



Chelmsford
Garden
Community

CGC Zone 1

Green Infrastructure Strategy

October 2022

Bradley Murphy Design

BMD

for



PTARMIGAN LAND



LANDSCAPE ARCHITECT

BRADLEY MURPHY DESIGN LTD
6 The Courtyard, Hatton Technology
Park, Dark Lane, Hatton, Warwickshire,
CV35 8XB
Company No: 7788475

www.bradleymurphydesign.co.uk

MASTER DEVELOPER

Ptarmigan Chelmsford A Limited
The Ptarmigan Group
2 Frederic Mews
London
SW1X 8EQ

www.ptarmiganland.com

Project number	BMD.21.071
Report number	BMD.21.071.RP.001
Created by	CS/GM
Checked by	JJ
Signed off by	RW
Issue type	PLANNING
Issued	OCT' 2022

This report is the property of Bradley Murphy Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without the written consent of Bradley Murphy Design Ltd.



CONTENTS

1	1 INTRODUCTION & CONTEXT 1.1 Aim and Purpose of the Strategy 1.2 Site Location and Description 1.3 Planning Context
2	2 GREEN INFRASTRUCTURE CONTEXT 2.1 Green Infrastructure Context
3	3 GREEN INFRASTRUCTURE BASELINE 3.1 Landscape & Visual 3.2 Biodiversity & Arboriculture 3.3 Water & Topography 3.4 Heritage 3.5 Constraints & Opportunities
4	4 GREEN INFRASTRUCTURE FRAMEWORK 4.1 Green Infrastructure Vision from the DFD 4.2 Guiding Framework Principles from the DFD 4.3 Green Infrastructure Framework 4.4 Open Space, Play and Recreation Requirements
5	5 GREEN INFRASTRUCTURE STRATEGIES 5.1 Play, Recreation & Sport 5.2 Biodiversity & Nature 5.3 Sustainable Surface Water Drainage 5.4 Productive Landscapes 5.5 Cultural Heritage
6	6 KEY PLACES & SPACES 6.1 Landscape Illustrative Masterplan 6.2 Channels Discovery Park 6.3 Greenways
7	7 CONCLUSION & SUMMARY 7.1 Conclusion & Summary

INTERACTIVE NAVIGATION



This document has been set up as an interactive PDF. Use the symbol in the top left hand corner of the page to navigate back to the contents. The numbered tabs on the left hand side of the page will navigate to the different sections.



1 INTRODUCTION & CONTEXT

1.1 AIM & PURPOSE OF THE STRATEGY

Bradley Murphy Design Ltd. (BMD) has been commissioned by Ptarmigan Chelmsford A Ltd to undertake a Green Infrastructure Strategy as part of the Proposed Development at Chelmsford Garden Community (CGC), referred to as Zone 1. It has been produced to support the Outline Planning Application and to provide an overarching vision for the approach towards the development and management of all Green Infrastructure elements within the area of the Planning Application Site. The Planning Application Site is defined by the red line boundary shown in **Figure 1**.

The Green Infrastructure Strategy and framework presents a holistic approach to natural environment, climate change adaption and resilience, biodiversity, open space, sports, play provision, productive landscapes and health and well-being by reflecting the interconnected nature of these elements. It is intended to present clear and concise guidance to ensure that a wide range of multifunctional Green Infrastructure elements are provided to maximise recreational, ecological and environmental amenity.

It also identifies how Green Infrastructure can accommodate strategic and local planning policies within the scheme and help to optimise its sustainability.

1.2 SITE LOCATION & DESCRIPTION

The Chelmsford Garden Community (CGC) Zone 1 (hereafter referred to as 'the Site') relates to 82.47 hectares of greenfield land located to the north-east of Chelmsford City, within the County of Essex.

The Site currently comprises the remnant Channels golf course to the south, arable farmland to the north and two small pasture fields to the east off Domsey Lane - enclosed on its boundaries by a combination of hedgerows, ditches and lines of occasional trees and/or wooded vegetation.

The Site lies directly to the north of the Beaulieu and Channels Estate (Channels Stage 1) developments - to the north east of Chelmsford. The Site is bound by the A130 Essex Regiment Way to the west, with Wheeler's Hill to the north, and extends to the east where the site is split by Domsey Lane (which is straddled by a small number of existing residential properties).

Domsey Lane runs through the Site from Cranham Road in the north to Pratts Farm Lane in the south and is currently rural in character. However, the majority of the properties and land along Domsey Lane are excluded from the Site area due to separate ownership.

To the south-west of the Site is Essex Regiment Way Business Park accessed from Channels Drive Roundabout and comprises an existing drive-thru McDonalds, Costa Coffee and a Shell Petrol Station. Planning permission was granted in April 2021 (Ref: 20/00071/FUL) for a 2,228sqm foodstore (expected to be Morrisons), a 175sqm café/drive thru, a 118sqm café as well as 16,680sqm of B2/B8 uses with access off Eagle Way.

1

2

3

4

5

6

7



Figure 1. Site location

- Chelmsford Garden Community Zone 1
- Other land under the applicants control



1

1.3 PLANNING CONTEXT

Chelmsford Garden Community (CGC) is allocated in the Chelmsford Local Plan (Adopted May 2020) to deliver an exemplar, comprehensively planned, new, sustainable Garden Community that will provide much needed housing, employment and sustainable travel opportunities within a high-quality landscape setting.

Local Plan Strategic Growth Site Policy 6 (SGS6) requires that development proposals accord with a masterplan that is approved by Chelmsford City Council. For the purposes of SGS6, stage 1 of the masterplan comprises, the following three interrelated core documents:

- Development Framework Document (DFD)
- The Infrastructure Delivery Plan (IPD)
- The Planning Framework Agreement (PFA)

Following adoption by Chelmsford City Council (CCC) the masterplanning documents will bind landowners and promoters together to ensure design quality, delivery and long term stewardship are addressed in a seamless, consistent and comprehensive manner across the Garden Community.

This Green Infrastructure Strategy supports the Stage 2 Masterplan as part of the Outline Planning Application (OPA) and is informed by the Stage 1 documents. Whilst the DFD is a material consideration in the determination of any future planning application, flexibility is required to enable the overall Masterplan to evolve over time in response to more detailed information emerging as part of the Environmental Impact Assessments undertaken.

The DFD provides a comprehensive, thorough and robust framework for delivering CGC that guides and informs the Stage 2 Outline Planning Applications. The DFD sets out Guiding Framework Principles (GFP's) which are specific to the implementation of Policy SGS6. The GFP's will act as the golden rules for the development, providing clarity on how the Local Plan Policy requirements should be translated to achieve a well-designed, sustainable and successful place.

At the heart of the DFD for CGC are two Framework Parameter Plans (shown in **Figures 2 and 3**)

- Land Use and Access and;
- Green Infrastructure

The Land Use and Access Framework Parameter Plan (**Figure 2**) quantifies land uses and establishes indicative alignments of primary elements of the movement network. The Green Infrastructure Framework Parameter Plan (**Figure 3**) differentiates and quantifies the different green infrastructure including open space, parklands and greenways. These two Framework Parameter Plans in turn inform an Illustrative Masterplan based on an indicative development specification that brings to life a representation of how the Garden Community could look.

