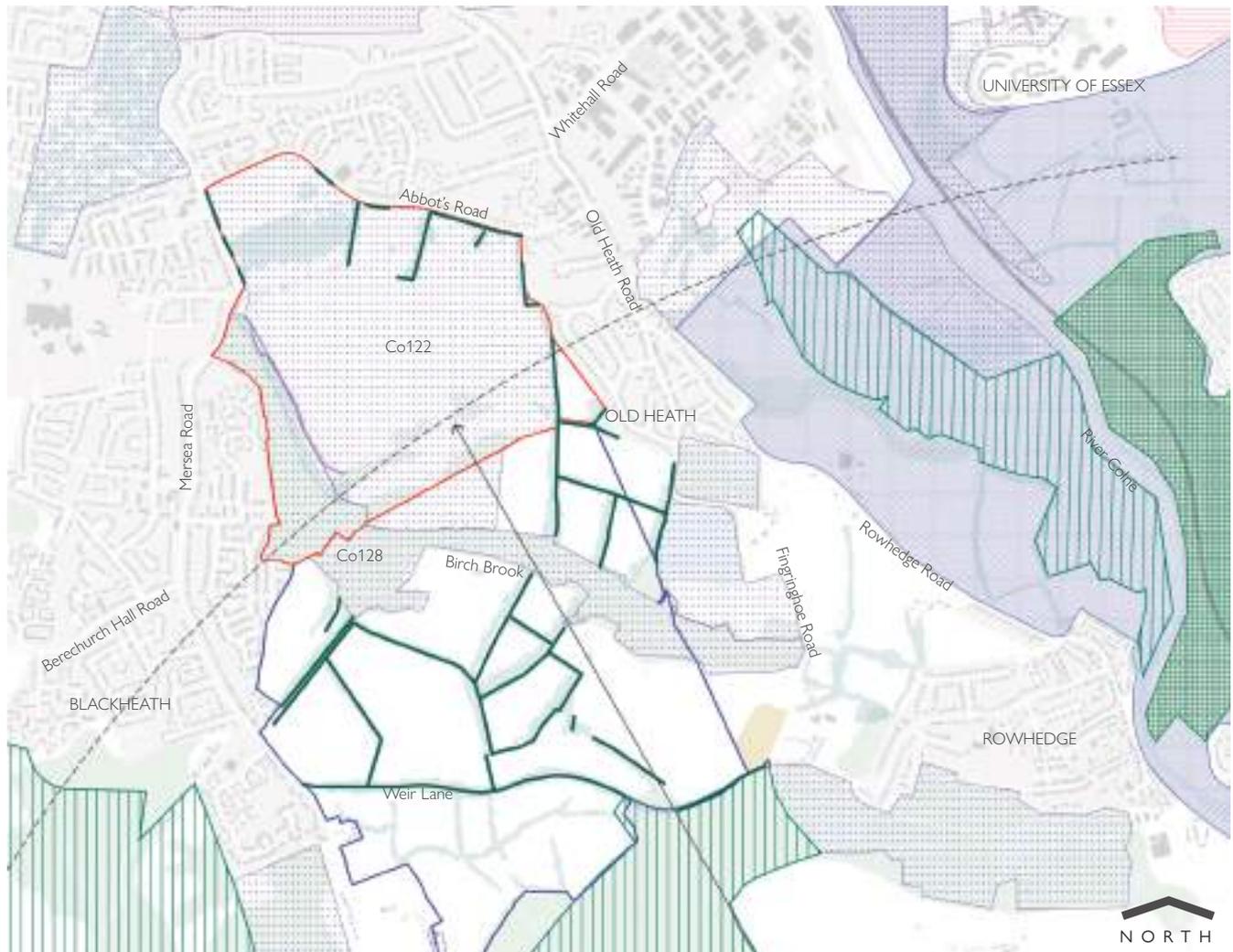
2.7.2 THE SITE

Two Local Wildlife Sites (LWS) lie within the site boundary, which are material considerations:

1. Co122 Middlewick Ranges: significant habitat for invertebrates and a UK Biodiversity Action Plan (BAP) Priority Habitat for Lowland Dry Acid Grassland
2. Co128 Birch Brook Wood: stream valley wood with “remarkable” variation in woodland types. A UK BAP Priority Habitat for Lowland Mixed Deciduous Woodland and Wet Woodland.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway
- Coastal protection belt
- Colchester local wildlife sites (LWS)
- Historic parks and gardens
- Site of Special Scientific Interest (SSSI)
- Local nature reserve
- SSSI impact risk zones
- Protected hedgerows



2.8 Significant Vegetation

2.8.1 THE SITE

There are a significant groups of trees and woodland blocks around and within the Middlewick Ranges. Birch Brook to the southern boundary comprises a large area of woodland trees. The majority of the Site mainly comprises grassland, with hedgerows, mature trees and tree-lines.

Together these habitats have potential to support a range of protected or notable species, and contribute to a network of ecological corridors at a strategic level.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Railway
-  Woodland
-  Protected hedgerows
-  Trees and hedgerows



2.9 Ecology

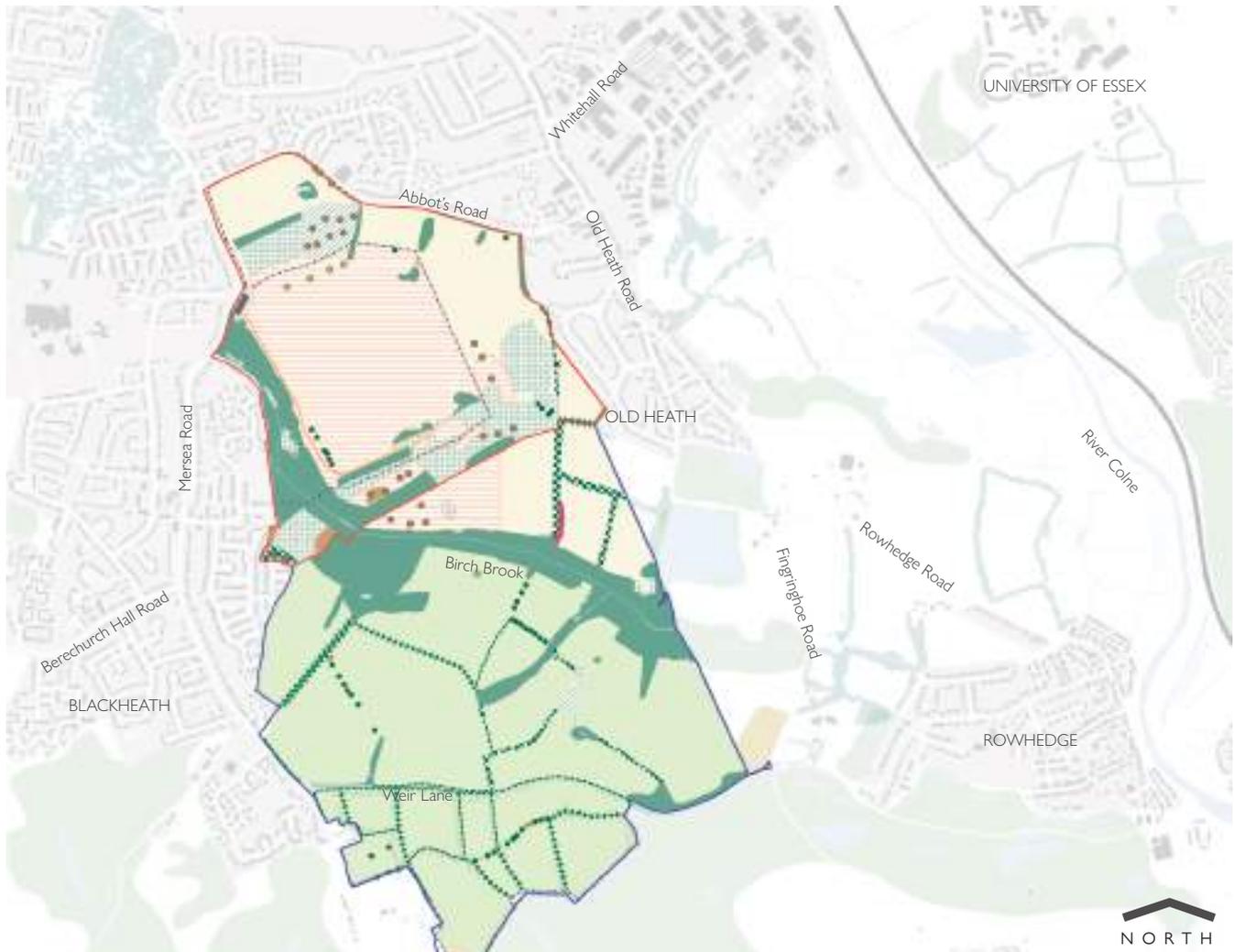
2.9.1 THE SITE

Middlewick Ranges Local Wildlife Site (LWS) is dominated by acid grassland, but is primarily designated for its invertebrate populations. Birch Brook LWS supports the brook itself and broadleaved woodland which displays characteristics of ancient woodland. Only a small part of the site does not fall within these designated areas, which is a field of poor semi-improved grassland. Habitats within the site are of high biodiversity value, with much of the boundary qualifying as HPI (including 53 ha of acid grassland).

The Site can be expected to support a range of protected species; some of these have become 'key ecological considerations' for the purposes of the allocation (invertebrates, breeding birds, roosting, foraging and commuting bats). Other species are expected to occur, but are not a 'key' consideration for the purposes of the allocation (refer to Section 3.3 Technical Studies & Considerations or the full ecological evidence base [Stantec, 2020]) for further information on this.

KEY

 Site boundary	 Fence
 Ecological mitigation land within MOD land ownership	 Broadleaved woodland - semi-natural
 Railway	 Broadleaved woodland - plantation
 Coniferous woodland - plantation	 Scrub - dense / continuous
 Mixed woodland - semi-natural	 Semi-improved acid grassland
 Broadleaved scattered trees	 Poor semi-improved grassland
 Scattered shrub	 Cultivated / arable land
 Water body	 Bracken - continuous
 Hedge with trees - species rich	 Ruderal
 Hedge with trees - species poor	 Bare ground
 Intact hedge - species poor	 Building
	 Hardstanding



2.10 Parks, Recreation & Sports

2.10.1 WIDER AREA

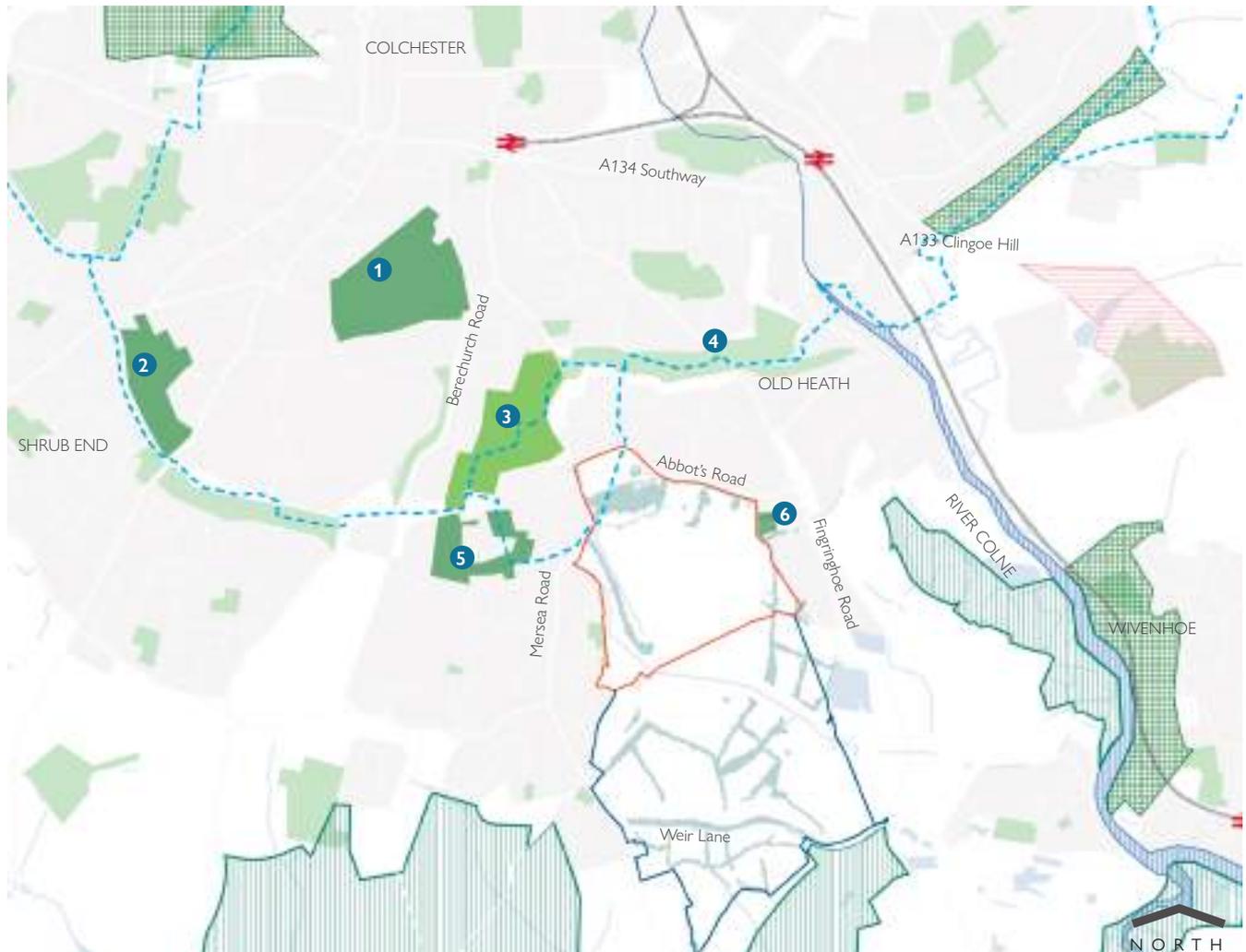
The Site is well located next to high quality open space to the south via Birch Brook. There is access to the Site via pleasant countryside walks and Public Rights of Way (PRoW) that run south from Abbot's Road.

The Colchester Orbital route runs through the north west section of the site which links it to a number of Colchester's Parks and Playing Fields including Abbey Field and the West End Sports Ground. There are also a number of Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves that surround it.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- - - Colchester Orbital route
- ⋯ Key walking route
- Site of Special Scientific Interest (SSSI)
- Open Space
- Parks & Playing Fields
- Cemetery
- Registered Park & Gardens
- Local Nature Reserve

- 1 Abbey Field
- 2 West End Sports Ground
- 3 Colchester Cemetery
- 4 Bourne Valley Local Wildlife Site
- 5 Thomas Lord Audley School Playing Fields
- 6 Old Heath Community Primary School



2.11 Urban Morphology

2.11.1 THE SITE

The figure ground diagram illustrates that the site lies on the edge of Colchester's built-up area and that there is a significant gap in urban fabric between Colchester and the neighbourhood of Rowhedge to the south east.

The surrounding urban morphology to the west, north and east of the site largely comprises detached and semi-detached houses, while further to the north east lies larger warehouse and office buildings, which form an industrial area centred on Whitehall Road.