2

3

4

5

6

7

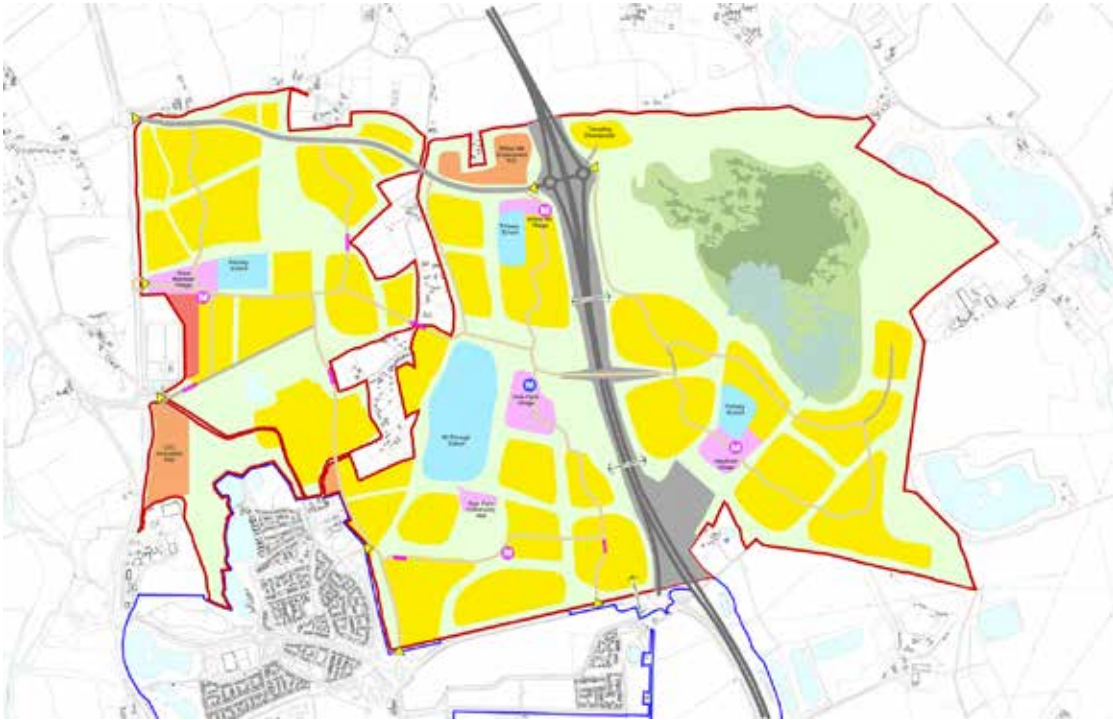


Figure 2. CGC DFD - Land Use and Access Framework Parameter Plan



Figure 3. CGC DFD - Green Framework Parameter Plan



PLANNING CONTEXT

Local Planning Policy

The Site lies wholly within the administrative boundary of Chelmsford City Council (CCC).

Chelmsford City Council's adopted Local Plan (2020) sets out the vision for how the City will develop to 2036 and allocates the Garden Community under **Strategic Growth Site Policy 6 (SGS6)** for a high quality comprehensively planned new sustainable urban extension.

Policy SGS6 outlines the Councils Site specific policy requirements for Chelmsford Garden Community which the Site forms part of, including but not limited to:

- around 3,000 new homes (the wider allocation may have capacity for a further 2,500 homes)
- 45,000sqm of employment
- travelling show people site for 9 serviced plots.
- a new country park
- single carriageway road (or phase 1) of the Chelmsford north east bypass within the site boundary
- new radial distributor road (RDR2) from Essex Regiment Way
- neighbourhood centres incorporating provision for convenience food retail, community and healthcare provision
- provision of a new secondary school and primary schools with co-located early years and childcare nurseries
- appropriate provision of community space and significant new multi-functional green infrastructure

Policy SGS6 requires development proposals to accord with a masterplan approved by the Council. As previously referenced, the CGC Masterplan will be delivered in two stages, with Stage 1 comprising the DFD, IDP and PFA, and Stage 2 comprising the OPA's. The DFD does not supersede any national or local planning policies but provides a clear vision for how they will be applied and implemented in the Garden Community.

Policy SGS6 sets out the following masterplanning principles of relevance to Green Infrastructure and the Site:

Historic and Natural Environment:

- Provide a network of green infrastructure to mitigate the visual, biodiversity and heritage impacts of the development.
- Preserve or enhance the character or appearance of the Little Waltham Conservation Area and its setting.
- Preserve and where appropriate enhance the listed buildings and their settings.
- Provide a generous landscape buffer to preserve the settings of nearby heritage assets (listed buildings).
- Provide suitable SuDS and flood risk management.
- Appropriate habitat mitigation and creation.

Design and Layout:

- Development to be planned around a coherent framework of routes, blocks and spaces that deliver areas of distinct character.
- Layout to provide a coherent network of public open space, formal and informal sport, recreation and community space within the site.
- Integrate historic and landscape features into the surrounding rural and urban context.

Site Infrastructure Requirements:

- Appropriate measures to promote and enhance sustainable modes of transport including a cycle / footpath bridge over Essex Regiment Way.
- New and enhanced cycle routes, footpaths, Public Rights of Way and bridleways where appropriate.
- New multi-functional green infrastructure including public open space, formal and informal recreation, outdoor sports facilities and allotments.
- Appropriate flood risk management measures and SuDS.

Strategic Policy S4 - Conserving and Enhancing the Natural Environment

requires all new development to minimise pollution of the natural environment including potential light pollution from glare and spillage on intrinsically dark landscapes and conservation. New development in particular will be expected to incorporate multifunctional greenspaces which provide for biodiversity, recreation and sustainable travel, whilst helping to reduce pollution through the use of sustainable drainage systems (SuDS).

1

2

3

4

5

6

7

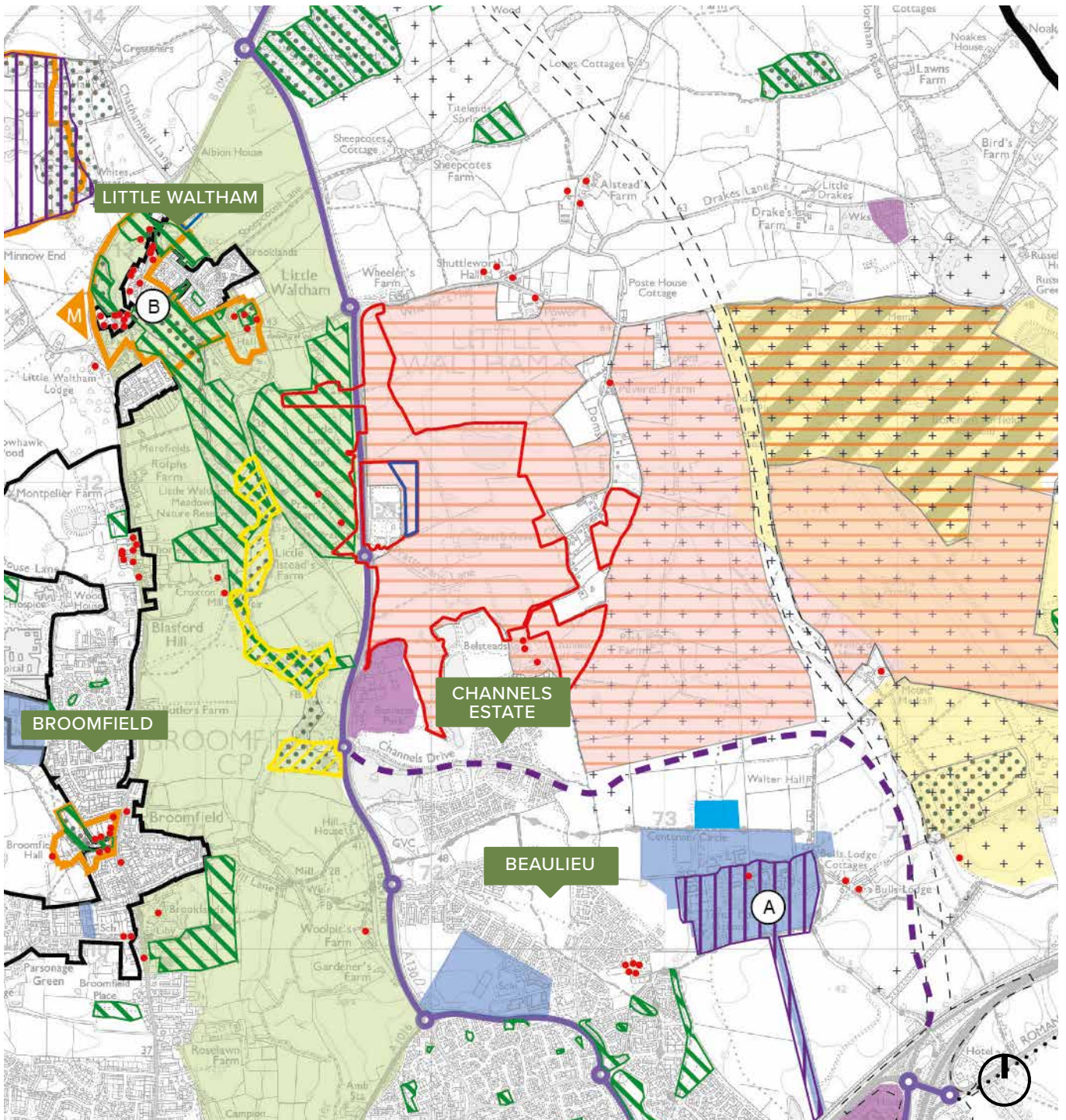






















Figure 4. Planning Policy

Chelmsford Local Plan Adopted (2013 -2036)

- | | | | |
|--|--|---|---|
|  Application boundary |  Proposed country park (SGS3, SGS6) |  Defined settlement boundary (S7, DM2) |  Scheduled monument (S3, DM13) |
|  Other land under the applicant control |  Open space (S11, DM21) |  Radial Distributor Road RDR1 (S9) |  Registered Park & Garden Of Special Historic Interest (S3, DM13)
A. New Hall |
|  Strategic growth site allocation 6 (SGS6) |  Local Wildlife Site (LWS) (S4, DM16) |  Minerals and waste site |  Conservation area (S3, DM13)
B. Little Waltham Conservation area |
|  New garden community for major housing and employment development (SGS6) |  Green wedge (S11, DM7, DM9, DM10, DM11, DM12) |  Existing employment area (S8, DM14) |  Listed buildings |
|  Proposed Chelmsford North East Bypass - safeguarded corridor (S9, SGS6) |  Essex Wildlife Trust nature reserve (S4, DM16) |  Location for primary school | |
| | |  Existing school (DM22) | |



2 GREEN INFRASTRUCTURE CONTEXT

2.1 GREEN INFRASTRUCTURE CONTEXT

An analysis and understanding of the broad principles and aspirations set out in the Essex and Chelmsford Green Infrastructure Strategies will be used to lay the foundations for a strong green infrastructure framework for Chelmsford Garden Community. A review of the following documents has been undertaken to understand, define and record the Green Infrastructure context of the Site and surrounding landscape in order to guide future development and design principles:

- Essex Green Infrastructure Strategy (Essex County Council 2020)
- Essex Green Infrastructure Standards, Technical Guidance (2022)
- The Chelmsford Green Infrastructure Strategic Plan 2018-2036 (2018) (CGISP)
- Essex Wildlife Trust Living Landscape – A Vision for the Future of Essex

The Essex Green Infrastructure Strategy guidance takes a positive approach to enhance, protect, and create an inclusive and integrated network of high-quality green infrastructure in Greater Essex. The design of the Site's Green Infrastructure (GI) will seek to achieve the aims and objectives of the Essex Green Infrastructure Strategy.

The Essex Green Infrastructure Standards, Technical Guidance outlines nine principles of good GI and identifies target measures and indicators to achieve quality and consistency in the provision, management, and stewardship of GI as an essential part of place-making and place-keeping for the benefit of people and wildlife. The design of the Site's Green Infrastructure will consider, apply and reference these GI principles as part of future proposals.

Future development proposals for the Site will seek to achieve the design aspirations from the Chelmsford Green Infrastructure Strategic Plan:

- Protect, enhance and restore Green Infrastructure assets of all kinds, as part of a multifunctional network which reflects the needs and potential of biodiversity, natural and historic landscapes, sense of place, sport and recreation, water management, productive and healthy farming landscapes, climate change adaptation, sustainable movement, and community health and well-being;

- Facilitate greater appreciation and use of the City's Green Infrastructure assets, promoting a sense of place and ownership;
- Realise greater connectivity for people and wildlife across the City through a network of high quality and accessible green spaces and corridors;
- At the landscape and local scales plan and manage networks of natural and cultural assets to conserve, enhance and restore ecosystem function and human well-being;
- Secure a step-change in environmental quality and performance to meet the goals of sustainable development, quality of life enhancement and climate change adaptation; and
- Where appropriate planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure

The Site and wider Chelmsford Garden Community (CGC) area is located within Essex Wildlife Trust (EWT) Living Landscape **'40: Boreham Common'** – a mosaic and grassland habitat. To the immediate west of the Site is Living Landscape **'38: Upper Chelmer Valley'** - a wetland habitat featuring water meadows. Living Landscapes are large areas of the countryside like river valleys, forested ridges, whole estuaries or diverse mosaics of grasslands, hedgerows and heaths and are a key part of Essex Wildlife Trust (EWT) vision for Essex.

The vision for Essex Living Landscapes is to restore these landscapes for both wildlife and people. The Site and the wider CGC area provides a critical opportunity to retain and create Green Infrastructure that promotes and contributes to the Essex living landscape.