To the west of the site lies a cluster of schools, namely Thomas Lord Audley and Monkwood Infant and Junior, which lie at the centre of an open space.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Railway
-  Urban grain



2.12 Built Form & Heights

2.12.1 THE SITE

Although the area is predominantly low-rise in character, buildings of varied heights are spread across the Site's immediate context. The residential areas surrounding the development boundary are mostly 1-2 storeys, with some 3-4 storey flats interspersed among lower-rise houses. The only significant area of high-rise buildings is the University of Essex campus, where 3 tower blocks rise up to 14 storeys.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Railway
-  1 storey
-  2 storey
-  3 storey
-  4 storey
-  5 storey
-  14 storey



2.13 Land Uses

2.13.1 THE SITE

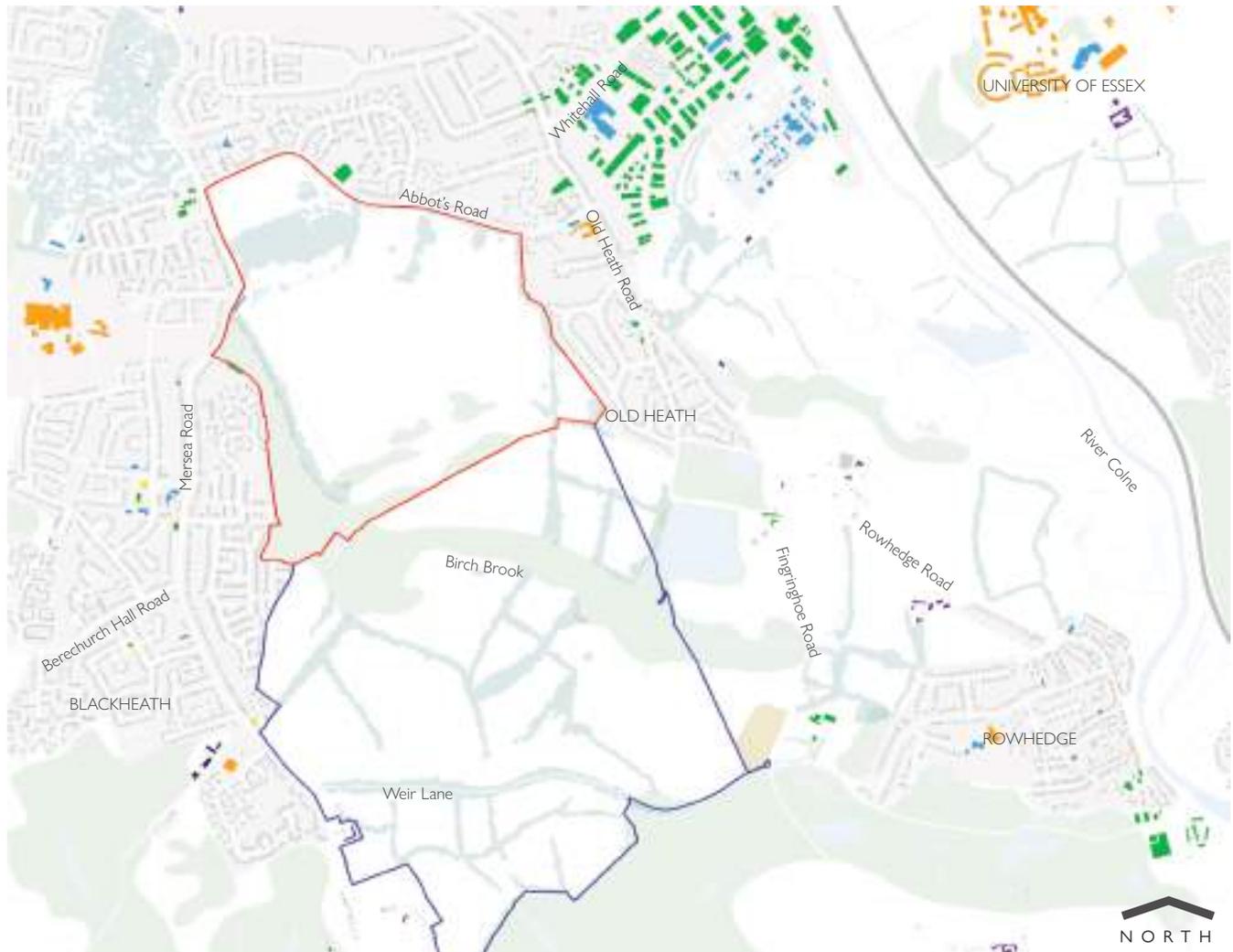
As part of Colchester's suburbs, the dominant land use in the site's surrounding area is predominantly residential, along with supporting services. These uses include schools, places of worship, retail and leisure. A Lidl to the north of the site is the main supermarket for existing residents.

There is significant employment in the immediate area, with retail warehouses and light industrial units to the northeast of the site which are significant providers, as well as the University of Essex located further east. There are also several farm buildings scattered across the area. Important utilities include the Anglian Water plant located just south of the warehouse complex.

Within the site itself, there are a collection of buildings associated with the firing range along the western boundary.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Railway
-  Agriculture
-  Military
-  Community and civic services
-  Commercial
-  Leisure
-  Education



2.14 Pedestrian & Cycle Movement

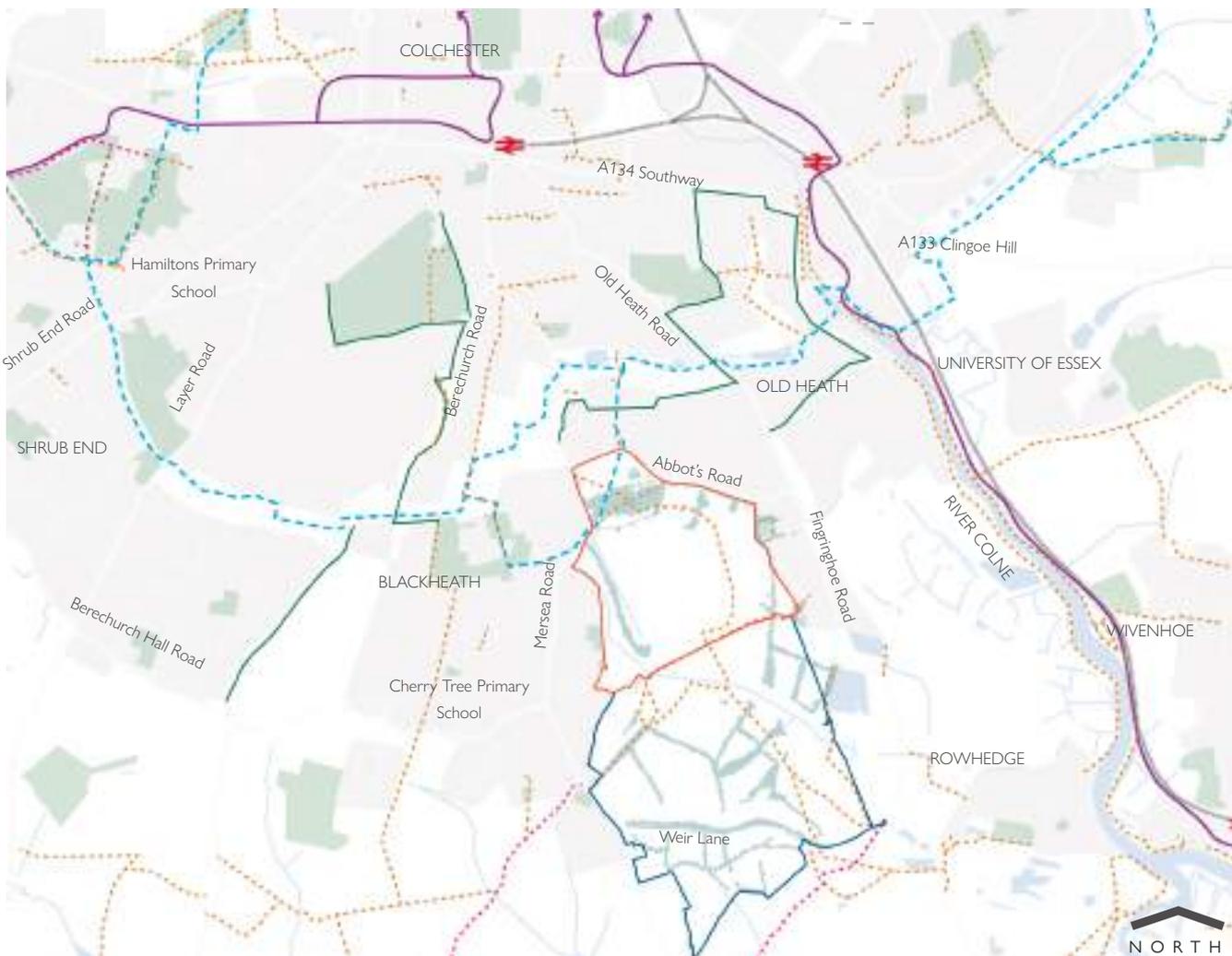
2.14.1 WIDER AREA

Colchester has an extensive network of walking and cycling routes, however most of these utilise ordinary roads, where the majority serve local journeys from door to door. One main and popular pedestrian route is the Orbital, which creates a circular link connecting many of the parks and existing Public Rights of Way (PRoW) around Colchester.

Old Heath Road provides connections to the National Cycle Network, Route 51. This provides an alternative route into Colchester Town Centre and Colchester Town railway station. At present Mersea Road and Old Heath Road do not have designated cycle paths, but these could be provided by re-allocating road space to cyclists, and enhancing measures for them at junctions along the route.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway stations
- Railway
- - - Orbital route
- - - Public Right of Way (footpath)
- - - Public Right of Way (bridleway)
- - - Public Right of Way (restricted byway)
- Cycle lane
- National cycle route



2.14.2 THE SITE

The Site and its surrounding area contain a significant number of Public Rights of Way (PRoW) which include footpaths and bridleways. Within the Site, there is a network of public footpaths that connect Blackheath to the west, Old Heath to the east and Rowhedge to the south. Although there are also PRoW in the surrounding area, these are largely disconnected from each other. Along the River Colne, there is a significant public footpath and National Cycle route, creating an attractive and accessible riverfront walk and cycleway.

There is adequate pedestrian provision along the local road network. Lit footways are present along both sides of Mersea Road and Abbot's Road, and pedestrian crossing facilities are available at multiple locations found to the north of the Site.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
-  Railway
- - - Orbital route
- - - Public Right of Way (footpath)
- - - Public Right of Way (bridleway)
- Informal pedestrian crossing point
- Cycle lane
- National cycle route



2.15 Public Transport

2.15.1 WIDER AREA

Colchester Bus Station is located on Osborne Street in the Town Centre and runs regular services locally and regionally. Colchester is on the London Liverpool Street to Norwich line and is approximately an hour's travel from each town.

Colchester has three stations: Colchester North, Hythe and Colchester Town. Colchester North is the mainline station, which is approximately a 20-minute walk from the Town Centre.

Stansted Airport, London's third largest airport, is 50 minutes away by road via the A12 / A120.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- ⇄ Railway stations
- Railway
- Bus routes
- Distance isochrones

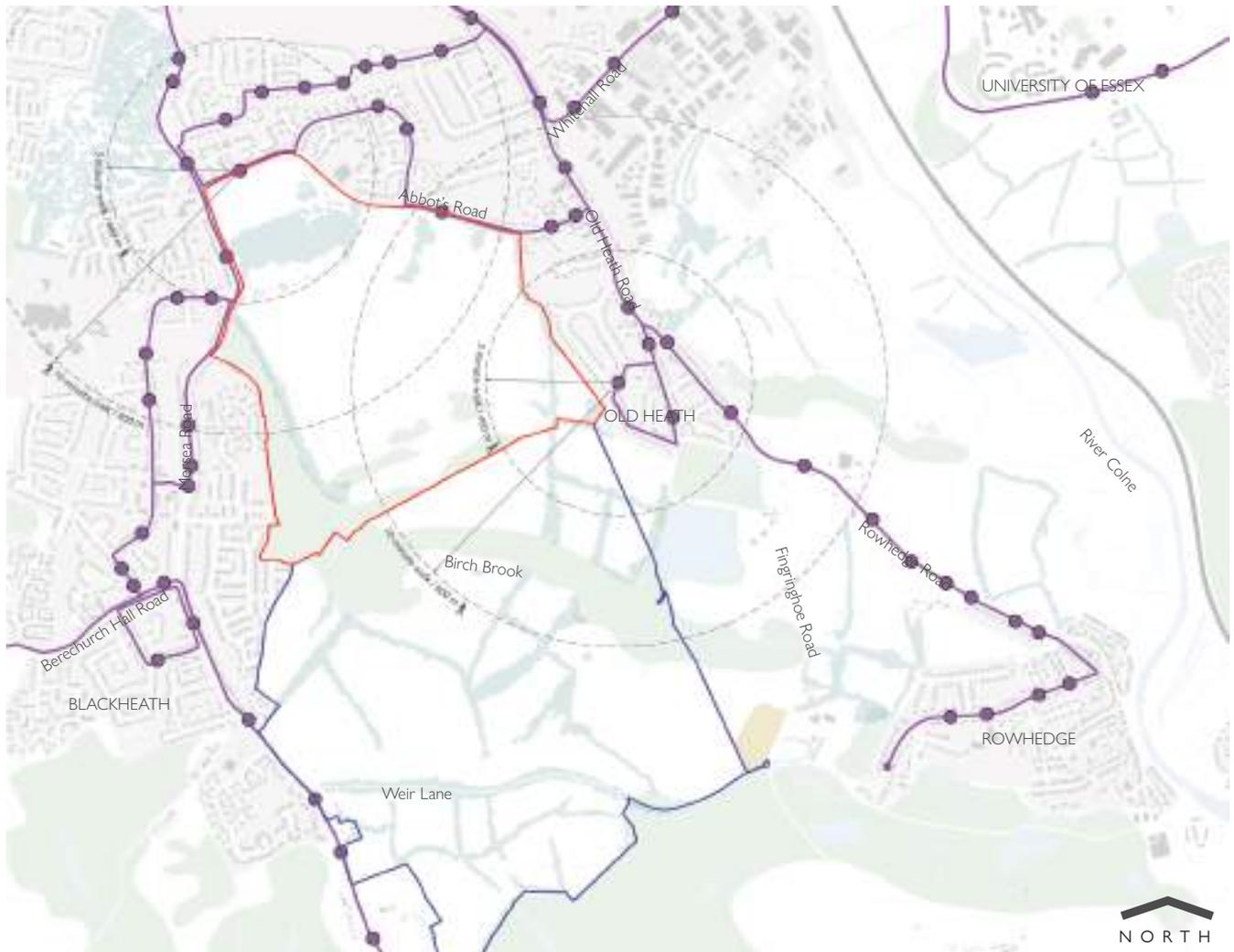


2.15.2 THE SITE

There are several stations located in relative proximity which provide access to London and other regional and local towns in East Anglia. The Site is well served by local bus routes, all of which connect to Colchester Town Centre. The local bus network also connects to other parts of the Colchester suburbs and surrounding villages, such as Hythe and Wivenhoe. Buses run frequently, thereby providing easy and convenient access to many local destinations. National Express also operates two services from its coach station, which is located adjacent to the University of Essex. These services provide access to various local and national destinations.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway
- Main bus routes
- Local bus stops
- Distance isochrones



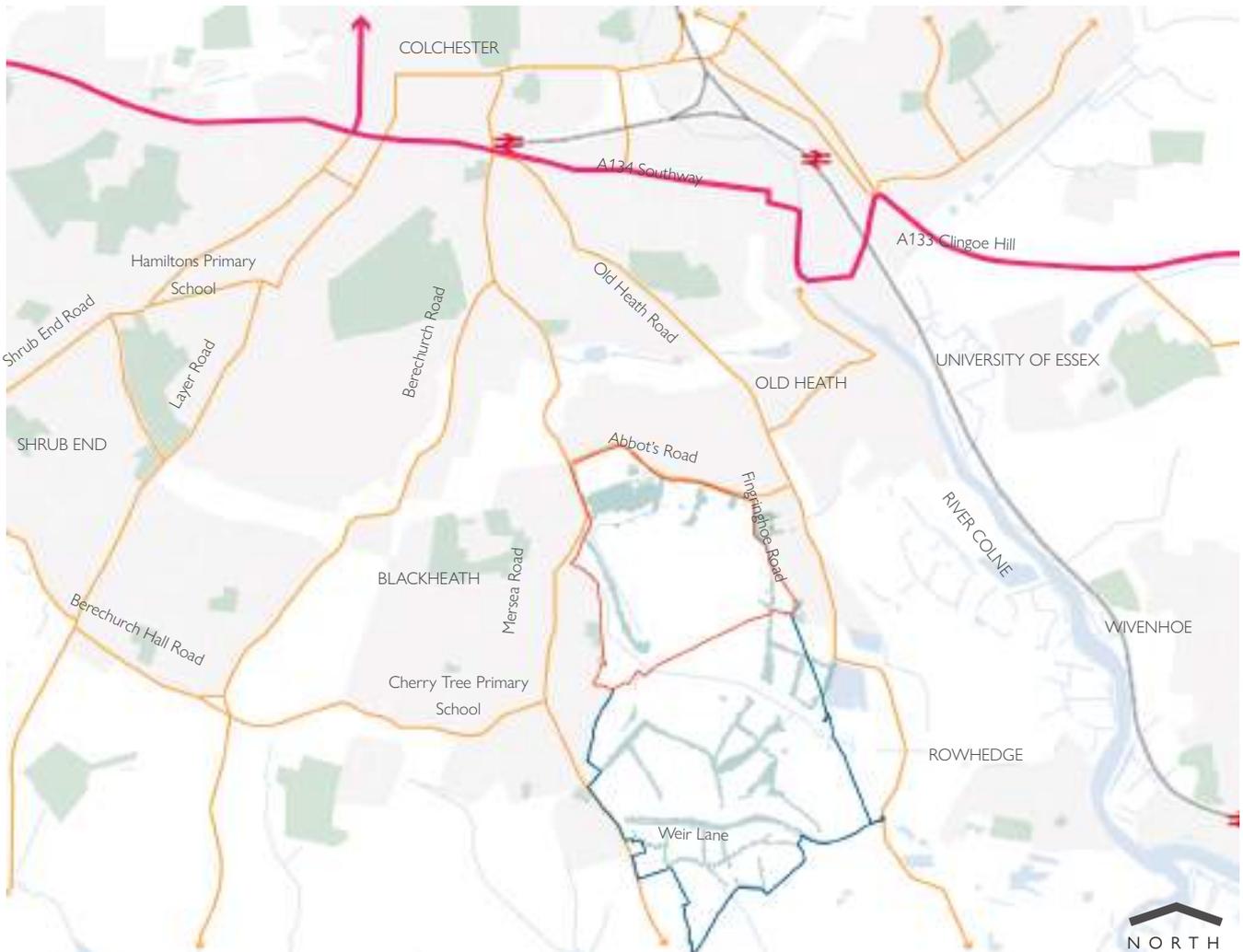
2.16 Vehicular Movement

2.16.1 WIDER AREA

Middlewick Ranges is well served by the urban highway network into Colchester, with the B1025 running along the western edge of Middlewick Ranges. It is the main north-south road corridor near the Site and directly links into the town centre and the countryside to the South. The A12 is a major road in England and runs north-east /south-west between London and the coastal town of Lowestoft, this bypasses Colchester to the north.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Railway stations
-  Railway
-  Primary route
-  Secondary roads

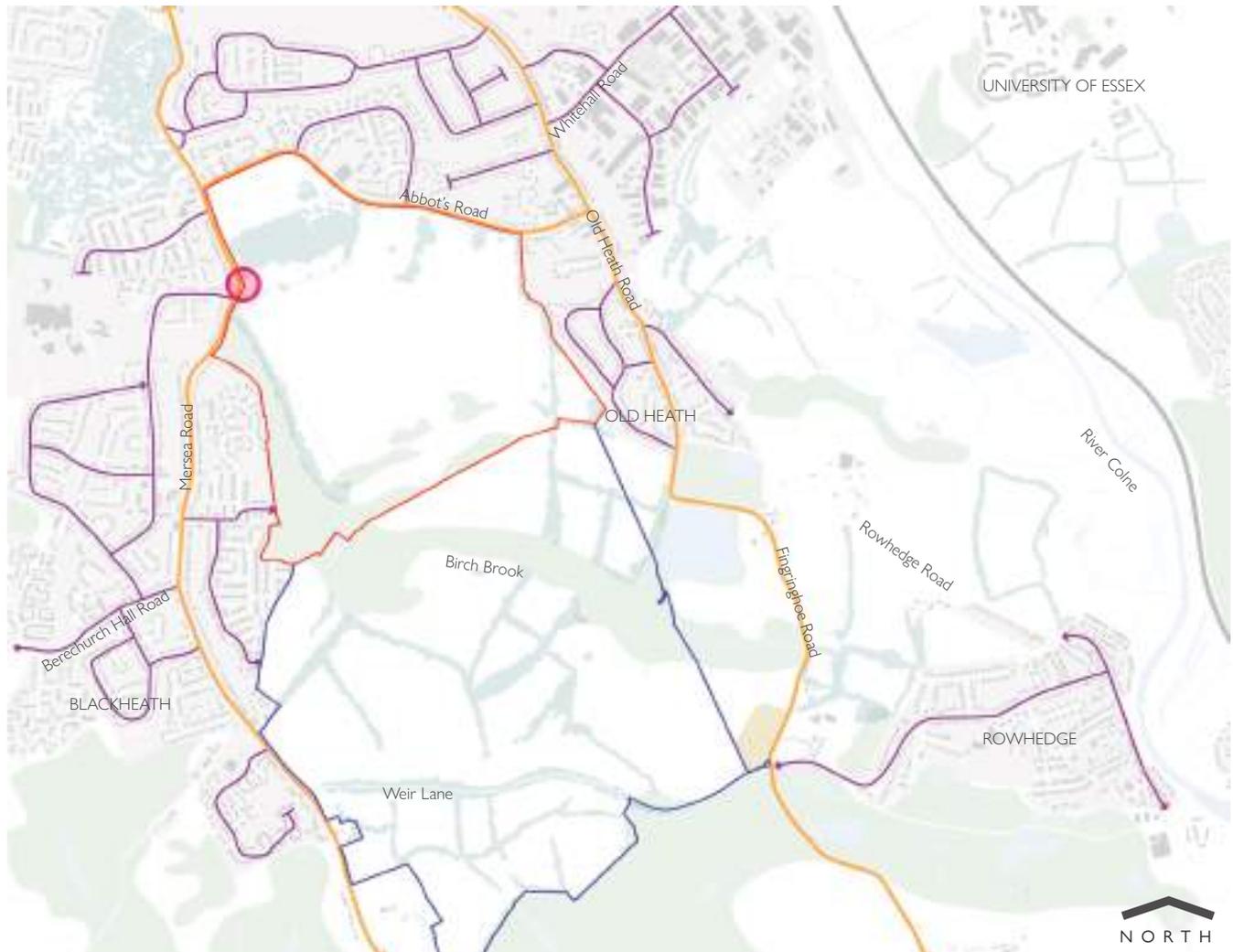


2.16.2 THE SITE

The Site is in close proximity to several locally important roads. It is bounded by Abbot's Road to the north and Mersea Road and Old Heath Road run along the western boundary, and hence we can use it to gain access into Middlewick Ranges. They are all local roads in the hierarchy of routes around Colchester which connect the site to Colchester's extents and into Colchester Town Centre. Other roads provide access to neighbouring small settlements, such as Fingringhoe and Shrub End. There is currently one vehicular access point on the Site, which is located on the northwestern boundary.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway
- Secondary roads
- Tertiary routes
- Existing access point (gated)



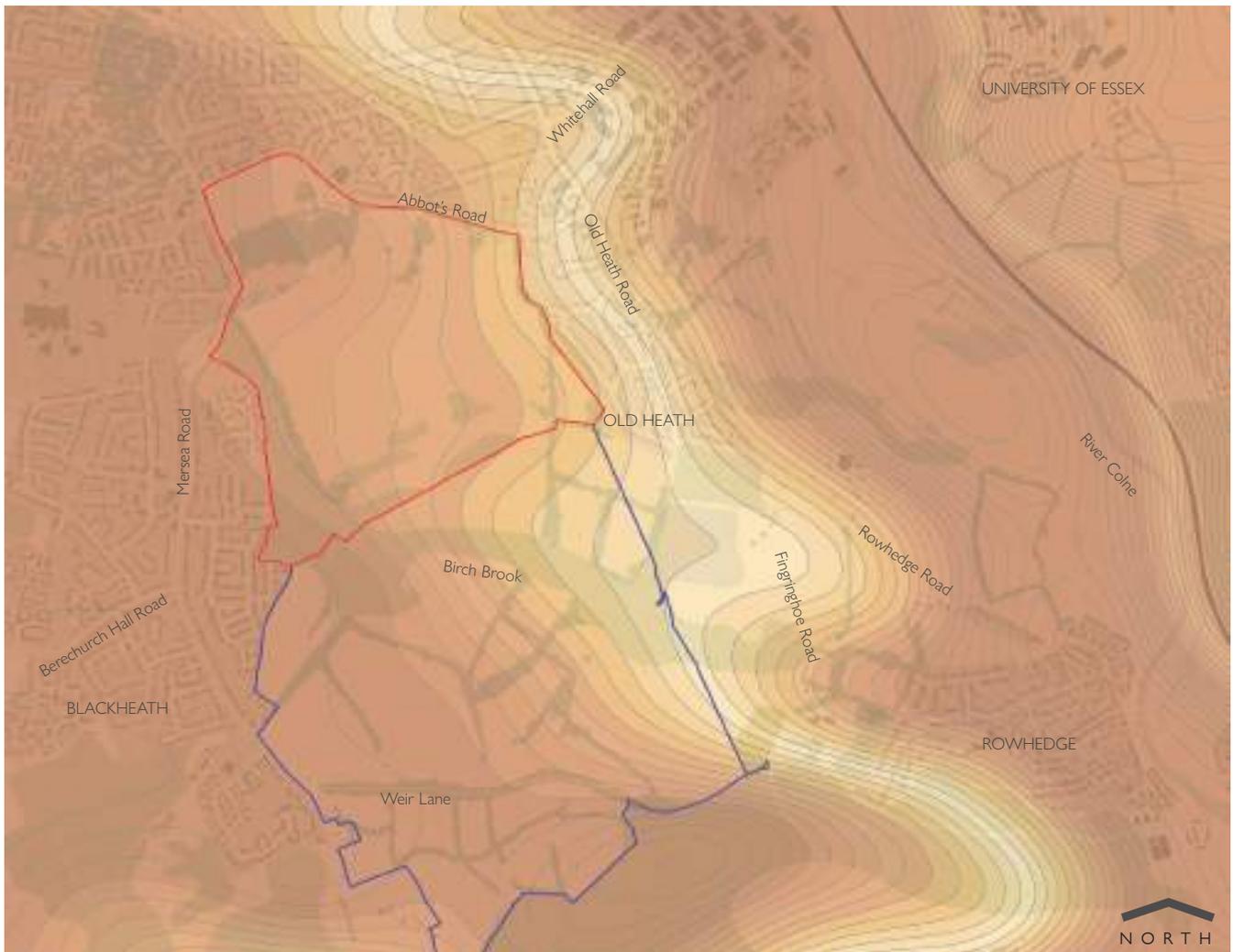
2.17 Topography

2.17.1 THE SITE

The Site is mainly flat with a gentle slope eastwards towards the River Colne, and some minor ground undulations. There are also military earthworks to provide firing points and stop butts.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Railway
-  Contours every 1 m



2.19 Utilities

2.19.1 THE SITE

The most significant infrastructure features on the Site are the 3 High Voltage (EHV) electritown pylons and associated overhead cables that run adjacent to the northern boundary of the Site.

Any residential development planned in this area will therefore need to be setback at least 20m either side of the cables, and the suitability of proposed land uses near this area will have to be carefully considered.

The gas main that historically ran across the northern section of the site has recently been relocated by Cadent to run around the northern boundary of the site, away from where any development is planned to be located.

The proposed development also needs to take into consideration sewers and potable water which run through the Site.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Railway
- Overhead cable
- ⊕ EHV Pylons
- M/P gas main
- Surface sewer
- Combined sewer
- Potable water



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2.20 Local Area Studies

A local area study has been undertaken in order to have a comprehensive understanding of the key features of the local environment, including their strengths and weaknesses. The settlement surrounding Middlewick Ranges has been extended steadily through time. This has resulted in areas of varying built form, typologies, architectural styles, and streetscapes.

Five areas within the vicinity of the site have been included within the study to understand their character, density,

relationships between built form and streets, housing typologies and plot sizes. Through public consultation in relation to proposals for the site we have further understood local opinion of new and existing residential areas. The study has been undertaken with the purpose of understanding the local context, and responding to it appropriately, and not to propose directly replicating these areas.

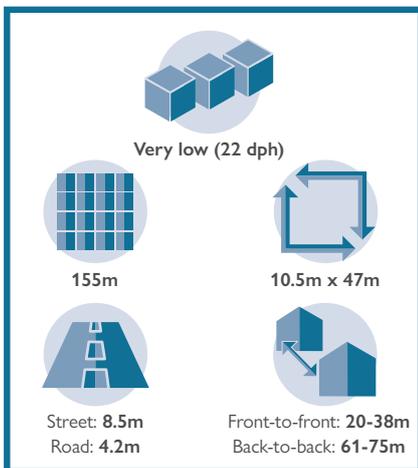


2.20.1 HILL VIEW CLOSE

Hill View Close is located in Rowhedge, which lies approximately 1.2 km to the south east of the Site, and has a density of 22 dwellings per hectare.

Key features of Hill View Close can be summarised as follows:

- Predominantly detached and semi-detached bungalows;
- Main building material is red brick with slight variations in the colour and materials used on the front facade;
- Given the bungalow typology, plot sizes are large with ample front and back gardens, resulting in a loose block layout;
- Sizeable setback from the street creates significant defensible space (approximately 5m in length) with low walls and planting forming the boundary between the public and private realms;
- Back gardens are approximately 15m in length;
- 2 on-plot parking spaces per property, resulting in very little on-street parking;
- Dropped kerbs along footpath allow easy access to driveways;
- Little street activity due to its location in a residential area and on the suburban-rural edge;
- Similar architectural style and no public realm landscaping results in a streetscape with little visual interest.