1

2

3

4

5

6

7

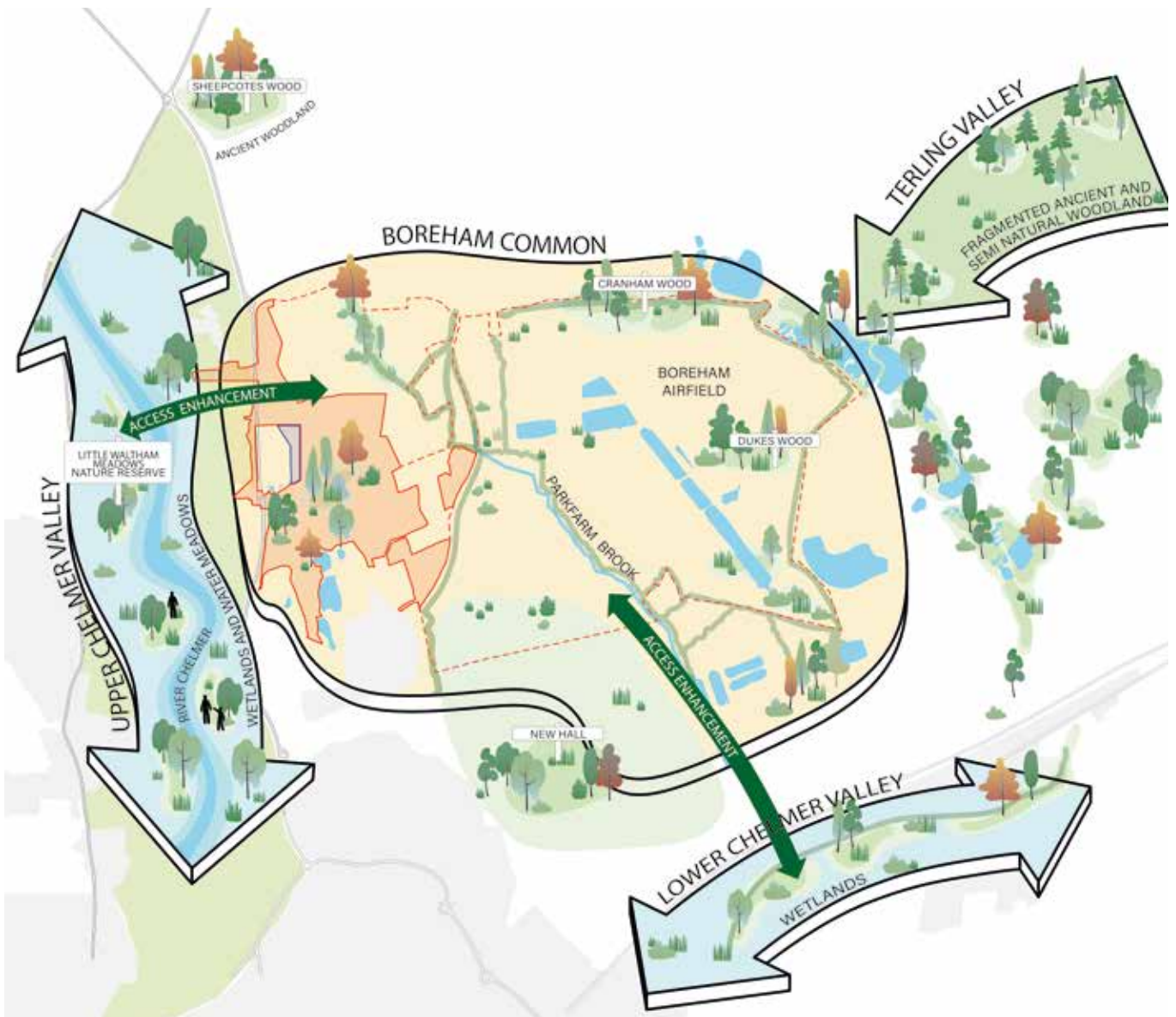


Figure 5. Green Infrastructure Influences



GREEN INFRASTRUCTURE CONTEXT

The Chelmsford Green Infrastructure Strategic Plan (CGISP) sets out the aspirations and opportunities to establish a green infrastructure network across the City and to promote city greening. This will include both green and blue spaces (such as, hedgerows, woodlands, parks, rivers and water courses). Objectives, standards and guidelines for its implementation aim for a City which is more ecologically diverse and robust, better connected and can meet the needs and expectations of its residents, workers and visitors.

The Spatial Strategy: Areas for Intervention plan within the CGISP identifies the Site within **'A2 North East Chelmsford'** an area of significant change. There is an access enhancement **'B1 North East Chelmsford - Upper Chelmer'** identified to the west of the Site linking North East Chelmsford (now referred to as Chelmsford Garden Community) to Chelmer North Green Wedge and the River Chelmer Valley.

To the west of the Site and separated by Essex Regiment Way is the Chelmer North Green Wedge, which follows the River Chelmer and encompasses Local Wildlife Sites including Little Waltham Meadows Nature Reserve. The surrounding green network provides the opportunity to create linkages and connections to the Upper and Lower Chelmer river valleys and green wedges through a network of footpaths, cycleways and green corridors.

There is the opportunity to enhance connectivity for both people and wildlife between River Chelmer Valley to the west and existing public open spaces delivered as part of Channels Estate and Beaulieu to the south. The CGISP outlines specific detailed guidance and opportunities in relation to **'A2 North East Chelmsford'** on designing for Green Infrastructure. Those of relevance to the Site include:

- Provision of access from the community into the Green Wedge of the Chelmer Valley to the west, at the junction of the Essex Regiment Way with Wheeler's Hill and the Chelmer Valley Park and Ride;
- Provision of Green Infrastructure which is intrinsic to the character of the development and leads its design, creating a community which demonstrates the application of Garden Village principles;
- Creation of biodiversity assets which replace those lost through past and new development and form part of the Boreham Common Living Landscape to the east of the Chelmer Valley;
- Enhancement and extension of water meadows, amongst other environmental enhancements, within the Chelmer Valley (centred on the Essex Wildlife Trust Little Waltham Meadows Natural Reserve).



The opportunity exists to support and contribute to Essex Living Landscapes both for Boreham Common - grassland mosaic habitats and the Upper Chelmer through an extension of wetlands through the Site.



The opportunity exists to enhance access links to the Chelmer Valley, across Essex Regiment Way (A130) west and south to Channels Estate and Beaulieu, as part of an interconnected GI network.

1

2

3

4

5

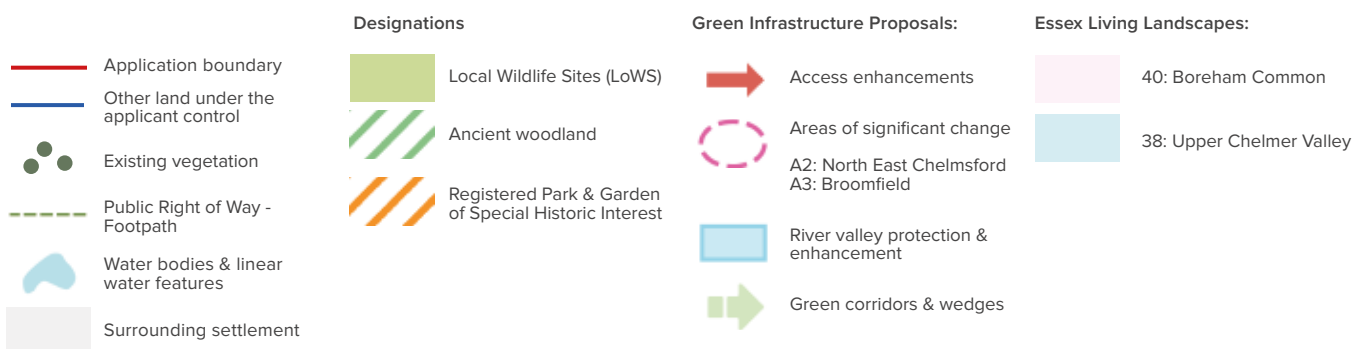
6

7



Figure 6. Green Infrastructure assets & Initiatives

This drawing shows the inherited conditions within and beyond the Site and Chelmsford Garden Community, including the green wedges and corridors, Essex Living Landscapes of the Upper Chelmer Valley and Boreham Common and strategic green infrastructure movement corridors.





3 GREEN INFRASTRUCTURE BASELINE

3.1 LANDSCAPE & VISUAL

LANDSCAPE CHARACTER ANALYSIS

The Landscape and Visual Impact Assessment (LVIA) produced to accompany the Environmental Statement assesses the baseline landscape character and identifies at county level¹ the Site lies within **LCT Glacial Till Plateau** and **LCA B1 Central Essex Farmland** and at a local level² within **B21 Boreham Farmland Plateau**, as illustrated on **Figure 7** opposite.

The Site lies within **LCT Glacial Till Plateau**, described as “a gently undulating glacial boulder clay (till) plateau dissected by major river valleys, predominantly arable with some wooded areas where woodland blocks and hedgerows visually link to form an often wooded skyline”. Hedgerows are strong along winding roads away from major routes, typically comprising Hawthorn, Blackthorn, Ash and Field Maple, with occasional Elm, Oak, Dogwood and Elderberry.

At a finer grain, the site lies within **LCA B1 Central Essex Farmlands**, which can be described as “an extensive area of gently undulating arable farmland bisected by the Chelmer Valley. In long views scattered small woods, copses and hedgerow trees coalesce to create the illusion of a wooded horizon, with local erosion of character due to sand and gravel workings.” The following landscape characteristics relevant to the Site and its local context include:

- Boundaries marked by sinuous thick hedgerows and ditches.
- Many small woods and copses provide structure and edges in the landscape.
- Small hamlets typically feature greens and ponds.
- Semi-natural vegetation cover includes hazel coppice and also oak-hornbeam woodland, pockets of calcareous/neutral meadows and Alder-carr in some river/stream valleys.
- Intermittent hedgerow trees of oak, ash and hornbeam and occasional poplar tree belts.