Bungalows featuring red brick and varied front facades



On-plot parking and ample front gardens form defensible space



Poor public realm landscaping

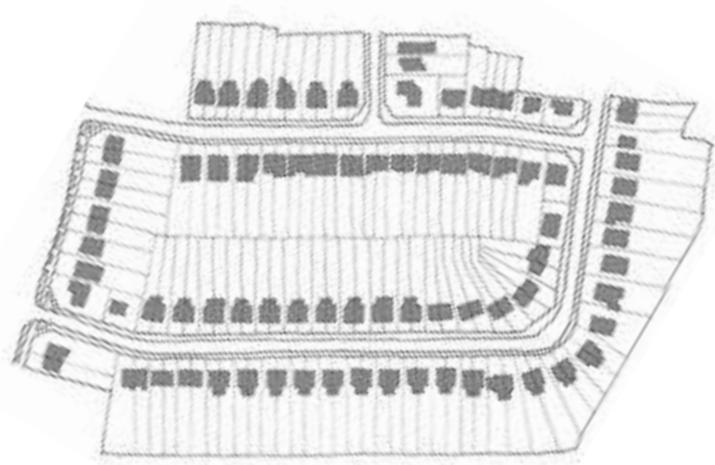
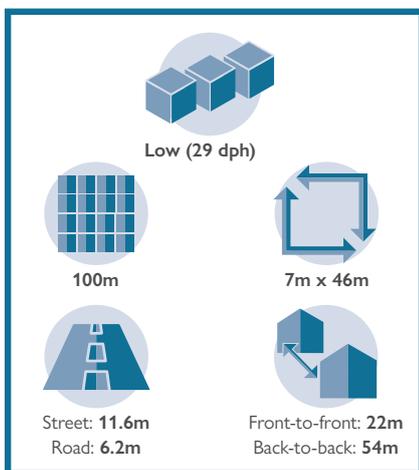
2.20.2 CAVENDISH AVENUE

Cavendish Avenue is a low density residential area, with a density of 29 dwellings per hectare, and is approximately 0.25 km to the north of the Site.

Key features of Cavendish Avenue can be summarised as follows:

- 2-storey semi-detached houses constructed in the 1950s;
- Dominant building material is red brick with mock Victorian architectural details, particularly for door arches;
- Narrow plots allow for efficient block layout;
- Defensible space comprises of either 2 on-plot parking spaces or 1 on-plot space with a small front garden;
- Some overspill parking onto the street;

- Consistent building line continued around the corners of the block, limiting the length of gable ends and maintaining a consistent facade. This encourages passive surveillance;
- Due to properties all being constructed in the same postwar period, repeated typology and architectural style creates a monotonous streetscape, along with the lack of public realm landscaping.



Postwar semi-detached house with mock Victorian architectural details



Some overspill parking onto street



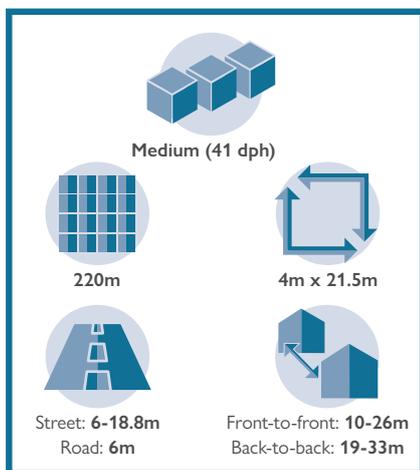
Street framed by consistent building line

2.20.3 THE QUARTERS, BERECHURCH

This study area focuses on recent development in part of the site of the former Colchester Garrison. It lies approximately 1 km to the south west of the Site and has a density of 41 dwellings per hectare.

Key features of this study area can be summarised as follows:

- 2-storey contemporary houses, including detached, semi-detached and some flats. Terraced houses line the primary road in the site;
- Dominant building material is red brick;
- Narrow plots allow for efficient block layout;
- Defensible space ranges from minimal paving in shared surface home zones to small front garden;
- Some on-street parking on the primary road, although parking is predominantly in parking courts and garages;
- Strong continuous building line, with buildings turning corners in order to frame the street and encourages public surveillance;
- The open space is fronted by largely continuous frontages of terraced and semi-detached housing;
- Front to front distances in home zones are 10 metres, allowing a more efficient layout.



Contemporary semi-detached and terraced houses overlooking open space



Terraced houses line the primary road, which has verges either side



Narrow shared surface fronted by terraced houses

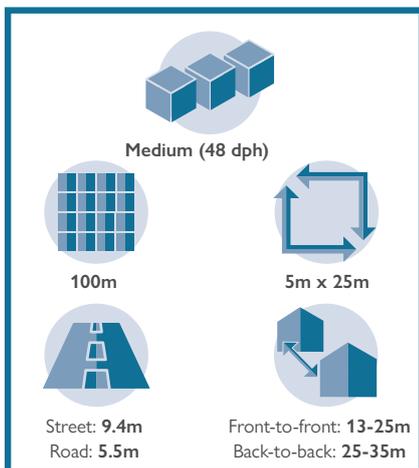
2.20.4 GARRISON PARADE

Garrison Parade lies approximately 1 km to the north of the Site, and is a residential area with a medium density of 48 dwellings per hectare.

Key features of Garrison Parade can be summarised as follows:

- Recent residential development of 2-3 storey short terraces, townhouses, apartments, and some semi-detached properties;
- Variety of architectural styles and materials used to create an interesting and changing streetscape, as well as establishing distinct character areas: for example, more contemporary-style flats line the primary road while short terraces using traditional building materials and mock Georgian features are found in the outer areas;
- Highly rectilinear street network - although allowing good legibility throughout the site - creates rigid block forms which are at odds with the more organic layout of surrounding streets;

- Small plot sizes allow for tighter block layouts, which in turn allows space to become available for public amenity spaces;
- Small defensible spaces allows the buildings to frame the street, creating a close relationship between the building and street activity;
- Strong continuous building line, with buildings turning corners in order to frame the street;
- All parking either on-plot or in parking courts;
- Public realm materials change along the street to signify pedestrian crossings



Changes in architecture and building materials create distinct character areas and generate visual interest



Various public realm materials act as visual cues to vehicles



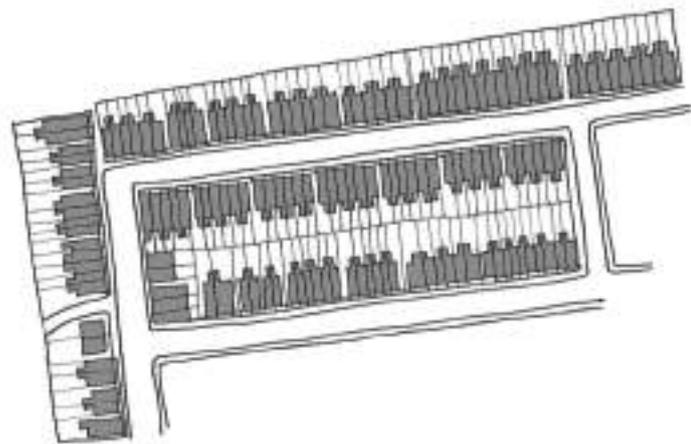
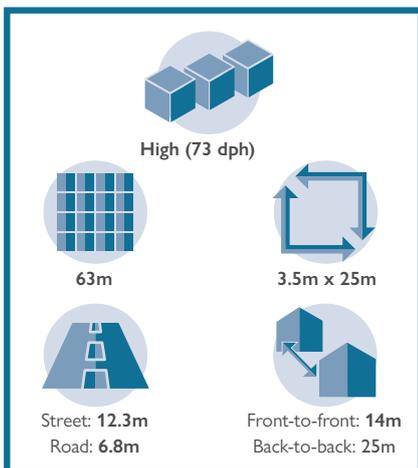
Play area (LEAP) located within the development

2.20.5 CANTERBURY ROAD

Canterbury Road is a residential area approximately 0.8 km north of the Site, with a density of 73 dwellings per hectare.

Key features of Canterbury Road can be summarised as follows:

- Interwar linear street with 2 storey terraced housing;
- Red brick used throughout the study area, with small variations in architectural details creating some visual interest;
- Blocks form a grid layout which aids legibility;
- Small defensible spaces and consistent building lines create a highly defined frame for the street;
- Less privacy for individual properties due to close proximity to adjacent buildings and to the street;
- Sizeable rear garden space of 11-13m;
- No on-plot parking or designated on-street parking bays available: all parking is found on the street which dominates the public realm;
- Negative frontage along the short edge of the block due to long stretch of garden fences.



Typical interwar terraced housing



All parking on-street, affecting the quality of the public realm and streetscape



Negative frontages along short side of block due to prevalence of garden fences and garages





Chapter 3: Considerations & Opportunities

A number of technical studies referenced in the previous chapter have been prepared to inform the considerations and framework of the masterplan. These considerations help build a picture of the site and how the development framework would best be brought forward. The following pages provide analysis which forms the vision for the land whilst remaining sensitive to the local environment, surroundings and the local community.

3.1 Site Features

At the centre of the Middlewick Ranges site is the rifle range, which is separated by high security fencing. A number of pedestrian access points and Public Rights of Way (PRoW) are located to the east of the ranges, which

has been rerouted around the fencing line. To the south of the ranges are the Birch Brook woodland corridor, and part of Middlewick Ranges Local Wildlife Site.



Map indicating the location of the photographs

3.1.1 SITE PHOTOGRAPHS



View looking east towards Abbot's Road



View looking south across the northern edge of the Range



View looking north across the eastern edge of the Range



View looking east across scrubland



View looking east across the Range



View looking north towards the current site access and the B1025

3.2 Considerations

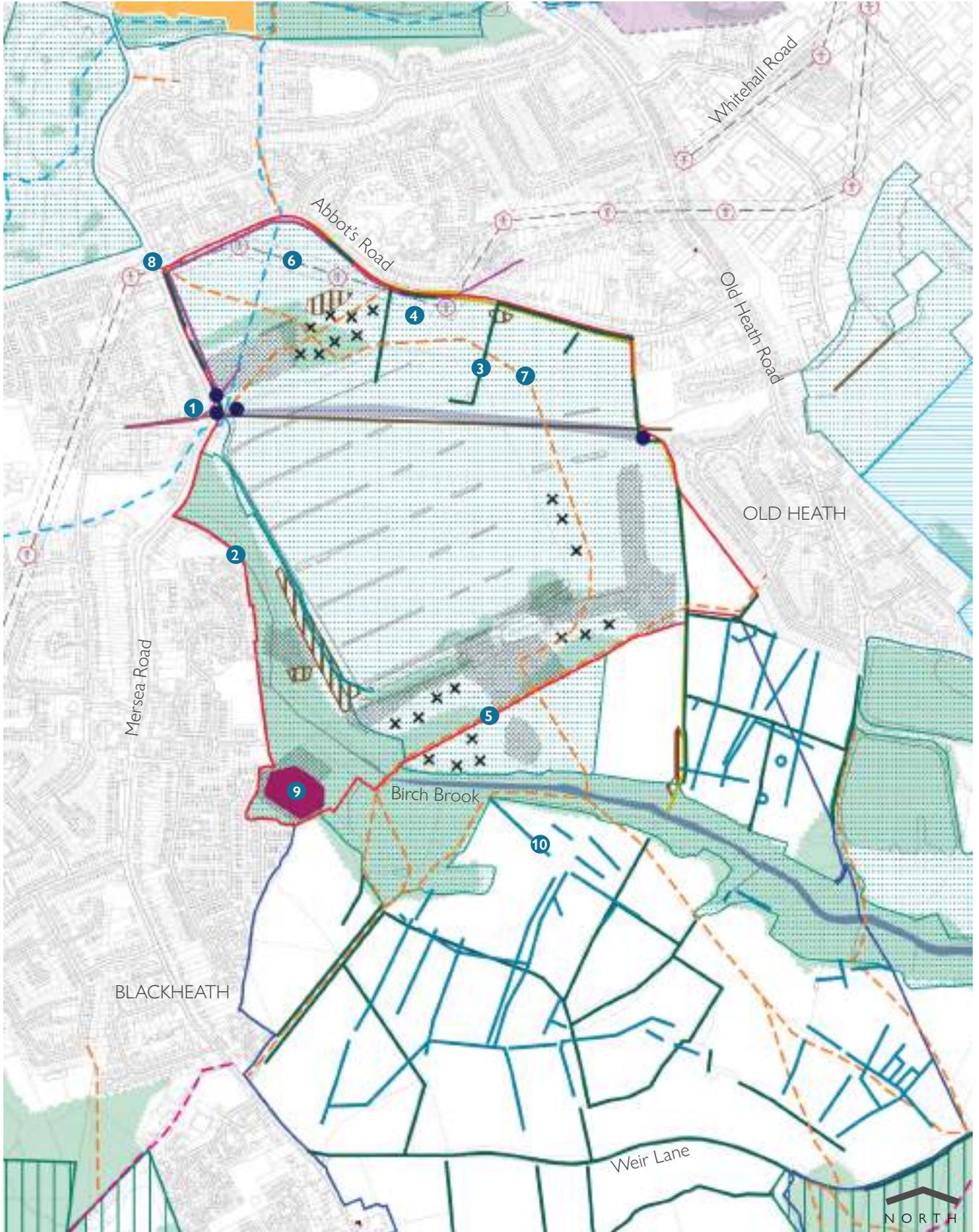
Middlewick's wider area and site context identifies the main considerations which will influence proposals for the site.

Some key considerations within the proposed indicative development and are described below:

- 1 The relationship of the World War II linear tank ditch line and the pill boxes within the site will be considered within the proposals as an important landscape and visual connection;
- 2 Appropriate buffers or strong frontages will be required for existing ecological and landscape features and surrounding properties;
- 3 Retention of the woodland and protected hedgerows within the site. Green spaces and green corridors are enhanced for wildlife.
- 4 Sustainable drainage measures can be provided to mitigate any potential increase in flood risk arising from any new development through the existing sewers and potable water;
- 5 Appropriate buffer zones will be provided for the two Local Wildlife sites to protect important adjacent habitats;
- 6 Three Extra High Voltage (EHV) electricity pylons are located within the north of the site and development;
- 7 Existing network of Public Rights of Way will be retained and potentially enhanced;
- 8 Abbot's Road and Mersea Road are identified locally as busy roads with only one vehicular access point on the north western side of the Site.
- 9 Retain the redoubt which dates back to the English Civil War, and its woodland landscape, acknowledging historic and archaeological context;
- 10 Crop marks depict the archaeological and undated linear features and possible track ways.

KEY

Site Boundaries	Utilities	Heritage	Landscape and Ecology
 Site Boundary	 Pylons and overhead power line and 20m offset	 Listed building	 Local Wildlife Site (Colchester)
 Ecological mitigation land within MOD land ownership	 M/P gas main	 Scheduled monument	 Site of Special Scientific Interest (SSSI)
Access & Movement			
 Public Right of Way (footpath)	 Combined sewer	 Conservation area	 Woodland
 Public Right of Way (bridleway)	 Surface sewer	 Historic World War II tank line	 Protected Hedgerows (as per CBC database)
 Indicative Colchester Orbital route	 Potable water	 WWII pill boxes	 Scattered shrub
Flooding			
 Flood zone 2		 Redoubt	 Tall ruderal
 Flood zone 3		 NMP Cropmark polygons	 Dense/continuous shrub



3.3 Site Opportunities

Middlewick Ranges offers a unique opportunity to transform a former military site into a sustainable new development within Colchester. Alongside a variety of new homes, education facilities, a local centre and access to extensive greenspaces will be provided. This community will respond sensitively to the character of the existing and surrounding area. A number of key opportunities for the redevelopment of the site are highlighted on the adjacent plan, which will inform the development of this sustainable new community.