The key landscape sensitivities to accommodate change associated with a major urban extension in relation to Central Essex Farmlands LCA include:

- Integrity of hedgerow and woodland pattern.
- Maintaining a tranquil character away from existing major road corridors.

The combined Braintree, Brentwood, Chelmsford, Maldon and Uttlesford Landscape Character Assessment (2006) also provides a description of the Site and its surrounding context at a more local level. The Site lies within **LCA B21 Boreham Farmland Plateau** and key characteristics relevant to the Site include:

- Irregular field pattern of mainly medium size arable and pastoral fields, marked by hedgerows, banks and ditches.
- Small woods and copses provide structure and edges in the landscape.
- Scattered settlement pattern, with frequent small hamlets.
- A concentration of isolated farmsteads.
- Network of narrow winding lanes.
- Historically water meadows along river valleys.

Proposed Landscape Strategy Objectives:

- **Conserve** - seek to protect and enhance positive features that are essential in contributing to local distinctiveness and sense of place through effective planning and positive land management measures.
- **Enhance** - seek to improve the integrity of the landscape, and reinforce its character, by introducing new and/or enhanced elements where distinctive features or characteristics are absent.

Suggested Land Management Guidelines

- Conserve and enhance the existing hedgerow pattern, and strengthen through planting where appropriate to local landscape character.
- Conserve and manage the ecological structure of woodland, copses and hedges within the character area.
- Strengthen the recreational role of the water filled sand and gravel pits.

There has been localised erosion of the landscape character as a result of the sand and gravel workings and the north-east expansion of Chelmsford, with the developments of Channels Estate and Beaulieu changing the character of the landscape to a more sub-urban context immediately to the south of the Site.

¹Essex Landscape Character Assessment (2003)

²Braintree, Brentwood, Chelmsford, Maldon and Uttlesford Landscape Character Assessments (2006)

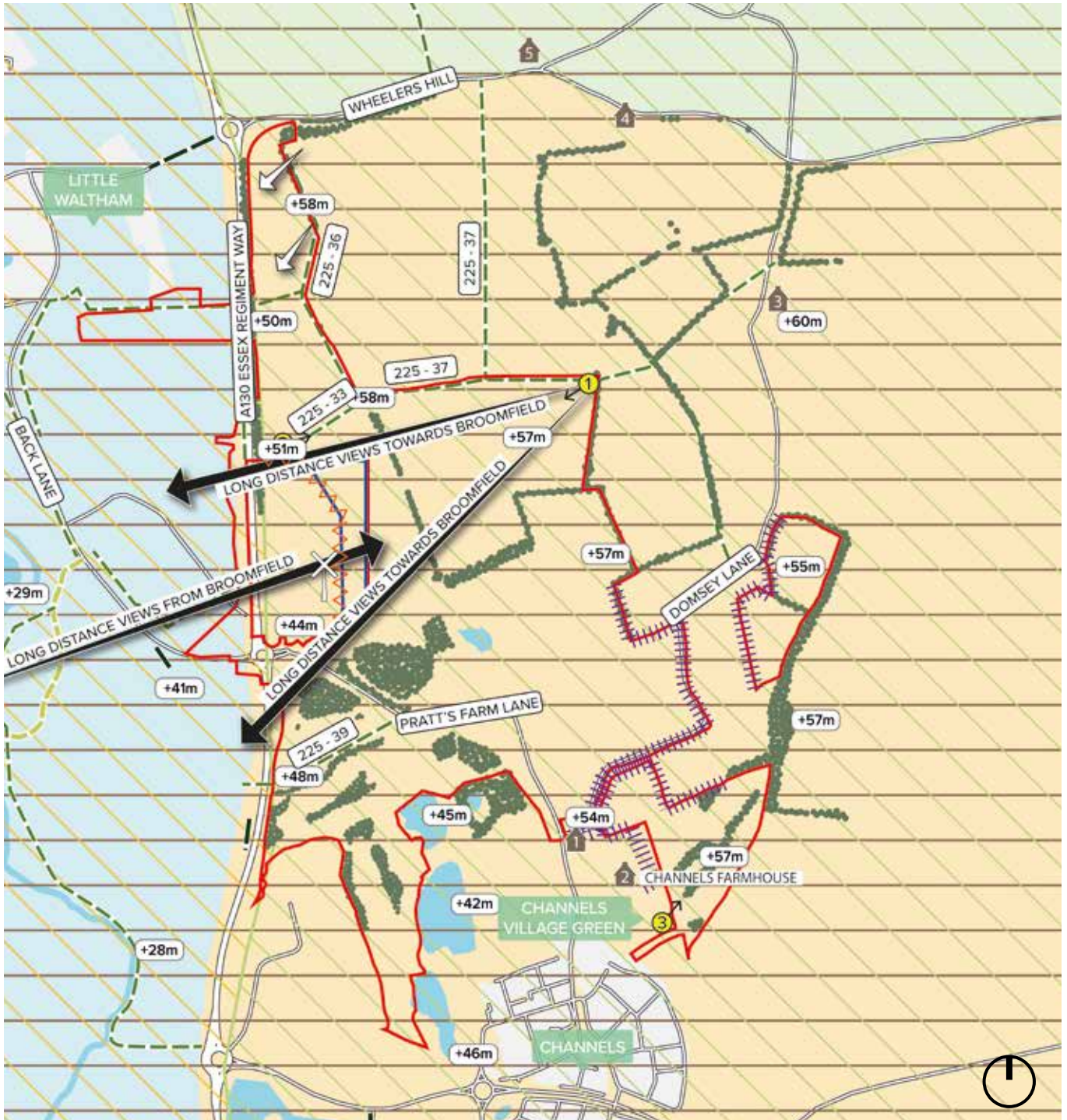


Figure 7. Landscape Character & Visual Context

Context:

- Application boundary
- Other land under the applicant control
- Existing vegetation
- - - Public Right of Way -footpath
- 🏠 Listed building:
 1. Belsteads Farmhouse & Barn
 2. Channels Farmhouse
 3. Peverel's Farmhouse
 4. Powers Farmhouse
 5. Shuttleworth Farm

National Character Area (NCA):

- NCA Area 86 -South Suffolk & North Essex Clayland

County Character Areas:

- ▨ LCT - Glacial Till Plateau
LCA - B1. Central Essex Farmland
- ▨ LCT - River Valley Landscapes
LCA - C5. Chelmer Valley

Local Character Areas:

- ▨ B21 - Boreham Farmland Plateau
- ▨ A6 - Upper Chelmer River Valley
- ▨ B15 - Pleshey Farmland & Plateau

Visual:

- Viewpoint location (refer to Visual Analysis)
- ← Long distance views
- ↖ Filtered / glimpsed views
- ▨▨▨▨▨ Visually sensitive edges
- ✕ Turbine - visual detractor



LANDSCAPE & VISUAL

VISUAL ANALYSIS

The LVIA identifies visual receptors that currently share intervisibility with the Site and are of the greatest visual sensitivity to the type of development proposed. The views in the area are generally short distance and constrained by tall hedges and small woodlands, however in the north east of the Site, the large elevated arable fields provide open panoramic views west towards Broomfield and the Upper Chelmer Valley (**refer to Viewpoint 1**).