Key opportunities for the site are:

- 1 Potential to retain existing Public Rights of Way (PRoW), or to return to historic alignments, and connect with new footpaths, cycle routes and green corridors to capture key desire lines of pedestrians, improving permeability through the site;
- 2 Potential to enhance the connectivity of bridleways to the south;
- 3 Promote connectivity to existing and emerging pedestrian and cycle routes (such as the Colchester Orbital) promoting access to adjacent recreation spaces and use of sustainable transport into the town centre;
- 4 Enhance pedestrian crossing opportunities surrounding the site along key desire lines;
- 5 Potential opportunity to create a new access and permeable link for movement across the site to serve the new development and allow existing traffic to utilise a new route in preference to the existing roads;
- 6 Provide improvements to the mini-roundabouts at either end of Abbot's Road to ensure that traffic flows can be accommodated, and improve the eastern section of Abbot's Road especially for pedestrians and school pupils;
- 7 Potential to create a community heart to the scheme including a local centre for some non-residential uses, a village green and community square, and bus stops.
- 8 Promote residential development of the site, enabling opportunities for new homes and a range of tenures;
- 9 Potential to provide new sports pitches for community use, alongside the existing;
- 10 Protect the redoubt within its existing woodland setting, and ensure potential archaeology within the site is respected;
- 11 Provide a strong east-west green corridor, capturing the former World War II tank line and pill boxes, whilst promoting connectivity with surround greenspaces;
- 12 Provide landscape buffers and a strong green corridor between the new and existing developments, ensuring the amenity of existing residents is protected;
- 13 Retain and enhance existing hedgerows within the site and the military training area;
- 14 Create green corridors within the new development, capturing existing hedgerows and connecting new and existing green spaces.

KEY

Site Boundaries

-  Site Boundary
-  Ecological mitigation land within MOD land ownership

Land Uses

-  Community heart including village green, local centre, community square and potential bus stops

Heritage

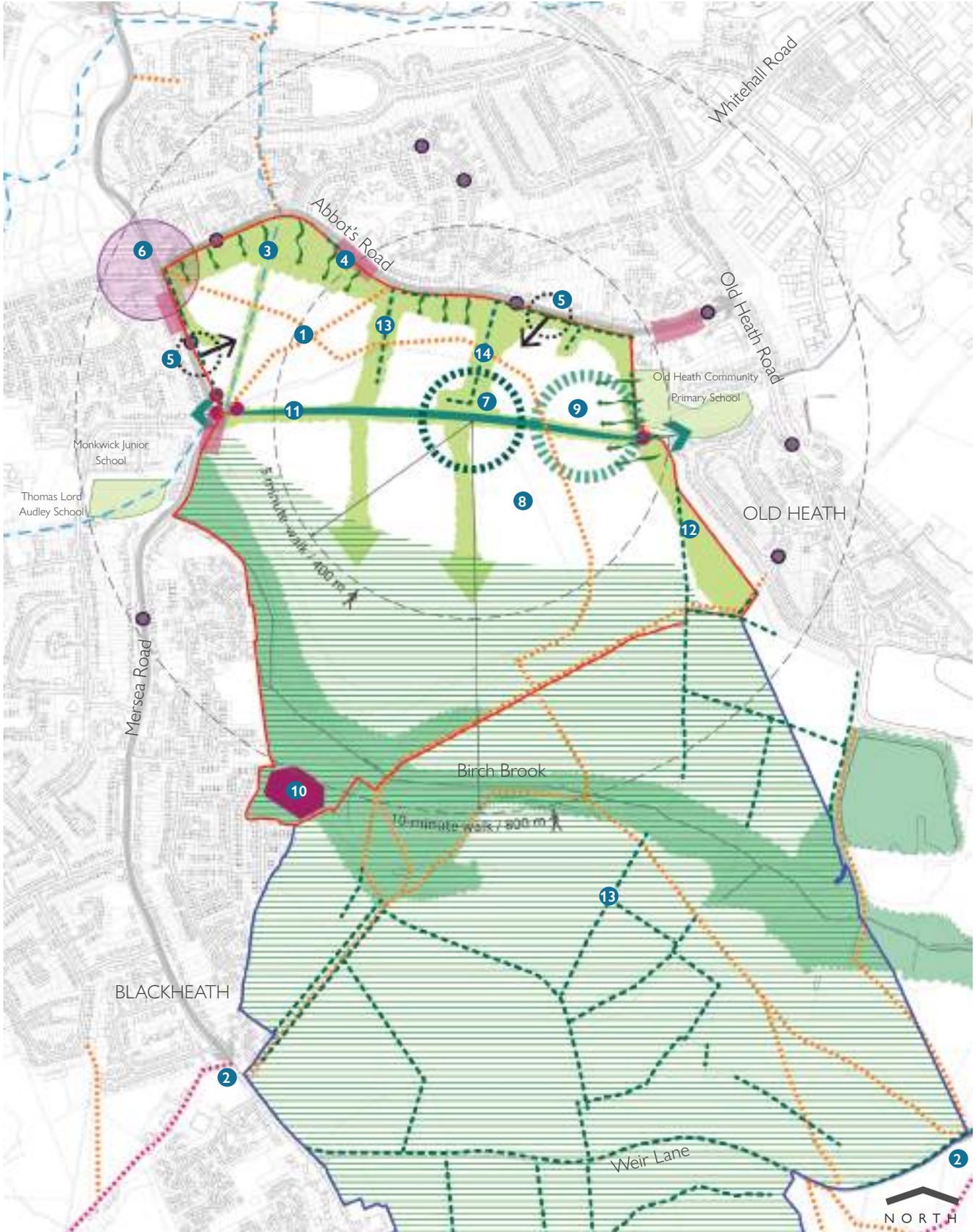
-  WWII pill boxes
-  Redoubt

Access & Movement

-  Public Right of Way (footpath)
-  Public Right of Way (bridleway)
-  Indicative orbital route
-  Main roads
-  Potential primary road
-  Green walk with retained tank line
-  Potential pedestrian crossing points
-  Proposed entrance gateway
-  Existing bus stops in proximity
-  Enhancement of existing junction and facilities

Landscape & Ecology

-  Retained and enhanced hedgerows
-  Green corridors
-  Ecological mitigation and enhancement area
-  Proposed sports pitches
-  Surrounding green spaces



3.4 Technical Studies & Considerations

3.4.1 TRANSPORT & MOVEMENT - SUMMARY

Context

As already described, the Middlewick Ranges site lies within the existing residential area to the south of Colchester. It is bounded to the west and north by existing suburban highway corridors, with predominantly residential development fronting the roads on the opposite side to the site. The eastern boundary is predominantly made up of residential development adjacent to the site boundary.

The site has a considerable level of accessibility to local services already, with a supermarket, schools and other local facilities within the immediate locality of the site. This means that walking and cycling are feasible and potentially the most attractive means to access these facilities. In addition, the proposals within the site itself will further add to enhance the local facilities that are available to new residents, and equally easily to the existing community by walking and cycling.

For trips further afield, all of the adjacent and nearby roads carry bus services that provide routes into Colchester, to the railway station and hence beyond. The design of the site, with a new link road through it, will provide additional routing opportunities for buses to provide more comprehensive services, and even greater proximity of bus stops.

The highway network adjacent to the site is generally able to cope with the flows that use it during most time of the day outside of the traditional weekday peak periods. At these times the junctions can get busy, and queues and delays can occur. This was the subject of much feedback during consultation on proposals for the site, and so, to reflect this level of concern, a more detailed assessment of the local highway conditions has been undertaken than would typically be expected for site allocation evidence in the Local Plan.

Improving Local Access

Walking and cycling routes around the site are already significant, with existing Public Rights of Way (PRoW) and cycleways that support active travel in Colchester and from the site. The Link Road provided through the site would be provided with at least a 2.0m footway and a 3.5m footway / cycleway to promote active travel throughout the site.

The footway and cycleway facilities would need to be connected into the wider networks, and so some improvement works will be required on the adjacent roads to make these through connections. From the northerly access, onto Abbot's Road, the footway/cycleway provision could be extended to Old Heath Community Primary School as far as possible, combined with better maintenance of the existing route to provide the infrastructure to support walking and cycling to school. This may require some traffic management measures, and the re-allocation of road space between different road users – although this would be likely to reduce vehicle speeds in the vicinity of the school, and so improve the situation in any event.

Three new pedestrian and cycle crossing points have been indicated on the existing highway network – two on Abbot Road, and one on Mersea Road. These crossing points are located by the site accesses for these modes and would be connected to existing cycle routes and PRoW. They are also located strategically in proximity to local facilities and bus stops to further promote sustainable travel.

Public Transport Provision

The proposals would be expected to make bus provision through the site, taking advantage of the new link road that would be provided to provide better services. The details of what was provided, and how it was dovetailed with existing services would need to be considered as part of a detailed Transport Assessment associated with a planning application.

However, as each of the existing routes alongside the site (Mersea Road, Abbots Road and Old Heath Road) each features two bus routes, there are plenty of opportunities to enhance and integrate additional service patterns into the bus routes serving the site and travel onwards to the wider Colchester area.

Highway Network

The local road network around Middlewick is mature, with

considerable existing frontage development and constrained junctions in places, and so it was considered important to be able to demonstrate that the allocation at Middlewick could be accommodated.

Current best practice requires that transport assessment should highlight the opportunities for sustainable forms of movement and accessibility first and then deal with highway access once sustainable modes have been provided. This is certainly the approach that needs to be taken at Middlewick and will be the guiding principle of any future Transport Assessment, should the site come forward under a planning application.

Philosophy

The opportunity exists as part of the Middlewick scheme to provide greater permeability to the local road network with a new link provided between Mersea Road and Abbot's Road. This will provide an alternative route for some of the existing traffic that switches between the Mersea Road and Old Heath Road routes into the Town and so spread traffic loads across the network.

The site access junctions, which would provide for this link to be provided through the site, are therefore positioned as far to the south as practicable on Mersea Road, and as far to the east as practicable on Abbot's Road, to provide the maximum potential alternative to using the current road network.

As part of this proposal, the way that the junctions are configured into the site has been proposed to re-balance traffic movements, encourage the use of the new route and draw some traffic through the site and away from the western end of Abbot's Road and Mersea Road. This is achieved by changing the priority of Abbot's Road where it meets the site access, so that the eastern section of Abbot's Road turns into the site, as the through route, and becomes the site road. The remaining section of Abbot's Road then "tees" off this new route. At the other end, a new, small roundabout on Mersea Road allows each of the entry arms to have equal status and allows drivers to select either route.

Together, these junction configurations make it easier for traffic that wants to switch to use the new route through

the site, rather than the existing section of Abbot's Road. It emphasises the new route and removes any difficult right turns to allow drivers to use the new route more easily than the current route.

The easternmost section of Abbot's Road remains on its existing alignment. Therefore, over this section, a traffic management and calming scheme would be proposed. This would manage traffic speeds, whilst enhancing the environment – especially around the school. There is no formal pedestrian crossing on this section and it may be appropriate to provide this as part of a more comprehensive scheme for the assistance of the school children accessing the primary school close to the junction with Old Heath Road.

In order to determine how the local highway network would cope with the effects of the development, the performance of four key local junctions has been tested for flows forecast for the 2032 Local Plan completion year.

The junction capatown assessments show that the Abbot's Road / Mersea Road and Abbot's Road Old Heath Road mini-roundabout junctions will be operating well over their design capatown by 2032 – with or without the Middlewick development proposals. However, the effect of Link Road means that there is some relief to the Abbot's Road / Mersea Road junction, and so it can be made to work with some local improvements and widening.

The Abbot's Road / Old Heath Road junction could also be improved with local changes to allow it to accommodate the additional development trips – but it is unclear at this stage how desirable this may be in the context of seeking to promote more sustainable modes of transport. Although it can be shown that the junction can be improved to allow for development trips, and hence there can be confidence that the development is deliverable, it may be that a different strategy would ultimately be adopted at this junction. This would be a matter for consideration in a more detailed Transport Assessment as part of a future planning application.

3.4.2 ECOLOGY - SUMMARY

Ecological survey work has been completed at Middlewick Ranges (both in the Allocation Boundary and the 'Mitigation Land' (land in Defence Infrastructure Organisation [DIO] ownership south of the Allocation Boundary), spanning a 3-year period (2017 – 2020). These surveys have generated a robust understanding of the baseline ecological conditions, sufficient to inform site allocation.

Survey work has necessarily focused on ecological considerations which could become a key constraint to the development; i.e. those which could affect the location or size of the developable area, ultimately affecting either viability or deliverability of the proposals. The methods and results of the surveys can be found in the 'Middlewick Ranges Local Plan Housing Allocation: Ecological Evidence Base Report' (Stantec, 2020). The surveys have found that any development at Middlewick Ranges should respond to three types of ecological constraint: designated sites, protected or notable habitats and protected or notable species. Specifically, the 'key' ecological constraints to the development (at allocation stage), are:

- Internationally designated sites in the wider area (to include Abberton Reservoir Ramsar and Special Protection Area (SPA) Colne Estuary (Mid-Essex Coast Phase 2) Ramsar and SPA, Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar and SPA, and Essex Estuary Special Area of Conservation (SAC);
- Nationally Designated sites - Roman River Site of Special Scientific Interest (SSSI);
- Locally designated sites – Middlewick Ranges and Birch Brook Local Wildlife Sites (LWS)
- Acid grassland;
- Broadleaved semi-natural woodland;
- Habitat suitable for roosting, foraging and commuting bats, including barbastelle (a rare bat species);
- Terrestrial invertebrate habitat; and
- Breeding bird habitat (including that suitable for nightingale).

The development footprint and masterplan have been shaped through careful consideration of these key ecological constraints (Refer to Section 6.9). However, all ecological constraints and opportunities will be given due consideration within an Ecological Impact Assessment at planning application stage.

Fundamental avoidance, mitigation, and compensation measures have been defined to allow the proposals to address the direct and indirect impacts of the scheme. Such measures include, for example:

- Acid grassland creation in the Mitigation Land;
- Provision of walking routes bounded by raised sandy mounds and other features to encourage dog walkers to use the walking routes;
- Provision of a sandy BMX track area to recreate the exposed sand habitat currently favoured by a range of terrestrial invertebrates, and;
- Provision of bolstered field margins and connecting habitat in the Mitigation Land.

The Middlewick Ranges Local Plan Housing Allocation: Ecological Evidence Base Report (Stantec 2020) contains a much greater level of detail in relation to the ecological constraints, their influence on the masterplan, key avoidance, mitigation or compensation measures, and examples of how a net gain to biodiversity can be achieved (as is required under planning policy).

A Biodiversity Metric has been completed which shows the proposals will achieve a minimum of between 9% and 16% net gain to biodiversity. Note this is a precautionary worst case scenario, so at planning stage this value is likely to increase (refer to the Ecological Evidence Base Report (Stantec 2020 for further detail).

3.4.3 FLOOD RISK, SURFACE WATER AND FOUL WATER DRAINAGE - SUMMARY

Overall the risk of flooding from all sources on site is low. The proposed development site would be located almost wholly within Flood Zone 1. The site is assessed as having a low probability of flooding with less than 1 in 1,000 annual probability of fluvial flooding.