The most substantive views of the Site and of key consideration in the design of the Proposed Development include:

- Open views from the Site boundaries and internally within the Site from walkers using the Public Right of Way (PRoW) network (Ref: Public footpath 225-33, 225-36, 225-37 and 225-39 - **refer to Viewpoint 1 and 2**).
- Partial to filtered / glimpsed views from properties along Domsey Lane that sub-divides the Site.)
- Filtered / glimpsed views from immediate surrounding farmsteads (including Listed Buildings).
- Partial to filtered / glimpsed views from existing public open spaces within Channels Estate - Channels Village Green (**refer to Viewpoint 3**) & Channels Park.
- Long distance filtered / glimpsed views from Broomfield (PRoW 225-40) and the Upper Chelmer Valley (**refer to Viewpoint 4**).

The Site is relatively enclosed by topography and layers of vegetation cover (within and outside the Site), particularly to the south due to the presence of Channels Estate and Beaulieu developments which are currently under construction and various early phases have recently been completed. These developments are urbanising the landscape up to the southern boundary. Further north, the relatively gentle topography and layers of field boundary vegetation prevent views of the Site but have potential to view any tall elements in the daytime or lighting at night, particularly in winter.

The Chelmer Valley Park and Ride (including wind turbine) is a visual detractor along the Site's western boundary. In the northern parts of the Site there are glimpsed views of vehicles travelling along the A130 Essex Regiment Way, due to the breaks in the vegetation along the Site's north western boundary.

Domsey Lane runs through the Site from Cranham Road in the north to Pratts Farm Lane in the south and is currently rural in character. However, the majority of the properties and land along Domsey Lane are excluded from the Site area due to separate ownership. Where the Site lies directly adjacent to Domsey Lane and existing property boundaries a sensitive design response and buffer planting is required to address these visually sensitive areas, which will also help to assimilate the Proposed Development into the surrounding landscape.

1

2

3

4

5

6

7



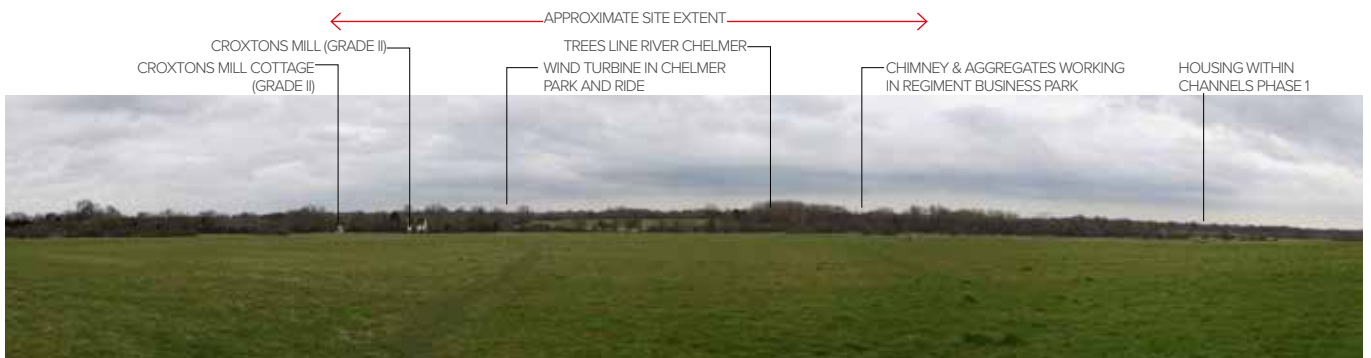
Viewpoint 1: View from Public Footpath 225-33 off Domsey Lane



Viewpoint 2: View from Public Footpath 225-35 off Essex Regiment Way A130



Viewpoint 3: View from Channels Village Green



Viewpoint 4: View from Public Footpath 214-28 Broomfield



1

2

3

4

5

6

7

3.2 BIODIVERSITY & ARBORICULTURE

Chapter 11: Ecology and Biodiversity of the Environmental Statement (ES) relates to wildlife and biodiversity for the Site and its surrounding context. The key environmental and site ecological context is summarised below.

Environmental Context:

The Site does not fall within the boundaries of any Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

There are five statutory designated areas of importance within the surrounding area, the closest being Chelmer Valley Riverside – LNR (2.3km south).

There are 17 non-statutory sites, such as Local Wildlife Sites (LWS) and a Potential Local Wildlife Site (PLWS), located within 2km. Of particular note include:

- Channels Golf Course – PLWS (part of the Site)
- Broomfield – Little Waltham Chelmer Mosaic – LWS (0.4km west)
- St Martin’s Church Little Waltham – LWS (0.4km west)
- Little Waltham Village Meadows – LWS (0.6km west)

The Essex Wildlife Trust Nature Reserves, Little Waltham Meadows and Newland Grove, also outlined within the Chelmsford City Council’s Local Plan, are located approximately 200m west.

Site’s Ecological Context:

The existing landscape features provide opportunity to create a network of habitats throughout the site, retaining existing planting. The habitat network, enhanced and managed, has the potential to positively deliver Biodiversity Net Gain.

The northern part of the Site comprises arable land (**TN1**), with large fields with field boundaries comprising gappy hedgerows with mature trees providing habitat for birds and bats.

The north eastern part of the site (**TN2**) features a large water body, albeit relatively recent, set within semi-improved grassland of ecological value for ground nesting birds. To the south of this area is a scrub and plantation woodland shelter belt that forms part of the field boundary (**TN3**).

The central part of the site is identified within the CGC DFD as ‘Channels Discovery Park’. The existing water body and area of woodland Plantation (**TN4**) support waterfowl, great crested newts and bats.

A triangular area of habitats exists of Pratt’s Farm Lane (**TN5**) featuring a mosaic of grassland, scrub and woodland that are of value to breeding birds and great crested newts. .

On the former Channels golf course to the south (**TN6**) the ecological value across the habitats comprise open grassland with young trees planted between former fairways.

Along the site’s eastern boundary at the interface with Domsey Lane is a mosaic of scrub, woodland, hedges and grassland (**TN7**) that supports birds, bats and great crested newts. identified as ecological importance (**TN7**).

On the former golf course to the south of Domsey Lane high value habitats are located along the boundary edges with mature semi-natural and younger shelter belt woodland, with and several mature trees which support birds and bats (**TN8**).



Figure 8. Biodiversity Context





1

2

3

4

5

6

7

LANDSCAPE FEATURES



Existing large water body / pond set within semi-improved grassland located off Pratt's Farm Lane, at the centre of the Site. In the background is an existing block of plantation woodland. This area is identified within the Chelmsford Garden Community DFD as 'Channels Discovery Park', where there is the potential to enhance the ecological value.



Existing farm track in the northern part of the Site, bordered by a hedgerow field boundary. The hedgerow features several mature trees providing habitat for birds and bats.



Existing hedgerow, tree and scrub vegetation lining Domsey Lane and on the Site boundaries.



Existing mature shelter belt woodland and trees located along the boundary of the former Channels golf course, located in the south eastern part of the Site.



Existing roadside planting along the A130 Essex Regiment way that borders the Site's western boundary and the arable farmland.



Existing ditch line bisecting the arable farmland within the northern part of the Site.

ARBORICULTURE

The Arboricultural Impact Assessment (AIA) identifies trees and woodland on the Site and in its surrounding context. The key arboricultural context is summarised below.

The Site is mostly arable land dissected by hedgerows and trees. To the south-west is the remnant parkland of Channels Golf Club. The high-quality oak trees provide striking landscape features within the landscape. There are no ancient natural woodlands, and there are 2 veteran oaks located on Domsey Lane. In terms of arboriculture, the Site has the following character areas as described below:

Land east of Essex Regiment Way

The planting adjacent to Essex Regiment Way is mixed native planting forming a dense screen. The hedgerow field boundary on the eastern boundary is patchy; punctuated with early mature Ash and Field Maple with long gaps between hedges. Dense young woodland planting on the northern boundary forms an effective visual screen.

Wheeler's Hill (southern side)

A densely tree and hedgerow lined road with some gaps, on the southern side, and in most cases both sides, resulting in a tunnel effect.

North eastern part of the Site

This section has the only TPO on Site. There is a line of multi stemmed Ash and Sycamore with Blackthorn understory forming an important landscape feature. To the south, the hedgerow becomes fragmented with areas of dead Elm. Continuing further south are mixed native hedgerows with groups of varying quality. A characterful old Oak pollard, with structural defects, is protected by the TPO.

Land north of Pratts Farm Lane

There are few trees and hedges in this area. A wooded area to the north of Pratts Farm Lane includes natural glades and clearings

Remnant parkland of Channels Golf Club

This section contains early mature woodland and swathes of immature golf course tree planting which is mostly unremarkable and, in some cases, failing to thrive. Pratts Wood is a wet woodland and is under a management proposal in connection to the Channels Estate to the south.



1

3.3 WATER & TOPOGRAPHY

The Flood Risk Assessment and Drainage Strategy within the Environmental Statement (ES) technical appendices relates to Hydrology, Flood Risk and Drainage.

The Site is located within Flood Zone 1, which means it has a low probability of flooding from rivers/seas. The Site mainly has a 'Very Low' (less than 0.1%) risk of flooding from surface water, however some small areas of the Site have a 'Low' (0.1% to 1%), 'Medium' (1% to 3.3%) and 'High' (over 3.3%) risk. No Groundwater Source Protection Zones are located within the Site and/or the immediate surrounding area.

The upstream extent of Powers Brook, a tributary of the River Chelmer, is situated at Power's Farm, approximately 600m north east of the Site. Powers Brook flows towards the south east and passes along the eastern extent of the site, located to the south eastern side of Domsey Lane.

The existing field ditch network within the central and western extents of the Site drains southwest towards the River Chelmer and is culverted beneath the course of the A130 Essex Regiment Way, adjacent to the western boundary of the site. The largest surface water flood risk area on Site is

situated adjacent to the north western boundary, where an existing field drainage ditch meets the course of the A130 Essex Regiment Way.

The Site is greenfield in nature and is not served by a formal piped network. As noted previously however, there is a network of field drains across the Site which assist in draining overland surface water flows in extreme scenarios.

The landform of the Site generally falls from approximately 65 metres AOD along Wheeler's Hill to the north, falling to approximately 45 metres AOD at the interface with Channels Park to the south of the Site.

2

3

4

5

6

7

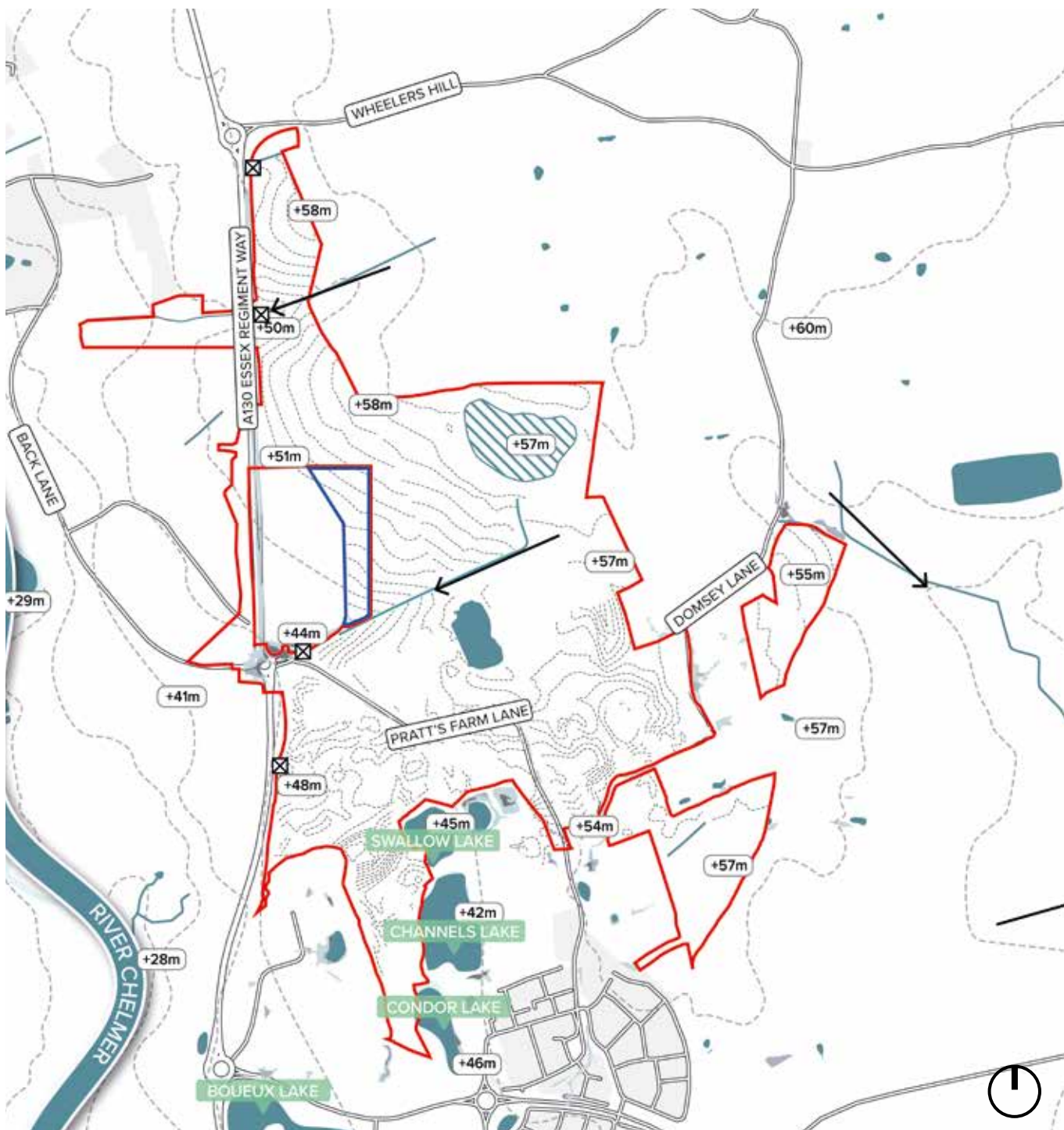










Figure 9. Water & Topography Context

- | | | |
|--|---|---|
|  Application boundary |  Existing Watercourses and Waterbodies |  Direction of Slopes / Overland flow |
|  Other Land Under The Applicant Control |  Existing Ditch Line |  5m Contours Line |
|  Existing Outfall Location | |  1m Contour Line |



1

2

3

4

5

6

7

3.4 HERITAGE

The Site’s heritage plays an important role in defining various aspects of the Site, with several key cultural assets present in the immediate surrounding context. The cultural assets provide a tangible link with the past and could contribute to the future sense of identity, character and distinctiveness of the development.

Chapter 10: Cultural Heritage (Built Heritage and Archaeology of the Environmental Statement (ES) relates to cultural heritage and archaeology.

There are no designated heritage assets within the Site, however there are a number of Listed Buildings within the immediate surrounding context, these include:

LISTED BUILDINGS

- Belstead Farmhouse and Barn (Grade II)
- Channels Farmhouse (Grade II)
- Peverel’s Farmhouse (Grade II)
- Powers Farmhouse (Grade II)
- Shoulderstick Haul (Grade II)
- Hobbits (Grade II)
- Shuttleworth (Grade II)
- Pratt’s Farm Cottages (Grade II)
- Pratt’s Farmhouse (Grade II)

Over time, field boundaries have been removed, fields enlarged and new field boundaries applied but a number of historic field boundaries remain (as illustrated on **Figure 10**).

HISTORIC MAPPING

The Site is located in a landscape, that has been shaped by farming, agriculture and wealthy land owners who created estates such as New Hall and Boreham House, located to the south. Mineral extraction has scarred and shaped the land, creating ponds and ditches which now form part of the character.