There is a small section of the site at the southern boundary within Flood Zones 2 and 3. These areas of increased potential flood risk are confined to the watercourse corridor of the Birch Brook and do not impact the developable areas of the site.

The River Colne is influenced by the tide and can experience tidal flooding; however, flooding does not extend up the Birch Brook to impact the site. The Environment Agency Map for Flood Risk from Surface Water indicates the site is at very low risk of surface water flooding. There are isolated patches within the site, associated with localised topographic lows shown to be at low, medium and high risk of flooding although these areas are limited and isolated.

In conclusion, the overall risk of flooding to the site from all sources is low. The site is almost wholly located within Flood Zone 1. Some areas of the site are at lower and higher risk of flooding, but these risks are considered to be able to be managed through effective and suitable surface water drainage strategy, masterplan development and setting finished floor levels above surrounding ground level where appropriate.

Future development would propose to utilise existing Anglian Water foul and combined sewer infrastructure within the site.

Although a full Flood Risk Assessment will be needed to support any future planning application, at this stage, flood risk, surface water management and foul water drainage are not considered to prevent development of the site.

3.4.4 UTILITIES - SUMMARY

The site lies within an established urban area, and consequently the utility networks in the area are comprehensive and easily accessible on all boundaries of the site. Connection points can be easily defined for all of the different utilities, with most having the option of multiple points of connection.

The only utility that requires any substantive off-site reinforcement work based on preliminary enquires is potable water, where a new main needs to be laid to the works some 1.7km away. The other supplies, for energy, telecommunications and foul water have all confirmed that their networks have sufficient capacity and only localised connection upgrades or changes to establish new points of connection for the site would be required.

Although the costs of providing a new potable water main could be considered as “abnormal” costs, they are well within the range of costs that could be expected for a site of this scale and nature. In addition, the fact that this is the only utility where there may be an off-site cost to achieve a supply is relatively unusual in sites such as this, where upgraded utility provision is often required across most or all of the providers

3.4.5 ARCHAEOLOGY - SUMMARY

The archaeological desk-top study was produced by Wessex Archaeology which assessed the known and potential archaeological resources within the site and the surrounding area. The study has assessed the likely impacts of the redevelopment of the site for residential development. The study did not include intrusive archaeological investigations of the site.

The assessment concluded that there is an archaeological interest within the Site due to the potential for the presence of buried archaeological remains, in particular relating to prehistoric, Roman and civil war and World War II defences. The site has limited previous archaeological investigation within the site, and therefore, the potential for and significance of potential archaeological remains could not be accurately assessed based on the available evidence.

However, given that the developable area is within the north eastern part of the site, with the remainder of the site left for ecological mitigation, the positioning avoids known heritage assets such as the redoubt, pillboxes, spigot mortars and the cropmarks identified in the southern sections of the site. There are areas of interest within the developable area, including the WWII anti-tank ditch, however, these are expected to be incorporated within the design of such as with a new road which follows the anti-tank ditch.

3.4.6 PHASE 1 LAND QUALITY ASSESSMENT STUDY - SUMMARY

The Ministry of Defence appointed Amec Foster Wheeler to carry out a Phase 1 Land Quality Assessment of the site in June 2018. The purpose of the report was to investigate the site for the potential sources of contamination and the overall land quality to ensure it is suitable for redevelopment.

A number of potential current and historical sources of contamination were identified at the site, namely, the firing ranges, the landfill located off-site by the eastern boundary, and the burial pits for burnt remains of animal carcasses and specified ancillary waste associated with Foot and Mouth Disease outbreak in 2001.

The assessment concluded that if the site is to be redeveloped for a residential end use, the potential risks from the site are assessed to be moderate. If the site is to be redeveloped for commercial end use, the potential risks would be considered moderate to low.

Overall, the report concluded that the redevelopment of the site for commercial and residential end use is suitable. Notwithstanding this, any redevelopment of the site would require further investigations into the land quality and the associated potential risks to future site uses and buildings. This would require specific focus into the soil quality for proposed garden areas and open areas of landscaping.





Chapter 4: Vision for Development

In order to support the Local Plan allocation we have developed a concept masterplan, to illustrate how the site could be developed. This is one option for the site development based on our approach to minimise the impact on ecology. Once allocated we envisage further consultation and technical work to create a masterplan as part of a planning application.

The following sections are about our approach to the site and the rules we followed, to create the **illustrative** masterplan.

4.1 Vision Principles

We envisage the new community at Middlewick Ranges as a strong, cohesive and inclusive community. Recognising the green, ecological and naturalistic surrounds, this community will have very close ties to the landscape and neighbouring destinations, maximising the quality of life offered to new and existing residents - it is about building upon strengths, creating a unique identity and bringing added value.

Respect existing site features

- Analyse existing settlement patterns within the wider area to influence the development.
- Retain and enhance existing woodland, trees and hedgerows and watercourses to define high quality amenity space.

Make connections

- Protect existing historical routes and Public Rights of Way within the new development to provide high quality walking and cycling routes with offer a sustainable alternative to the use of vehicles and enhance local distinctiveness.
- Connect with the surrounding footpaths and Colchester Orbital, promoting health and wellbeing and access to the countryside.
- Create a central movement corridor through the site connecting Mersea Road and Abbots Road. Providing good connectivity through the site along with broader route choices for trips in the local area by all modes.

Create a distinctive place

- Define a series of distinct development parcels at a variety of densities linked by pedestrian friendly streets and footpaths.
- Draw the landscape into the site creating functional green space and high quality recreational facilities.
- Protect the existing ecology of the site and enhance and protect areas from public access where required whilst bringing nature into the development, opening up a currently restricted site and forming a connection between the surrounding communities and new green spaces.

Overall Design Principles

Increase Biodiversity

Deliver net gains to biodiversity, whilst maintaining ecological functionality of the Local Wildlife Site and retained habitats

Quality Design

A place where people will aspire to live, with well designed streets and homes which are designed and built to last.

Healthy Lifestyles

Enhance the existing landscape and ecology to create attractive and engaging spaces which promote active, health lifestyles, developed sensitively alongside the sites wildlife and habitats.

Locally Distinctive

A place which is sympathetic to, but distinct from its surroundings, creating a place which is memorable and engaging. A development which places as much importance on the space between buildings as the buildings themselves.

Inclusive Neighbourhoods

Provide a variety of high quality and affordable homes, considering the diverse needs of the existing and new community.

Sustainability

An environment which encourages greener ways of living, considering impacts on climate change, reducing energy demand, resource efficiency and opportunities to promote sustainable transport options.

Connected Communities

A place which is easy to navigate, legible and provides good accessibility to local facilities and services. Consider existing local walking routes and key desire lines and promote and enhance these within the community, to be safe and attractive.

Safety and Security

Ensure the community provides a safe environment at all times of the day and night, with streets and spaces which are active and well-used, carefully lit and overlooked by surrounding homes and uses.

4.2 Concepts to Deliver the Vision



Existing Assets

Existing hedgerows and tree belts will be retained where possible and will be used as the basis of a green structure for the new development. The existing planting will be enhanced and extended to mitigate ecological impacts whilst maintaining functionality of the Local Wildlife Site. The improvements seek to introduce a green character to the neighbourhood and to provide a net gain to biodiversity, through the creation of green corridors and links to the surrounding landscape. The existing archaeological assets will be retained, protected and integrated into the layout.

Open Space

The primary new open space will be at the heart of the development providing a central village green connected by green routes. Green routes connect existing hedgerows and ecologically sensitive areas, and provide a walking route along the former tank line. Landscape to the edges of the site will be enhanced and will provide walking routes, cycle paths and a green setting for the new neighbourhood as well as a separation to existing properties. Smaller green spaces, play areas and parks will be integrated with the new development, providing opportunities for sports, play, community events and community gardens.

- Site Boundary
- Ecological mitigation land within MOD land ownership
- ▶ WWII tank line
- Heritage / archaeology assets
- ≡ Acid Grassland Habitat
- Surrounding green assets
- Existing hedgerows, trees and woodlands
- Expanded hedgerows, trees and woodlands
- - - Colchester Orbital route

- Proposed green corridors
- Village green
- Proposed focal spaces
- Proposed sports pitches



Connectivity

Primary movement through the site will be provided by a primary road connecting Mersea Road and Abbots Road. This road will serve as a local distributor, relieving congestion on the Mersea Road / Abbots Road Junction.

Accessibility to the surrounding area with connections to existing footpaths, cycleways and Public Rights of Way will be provided to promote sustainable transport routes. Opportunity for a new bus stop will be provided at the centre of the new community to promote use of public transport.

- ➔ Primary road
- Potential new bus stop
- ➔ Strengthened connections to the surroundings

Community Focus

Opportunity for a wide range of facilities will be provided to support the new community. These could include shops, homes, recreational facilities, education and opportunities for community use spaces. There is potential within the wider site for green community uses.

- Village green
- Local centre
- Primary school
- Proposed sports pitches
- Potential green community uses

5



Development Parcels

The new community will consist of a series of neighbourhoods set within the green structure. Residential densities will vary throughout the site, responding to the surrounding context and landscape setting and to create a varied character.

The new community aspires to be inclusive and inter-generational allowing for a range of property types and tenures for all ages to create a more resilient and diverse scheme.

■ Developable parcels





Chapter 5: Masterplan Framework

This chapter delivers the concept masterplan for Middlewick Ranges including green infrastructure, open space, community facilities and housing densities.

This masterplan has been prepared to demonstrate that the site can be allocated for 1000 new homes. It supports the ecological mitigation work demonstrating that a net gain in biodiversity can be achieved. It provides confidence on site deliverability, and includes solutions for local infrastructure.

We anticipate the principles within this section can be included within adopted Policy to ensure the future development of Middlewick Ranges has a holistic and integrated design approach which can continue the transformation of the Colchester area and surrounding settlements, promoting benefits for existing and new communities as well as the surrounding landscape.

5.1 Concept Masterplan

To ensure that Middlewick Ranges delivers a balanced community, with on-site opportunities to live and work, a range of land uses will be provided to provide day-to-day facilities for new and existing residents. Education, and community uses will be provided, set within a high quality landscape setting, to create a sustainable place for people to live, work and play. The adjacent diagram highlights the proposed land uses within the context of the existing uses within the local area.

The following land uses are to be considered within the new community:

- 1 **Residential:** the development will provide approximately 1,000 new homes including a mix of housing typologies, tenures and affordability.
- 2 **Education:** a new primary school is proposed at the heart of the community, within walking distance of the new neighbourhood and the local centre.
- 3 **Local Centre:** the local centre will be a central hub for new residents to meet and will provide day-to-day facilities with the potential for retail, leisure and community amenities.
- 4 **Employment:** through provision of the local centre and primary school, delivery and maintenance of the development a range of job and business opportunities will be provided within Middlewick Ranges.
- 5 **Integrated Living:** a range of housing types with older and younger people living next to each other to forge a sense of neighbourliness between the generations and a strong sense of community.
- 6 **Green Community uses:** the new development will provide a range of outdoor spaces, including allotments, play spaces, sports pitches, amenity green spaces and natural and semi-natural open spaces. In addition there are opportunities for integration of green community uses within the allocation site and ecological mitigation land. These could include, a BMX track, farm school, woodland cemetery, community orchard among others.



Integrated living: older and younger residents living together



Local centre: the heart of the new community

KEY

 Site boundary	 Proposed sports pitches
 Ecological mitigation land within MOD land ownership	 Proposed focal spaces
 Residential	 Allotments
 Education	 Existing hedgerows, trees and woodland
 Local centre	 Proposed green corridors
 Primary road	 Enhanced hedgerows and tree lines
 Vehicular site access	 Key grassland habitat
 Indicative orbital route	 Heritage asset and setting to be sensitively incorporated
 Public Right of Way (footpath)	
 Public Right of Way (bridleway)	
 Potential for green community uses	
 Village green	



5.2 Green Infrastructure & Open Spaces

The landscape strategy is designed to integrate the new development with the surrounding area. Existing features such as hedge lines, tree belts and water courses will be retained, to form a framework of green infrastructure that respects the character of the existing landscape and supports nature conservation.

The key objectives are:

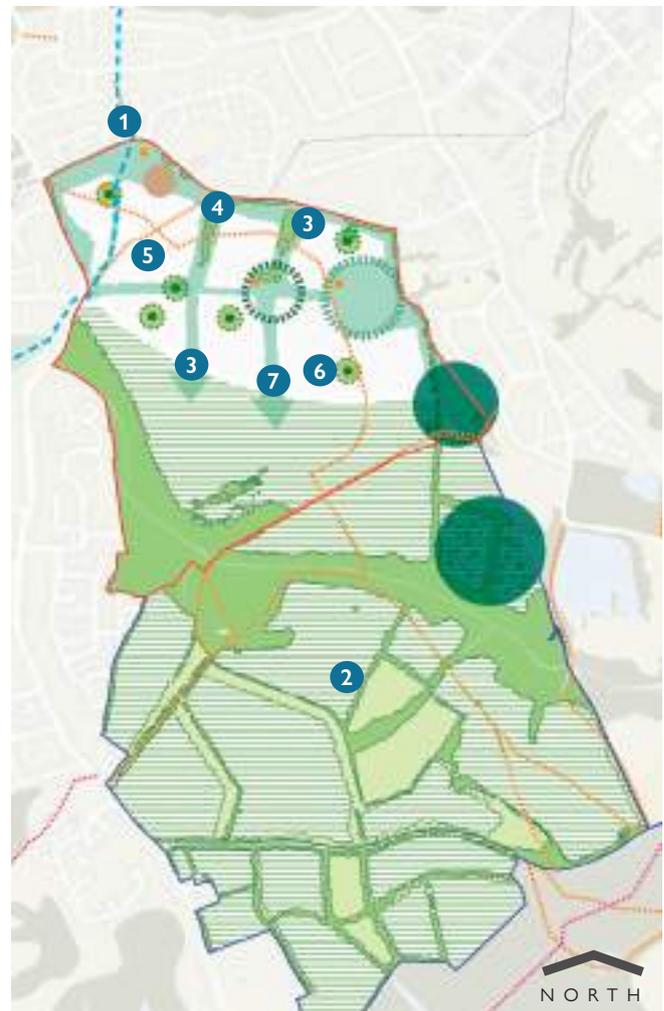
- 1 Strengthen connections:** Provide access to cycle and footpath connections to the surrounding residential areas, local facilities and the countryside beyond;
- 2 Ecological Enhancement:** Deliver net gains to biodiversity, whilst maintaining ecological functionality of the Local Wildlife Site and retained habitats. Sensitively manage recreation to limit habitat degradation, whilst providing access to nature, including well appointed footpath routes. Integration and fine enhancement of key features of the site;
- 3 Linear greens:** Linear green corridors and parks will be created that extend and reinforce existing hedges and ditches to form linear parks. They will be easily accessible to the new and existing communities and cater for all ages all year round. They will contain gardens, growing areas and orchards, areas of play, outdoor gyms and fitness trails and a series of sports pitches;
- 4 Existing Hedges and Tree Lines:** Hedge and tree lines will be protected and enhanced with new native planting to reinforce the existing landscape character;

Green Streets and Avenues: A network of green

- 5** streets will have a green character containing trees, planted verges and swales and will support low traffic volumes and speeds to encourage walking and cycling. The main spine road through the development will be lined with avenue trees and will contain wide planted verges and hedges to create a green and sheltered character to the development;

Neighbourhood Greens: Within the development a

- 6** series of recreational green open spaces will be formed providing immediate access to open space for residents. These are envisaged as open lawns and areas of planting.



KEY

- | | |
|--|---|
| Site boundary | Proposed focal spaces |
| Ecological mitigation land within MOD land ownership | Formal play spaces |
| Indicative orbital route | Allotments |
| Public Right of Way (footpath) | Existing hedgerows, trees and woodland |
| Public Right of Way (bridleway) | Proposed green corridors |
| Potential for green community uses | Targeted habitat creation including enhanced hedgerows and tree lines |
| Village green | Acid Grassland Habitat |
| Proposed sports pitches | |

- 7 Sustainable Urban Drainage System (SUDS):** Swales and attenuation ponds will form part of the drainage infrastructure and will be integrated into the linear green corridors and other public spaces with areas of natural landscape.

The proposed masterplan seeks to provide large areas of public open space, as required by Colchester Borough Council. The adjacent plan shows the indicative location of each open space typology within the proposals.

Green corridors will accommodate recreational activities within a natural setting, and will be of appropriate widths. These widths are anticipated to vary across their length, subject to design and existing landscape features, however minimum widths are proposed below. Vehicular routes are excluded and would be in addition to the minimum width.

As part of this strategy protected hedgerows will be incorporated into natural / semi-natural open space or along the edge of amenity green space.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Natural / semi natural open space
- Outdoor sports facilities
- Allotments
- Other public open space comprising:
 - Parks and gardens
 - Amenity green space
 - Provision for children
 - Provision for teenagers
- ⊙ Village green (included in amenity green space)
- 1 North - South Corridor minimum width 30m
- 2 East - West Corridor minimum width 15m
- 3 Orbital corridor minimum width 10m



The below table provides a breakdown of the minimum requirement for each open space typology, as required by Colchester Borough Council, in comparison with the indicative quantum proposed within the masterplan.

Public open space requirements		Minimum area required (ha)	Area provided (ha)	Difference (ha)
■	Natural / semi natural open space (9.83 ha per 1,000 population)	22.61	40.26	+17.65
■	Outdoor sports facilities (1.50 ha per 1,000 population)	3.45	3.50	+0.05
■	Allotments (0.2 ha per 1,000 population)	0.46	0.46	+0.00
■	Parks and gardens (1.76 ha per 1,000 population)	4.05	9.25	+2.43
	Amenity green space (1.10 ha per 1,000 population)	2.53		
	Provision for children (0.05 ha per 1,000 population)	0.12		
	Provision for teenagers (0.05 ha per 1,000 population)	0.12		
TOTAL		33.34	53.47	+20.13

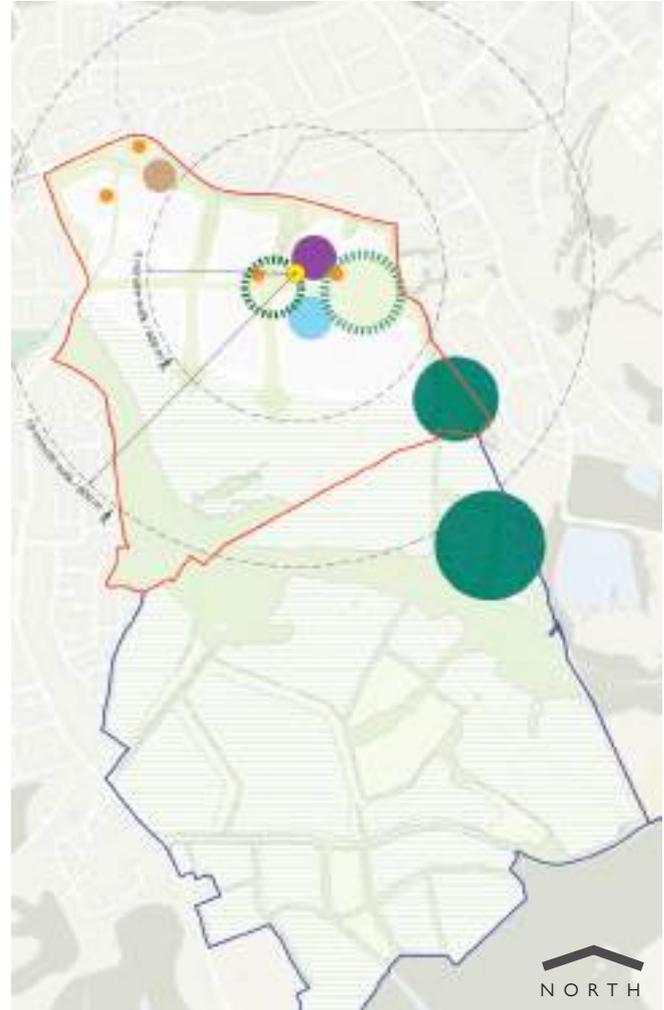
5.3 Community Uses

Middlewick Ranges is expected to deliver 1,000 homes. A new local centre providing a range of community services and opportunities will therefore be created to support this new neighbourhood. A primary school is amongst the facilities offered as well as a village green at the heart of the development to allow public spaces, including a community square, which are conveniently accessible for both new residents of existing surrounding settlements.

Recreational and sports facilities are amongst those included in the development with potential for green community uses to the south of the site. These could include a woodland cemetery, an arboretum, a farm school, BMX track or community garden.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Local centre
- Primary school
- Sports pitches
- Formal play spaces
- Allotments
- Potential for green community uses
- ⊙ Village green
- Community square



Community orchard encouraging local stewardship



Arboretum



Memorials in a green setting



Sports grounds for recreation



A memorial arboretum set in natural landscape



BMX tracks



Farm school, providing education in an agricultural setting



Community allotment for growing vegetables



Woodland cemetery

5.4 Housing & Densities

The masterplan for Middlewick Ranges creates a sustainable and well balanced community which makes a significant contribution towards meeting the housing demand. Creating a variety of types, size and tenure of all homes will enable Middlewick Ranges to become an inclusive community with strong linkages to the surrounding environment and context.

A range of densities are proposed within the masterplan in order to create a varied character. Lower density housing will be located on the southern edge of the Site with the higher densities fronting the primary road, and leading to the local centre which reflects the highest density and mixed use section within the masterplan. The adjacent plan indicates the disposition of densities proposed within the layout.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Low density (25 dph)
- Medium density (35 dph)
- Medium - high density (45 dph)
- High density (60 dph)



The below table provides a summary of the total homes which could be delivered through the redevelopment of Middlewick Ranges.

Density band	Density (maximum dph)	Developable area (ha)	No. of homes
Low	25	5.67	142
Medium	35	11.66	408
Medium to High	45	8.40	378
High	60	1.21	72
TOTAL		27.29	1,000



Medium density areas connecting to play spaces



Medium density areas to have a mix of semi-detached and terraced housing



Lower density residential to face natural/semi-natural open space



High density residential integrated with retail and community uses



Provide spaces of interest fronted by medium-higher densities



Creating character within the lower density blocks

5.4.1 LOW DENSITY

Softer, low density edges up to 25 dwellings per hectare create a character appropriate to the landscape setting and enable a transition between residential development and the ecologically sensitive natural/semi-natural open space to the south. A higher proportion of detached and semi-detached homes are anticipated to be located in these areas.

These low density areas are also proposed around the southern edge, overlooking swales and other landscape features.

The design approach of these areas will also include strong connections to surrounding open spaces, tree-lined streets, properties around shared surfaces and quiet streets.



KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Low density (25 dph)



Low density residential overlooking open space, South Broadbridge Heath



Low density residential with shared surface at Windlebrook, Surrey

5.4.2 MEDIUM DENSITY

Medium density up to 35 dwellings per hectare will serve as a gentle transition between low densities areas and medium-high densities.

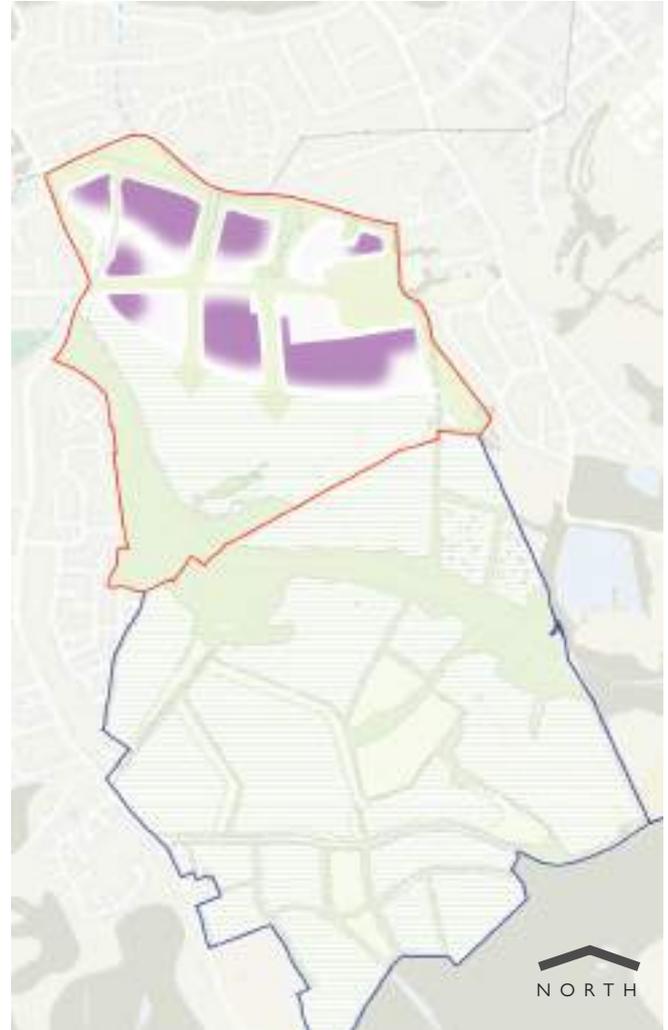
The design approach for the medium density blocks will comprise a mix of semi-detached and terraced houses.

Semi-detached houses will be located to respond to the very low density areas in order to provide a smooth transition between different areas.

Continued strong frontages will face new open spaces and green corridors and will ensure maximum outlook onto valuable areas, whilst encouraging passive surveillance onto streets and open spaces.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Medium density (35 dph)



Woodstock Street, Hull.



South Broadbridge Heath, Sussex.

5.4.3 MEDIUM/ HIGH DENSITY

Medium density areas of up to 45 dwellings per hectare will be concentrated along the primary road corridor, which is the central axis through the Site.

These areas will be developed with efficient semi-detached and terraced typologies, alongside some apartments.

Facing existing and proposed open spaces, typologies with strong and continuous frontages will be proposed in order to maximise views and overlooking towards these green areas.



KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Medium - high density (45 dph)



South Broadbridge Heath, Sussex



Bell School, Ninewells, Cambridge

5.4.4 HIGH DENSITY

High density areas of up to 60 dwellings per hectare will be located at the local centre, which lies on the primary road.

This area will be predominately developed with apartments, including affordable flats and starter homes, which help to meet local housing needs. Taller elements can overlook the primary road and community square, acting as a landmark.

Terraced and mews typologies can also potentially located here.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  High density (60 dph)



Willow Barns, Stoke-on-Trent



Bluebell Park, Alamein Road, Merseyside

5.5 Local Centre

The local centre is to be the community hub for the development and is located along through route link provided across the site so as to be equally accessible to the existing and new communities.

This encourages activity throughout the day by locating residential homes on the upper floors, with non-residential uses at ground level. It is proposed to maximise development at this heart of the community.

The local centre is to maintain a defined and active frontage to the proposed primary road and community square. This allows the community square to be a key focal point for the whole development, where community events can take place.

Potential non-residential uses at the local centre include:

- Small-scale retail, catering for residents' day to day shopping needs;
- Community facilities such as GP practice, a nursery, community centre
- Restaurants;
- Office space subject to demand.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Local centre
- Village green
- Community square



Local centre with a community square



Willow Barns, Stoke-on-Trent

5.6 Education

There is a potential to provide a 2ha 2-form entry primary school to serve the existing and new community.

The school has been positioned within close proximity to the local centre and sports pitches, creating a central hub of community facilities within a 10-minute walk of all new homes in the development. The school will include new playing fields and recreation areas.

The school is adjacent to the proposed east-west green corridor on the former World War II tank line, creating a landscaped pedestrian link to the existing Monkwood Junior and Infant Schools and Thomas Lord Audley School just west of the site.



KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Primary school
- ▬▬▬▬ Green corridor (former World War II tank line)



Beatrix Potter Primary School



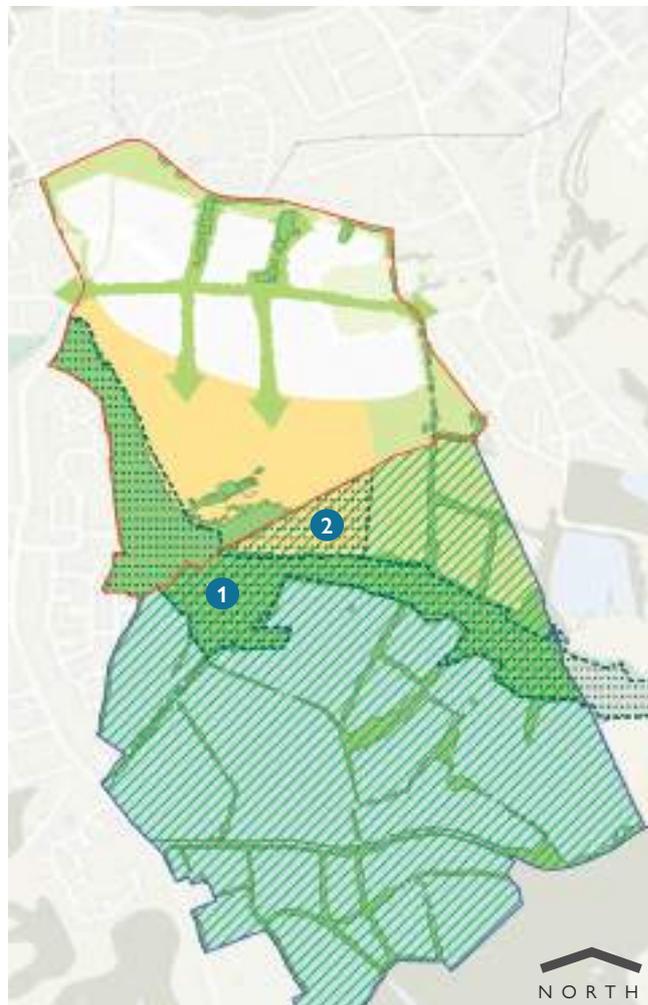
Weston Green School

5.7 Ecology

The Site and immediate vicinity support a range of habitats, including broadleaved semi-natural woodland, acid grassland, other grassland types and scrub.

The masterplan has been ecologically informed throughout all stages of its preparation and refined in response to key ecological findings since 2017. It minimises ecological impact where possible, making provision for long term ecological functionality and landscape scale connectivity. Key elements of the masterplan include:

- Focusing the development footprint within the habitats of least ecological value, and which are of least value to a range of species;
- Retention of Birch Brook Local Wildlife Site in its entirety, with a buffer from development;
- Retention of approximately 30 ha of the Middlewick Ranges LWS boundary, prioritising the areas of higher ecological value, and ensuring retained areas remain well connected in the landscape;
- Provision of substantial green corridors (comprising retained and new habitats) throughout the built footprint of the development to facilitate landscape scale connectivity for bats, birds and other species;
- A stepped built form in both density and typology, to minimise ecological impacts associated with a 'hard' development edge.



Acid grassland on existing ranges

KEY

- | | |
|---|---|
| Site boundary | Mitigation Land to be subject to a series of proposed ecological enhancement (details of enhancements to be agreed) |
| Ecological mitigation land within MOD land ownership | Existing acid grassland (pre development) |
| Birch Brook Local Wildlife Site | Existing arable grassland (pre development) |
| Reorientated area of Middlewick Local Wildlife Site | Existing poor semi-improved grassland (pre development) |
| Proposed green corridor | |
| Bolstered broadleaved semi-natural woodland, trees and hedgerows (post development) | |

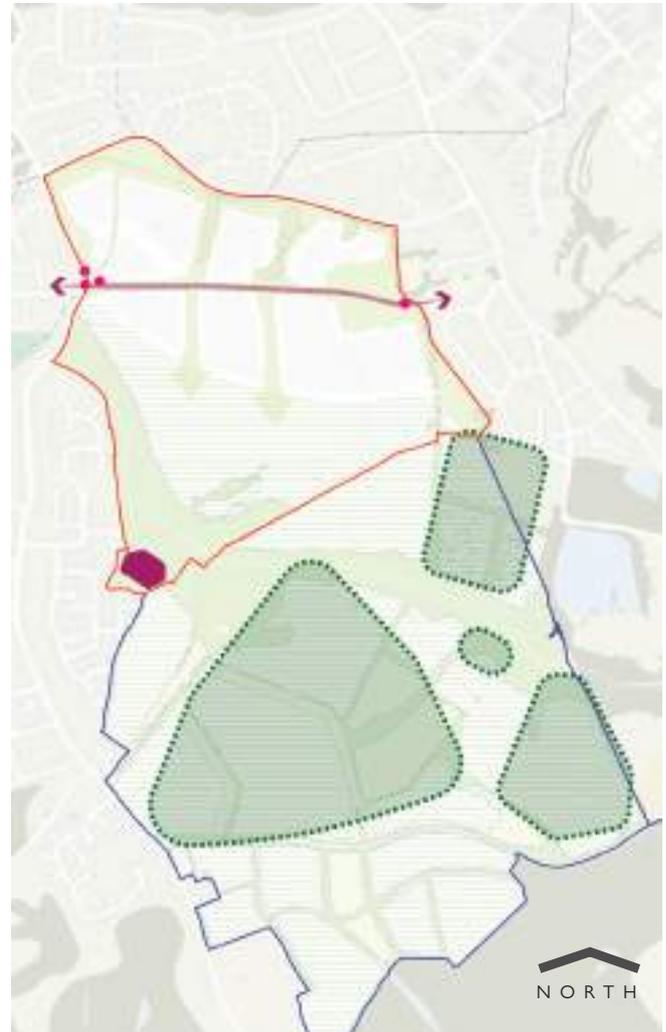
5.8 Heritage Approach

A heritage strategy also helped inform the masterplan and includes the following key principles:

- Retain and enhance the landscape setting of the World War II pill boxes;
- Create an east-west green corridor on the alignment of the former World War II tank line. This creates access and a physical link between the pill boxes. Interpretive signage could be installed as part of heritage trail;
- Incorporate the redoubt sensitively within the landscape proposals as part of a heritage-led strategy;
- A number of crop marks have been identified, primarily outside the allocation boundary where ecological enhancements are proposed, and will remain in use by the Ministry of Defence (MOD);
- Should archaeological remains be discovered during the planning application stage they will be sensitively assessed and incorporated as appropriate.

KEY

 Site boundary	 Redoubt
 Ecological mitigation land within MOD land ownership	 Former World War II tank line
 World War II pill box	 Area with crop marks



Enhanced landscape setting of the former tank line, with interpretive signage



Wayfinding signage as part of a heritage trail

5.9 Sustainable Transport

5.9.1 BUSES

The new development would benefit new bus routes along the primary road which connect with the existing bus network.

The location of various bus stops at the heart of the site promotes sustainable connectivity to the local centre and primary school from the surrounding area.

The existing bus stops on the Site's western boundary would require relocation and improvements in order to provide access into the site from Mersea Road.

These bus stops will ensure all residents are within a 5-minute walk, promoting sustainable transport connectivity to Colchester Town Centre and Rail Station and other key destinations in the wider area.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- - - Existing bus route
- Proposed bus route
- Existing bus stop
- Proposed relocated bus stop
- Proposed bus stop



New bus route along primary road



Bus stop in Colchester

5.10 Access & Movement

5.10.1 VEHICULAR MOVEMENT

The development will include a hierarchy of streets ranging from primary roads to less formal streets with pedestrian and cycling priority. The adjacent diagram is indicative and shows how the street hierarchy works.

The new primary route can be designed to encourage its use by through traffic, to share the traffic load across the local network, providing alternative connection between Mersea Road and Abbot's Road in order to relieve congestion at the existing Mersea Road / Abbot's Road junction.

Secondary and tertiary streets feed into the primary road from each neighbourhood, creating a clear hierarchy of streets.

Streets on the very edge of the development and those facing green corridors will potentially be shared surfaced lanes rather than through roads to better integrate with the landscape setting.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
-  Indicative site access point
- Primary road
- Secondary road
- ⋯ Tertiary road



Lane beside open space, South Broadbridge Heath



Abbots Road with landscape improvements

5.10.2 PEDESTRIAN & CYCLE MOVEMENT

The development will provide new pedestrian and cycle routes that will be located along green corridors and open spaces, connecting with existing Public Rights of Way. Cycle stands at strategic locations such as the community square will be encourage cycling among residents.

Primary and secondary roads will have a dedicated footway/cycleway on one side of the road corridor, separated from the road by a tree lined verge. A footway will be provided on the other side of the road.

Tertiary streets will be pedestrian and cyclists priority, with cyclists sharing the road with vehicles. New “Toucan” crossing points will be provided on Mersea Road, Abbots Road and Old Heath Road to improve the safety of crossing these routes and to tie the new community and existing communities together and encourage sharing of facilities.

KEY

- Site boundary
- Ecological mitigation land within MOD land ownership
- Green corridor with footpaths
- Proposed footpath
- ⋯ Off-road cycle path / footpath
- Segregated cycle path
- - - Indicative Colchester orbital route
- - - Public Right of Way (footpath)
- - - Public Right of Way (bridleway)
- ↔ Pedestrian crossing point



Cycle stands



Off-road cycle path, shared with pedestrians

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5.11 Health & Wellbeing

Generously landscaped, diverse and well-maintained green spaces will promote good outdoor air quality, improve existing ecological habitats, enhance biodiversity and support access to nature that promotes good mental health and wellbeing.

At the heart of the vision for the new community at Middlewick Ranges is a strategy to create an inclusive and intergenerational community. The vision seeks to ensure positive social value outcomes to improve the quality of life for residents who of the new, and existing communities, through the creation of a neighbourhood that is resilient, sustainable, thriving, inclusive, and healthy. We hope to create an inclusive community that maximises the potential of every individual within the community, and to ensure that social wellbeing are at the heart of our proposals.

RESILIENT

- Providing robust infrastructure and strong communities to build resilience to future climate and socio-economic change
- Ensure longevity of designs; and allow for future adaptation to changes in use and demand
- 'Electric revolution' ready features such as electric charging points
- Build a resilient communities through the provision of shared spaces and a vibrant local centre and mix of ages to strengthen community cohesion
- Creation of a development in conjunction with the community and ensure it provides for a diverse range of wider community groups, promote community engagement and develop a strong sense of local ownership
- A development which respects heritage, whilst drawing on the heritage of the surrounding area.

SUSTAINABLE

- Designed for resource efficiency, ecological enhancement and a better quality of life for future generations
- Homes will be built to high energy efficiency, maximising opportunities for clean energy, on-site renewable energy generation, energy storage and consideration of district energy systems.
- Many existing ecological and green and blue features within the site have been retained within the masterplan and will be enhanced to create biodiversity net gain, alongside active and vibrant public greenspaces.
- Implementation of electric bike schemes and connectivity to the Colchester Orbital and new leisure routes will promote active lifestyles and reduce car usage.
- Opportunities for allotments, community orchards and food growing schemes, including fruit trees promote community cohesion.
- Habitat enhancements and creation will target species of concern relevant to the survey work completed. This will include targeting species of local concern.



THRIVING

- Creation of flexible workspaces and shops to provide a platform for local businesses to flourish and engage with the new community
- Consideration of opportunities to engage with local businesses and employ local labour to create job growth

INCLUSIVE

- A focus on inclusive community creation, ensuring that commercial and housing provision is designed with future residents and vulnerable groups in mind.
- The vision provides the opportunity to create a vibrant and active community that will bring together a diverse range of people from all ages and walks of life, with accessible facilities, local shopping and learning, whilst sustainably connected to Colchester and existing employment centres
- Accessible, and walkable public realm and ecological corridors aim to enhance connectivity to adjacent neighbourhoods through animated, safe and secure, routes that encourage positive social interaction and provision for cycling.
- Opportunities for innovative housing typologies, including intergenerational living and multi-generational homes will bring together different generations and enable them to live harmoniously together.
- Provide opportunity for flexible community spaces and potential co-working facilities providing opportunities to support local businesses and entrepreneurs and enable flexibility for young families.

HEALTHY

- Promoting physical and mental wellbeing
- Creation of a local centre that is well connected by sustainable transport, cycle paths and safe, secure walking routes will bring the community together.
- Maximise the sustainable location of the site, proximity to buses, cycle routes and the Colchester Orbital to encourage healthy and sustainable commuters
- Promote good air quality throughout the development through provision of electric car charging infrastructure, generous landscape corridors, new tree planting and well planned cycle routes.
- Promotion of healthy eating through provision of allotments and opportunities for community growing.
- The integration of landscape corridors, outdoor fitness trails and social spaces for 'natural' interaction - not only with other people but also with nature - to assist in the promotion of mental health
- Playable, safe landscapes, connecting surrounding local open spaces and parks to promote a better connection with nature and active living.



5.12 Summary

Middlewick Ranges is a unique location that will require a sensitive approach to redevelopment. There is an opportunity to provide, in one sustainable location; new homes, education and a local centre within a well-established landscape setting.

The key benefits of proposals for the Site are:

-  1,000 new homes
-  Over 63% of the Site will be open space, complemented by an additional ecological areas
-  The net developable area reflects approximately 78% of the currently fenced Ranges. Therefore there will be an increase of publicly accessible land, following removal of the fence currently enclosing the Firing Range.
-  A new local centre with potential community facilities and small-scale retail
-  A new 2 form-entry primary school to support local need
-  Improved sustainable transport connections to Colchester town centre and the surrounding area
-  A network of pedestrian and cycle routes which connect to the existing Colchester Orbital







MIDDLEWICK RANGES

APPENDIX

DECEMBER 2020





Defence
Infrastructure
Organisation

Planning and Development



Masterplanning
Landscape



Technical



PRP Job Reference
AA6742 Middlewick Ranges

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This document accompanies the Vision for Development at Middlewick Ranges. This appendix provides additional technical and illustrative plans which show one way of delivering 1,000 homes at Middlewick Ranges.

1.1 Framework Masterplan

Middlewick Ranges will be a new landscape led development. The masterplan includes new community facilities which sit within a rich setting of retained and enhanced habitats.

The organic form and layout of the proposed masterplan responds to the retention of key landscape and heritage assets which have been woven into the Site. The concept has been designed to respond to the existing connections surrounding the site and new links will be designed to prioritise pedestrians providing on-street cycling and cycle parking to promote sustainable transport modes which can connect to the surrounding areas.

The proposal for Middlewick Ranges accommodates the following land uses:

- 1 Residential: the development will provide a minimum of 1,000 new homes, including a range of types and tenures;
- 2 Education: the development will provide a new 2 hectare 2-form entry primary school;
- 3 Local centre: a mixed use area situated along the primary road at the heart of the new development, which could include retail, leisure and community uses.

Key objectives of the Middlewick Ranges framework masterplan are:

- 4 Connect the community with surrounding assets and landscape features through green routes which will incorporate existing green and blue features stitching the wider landscape back into the site.
- 5 Ensure, through a landscape and ecology led strategy, that key ecological habitats (and species they support) are retained and protected;
- 6 Acknowledge and incorporate the heritage of the Site, whilst also enhancing its character through high quality design;

- 7 Provide new sports pitches and open spaces within the site for use by both new residents and the wider surrounding community;
- 8 Introduce a new village square at the new local centre to create a vibrant heart of the development;
- 9 Improve bus connections to the town centre, with bus stops at key locations, as part of an overall strategy to promote sustainable transport modes;
- 10 Provision of new pedestrian and cycle routes through the site to create an opportunity to promote connections to surrounding area.

KEY

 Site boundary

 Ecological mitigation land within MOD land ownership



1.2 Illustrative Character



Aerial view of the proposed development



Local centre and village square at the heart of the development



Houses overlooking sports pitches



Lower density residential overlooking open space to the south



Green corridors fronted by higher density residential



View of Abbot's Road; new houses and open space integrating with existing houses



View from Mersea Road; World War II pill boxes and tank line incorporated into pedestrian routes and landscaping

1.3 Public Open Space

Middlewick Ranges will be a sustainable community with its landscape setting playing an integral part. Existing landscape assets, including hedgerows and trees will be maintained and enhanced where possible to define the configuration of the built form and form a coherent green network.

The quantum for green infrastructure are set out in the below table. The Colchester Open Space Quantity Standards has been used to inform the public open space strategy. The table highlights the minimum policy requirement for 1,000 homes, which is the maximum number proposed for this development.

As shown in the table, the scheme will meet or exceed the Council's open space requirements for each public space typology.

KEY

-  Site boundary
-  Ecological mitigation land within MOD land ownership
-  Natural / semi natural open space
-  Outdoor sports facilities
-  Allotments
-  Other public open space comprising:
 - Parks and gardens*
 - Amenity green space*
 - Provision for children*
 - Provision for teenagers*
-  Local Centre
-  Education

Public open space requirements		Minimum area required (ha)	Area provided (ha)	Difference (ha)
	Natural / semi natural open space (9.83 ha per 1,000 population)	22.61	40.26	+17.65
	Outdoor sports facilities (1.50 ha per 1,000 population)	3.45	3.50	+0.05
	Allotments (0.2 ha per 1,000 population)	0.46	0.46	+0.00
	Parks and gardens (1.76 ha per 1,000 population)	4.05	9.25	+2.43
	Amenity green space (1.10 ha per 1,000 population)	2.53		
	Provision for children (0.05 ha per 1,000 population)	0.12		
	Provision for teenagers (0.05 ha per 1,000 population)	0.12		
TOTAL		33.34	53.47	+20.13

The table is breakdown of the land uses proposed at Middlewick Ranges, which shows that public open space accounts for 63.42% of the site.

Land Use	Area (ha)	Percentage of Site Allocation Area (%)
Net residential development area (including Local Centre 1.21 ha)	26.94	31.96
Education	2.00	2.37
Primary road	1.90	2.25
Public open space	53.47	63.42
TOTAL SITE ALLOCATION AREA	84.31	100