The fields within the Site bounded by Wheelers Hill, Domsey Lane, Essex Regiment Way and Pratt’s Farm lane are partially formed of pre-18th century irregular enclosure indicating that this area of the Site fell outside of the medieval Deer Park associated with New Hall.

Further features of the post-medieval landscape that remain within the Site include the layout of Wheelers Hill Lane, Domsey Lane, Pratts Farm Lane and Belsteads Farm Lane which bound or intersect the Site. These lanes are shown in detail on Chapman and Andre’s Map of Essex dated to 1777 connecting the various farms in the eastern section of the Site.



Chapman and Andre’s Map of Essex 1777

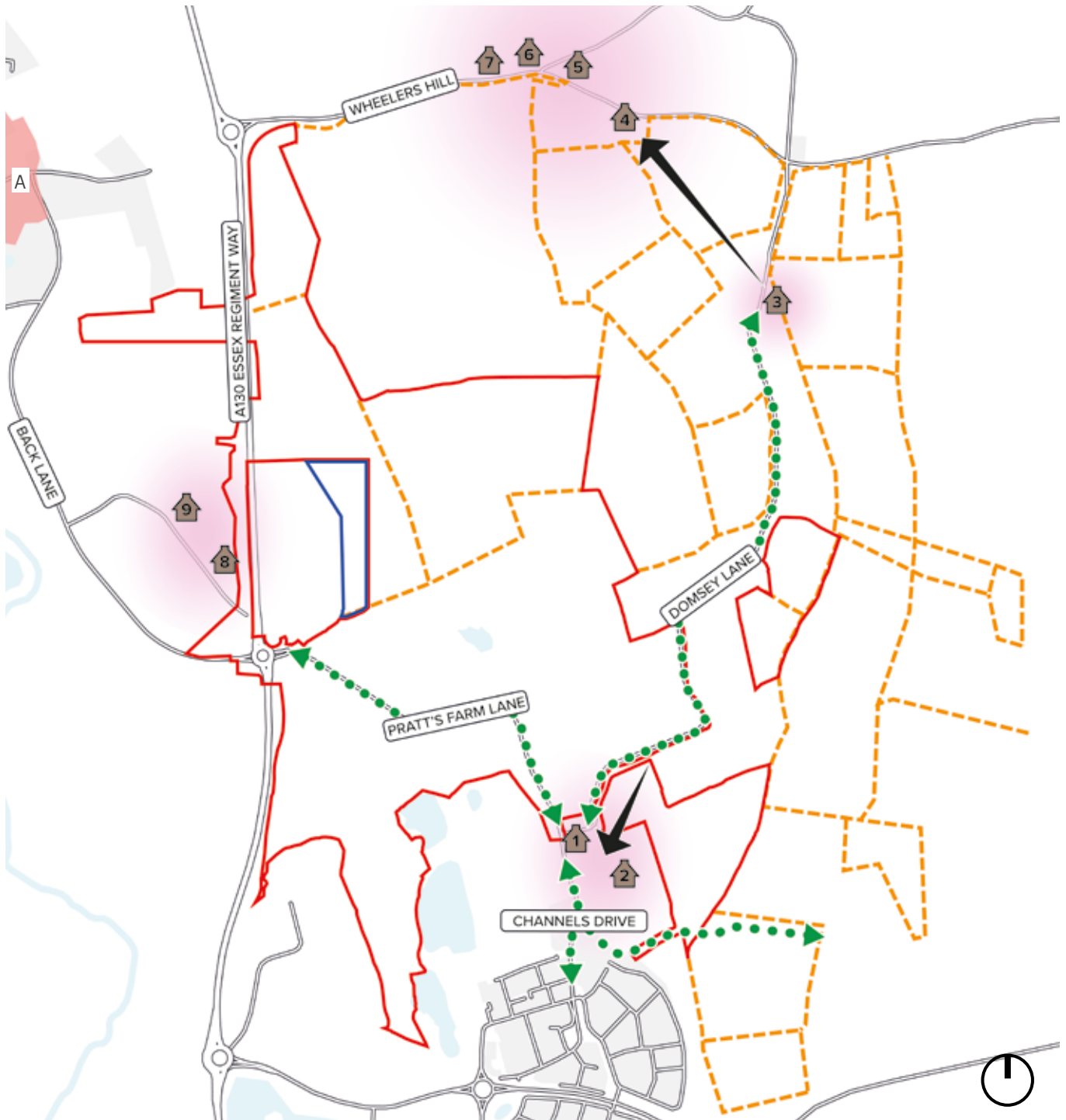










Figure 10. Heritage Assets

- | | | | | | |
|---|--|---|-------------------------|---|---|
|  | Application boundary |  | Historic lane |  | Conservation Area A. Little Waltham |
|  | Other land under the applicant control |  | Historic field boundary |  | Visual connections between heritage assets / key view |
|  | Listed building: |  | Heritage sensitivity | | |
| | 1. Belsteads Farmhouse & Barn | | | | |
| | 2. Channels Farmhouse | | | | |
| | 3. Peverel's Farmhouse | | | | |
| | 4. Powers Farmhouse | | | | |
| | 5. Shoulderstick Haul | | | | |
| | 6. Hobbits | | | | |
| | 7. Shuttleworth Farm | | | | |
| | 8. Pratt's Farm Cottages | | | | |
| | 9. Pratt's Farmhouse | | | | |



1

2

3

4

5

6

7

3.5 CONSTRAINTS & OPPORTUNITIES

CONSTRAINTS

There are a number of existing features and environmental constraints within and in the immediate context of the Site that were considered as part of the design process.

Landscape & Visual

- The Chelmer Valley Park and Ride (P&R) forms a visual detractor, directly adjacent to the Site, due to the open exposed nature of the car park. Future design proposals for the Site should include a landscape buffer along the Site's interface with the P&R and/or have development backing onto it.
- The north eastern parts of the Site are slightly elevated and share intervisibility with Broomfield and the Upper Chelmer Valley. Where possible, development proposals should strengthen boundary vegetation and allow for tree planting within the development parcels to assimilate and soften built form within views.
- The eastern parts of the Site are in close proximity to properties on Domsey Lane. Where possible, development proposals should set development back from Domsey Lane and seek to strengthen and reinforce the Site's vegetated boundaries.

Biodiversity & Arboriculture

- The ecological surveys have identified a number of high value habitats that support species such as bats, birds and GCN. Where possible, these priority habitats will be accommodated and sensitively managed within the design proposals to provide an overall improvement in biodiversity.
- There are a number of high value category A and B trees located on the Site, including two trees protected by TPO's, and two veteran trees along Domsey Lane, primarily within the hedgerow field boundaries. These trees should be protected, retained and incorporated within the design proposals.

Water & Topography

- From baseline data provided by the Environment Agency surface water ponding could occur in topographically low areas of the Site. Whilst the majority of the low areas will be removed through reprofiling as part of the development, the on-Site ditches remain potential flow routes. This is particularly relevant on the north western boundary where field ditches meet the outfalls adjacent to the A130.
- Attenuation should be provided across the Site to ensure that flood risk is not increased elsewhere. This should ideally be provided in open above ground features, to maximise the potential for improving amenity and biodiversity.
- There is an area of historic Landfill located within the central part of the Site identified for 'Channels Discovery Park'.

Heritage

- There are no designated heritage assets, such as listed building, within the Site. However, there are a number adjacent to it and the proposals should therefore seek to respect and protect the setting of areas of heritage to ensure their significance is preserved, wherever possible enhanced, and any harm minimised.

Air & Noise

- The A130 Essex Regiment Way runs north/south adjacent to the Site's western boundary and has been identified from modelling and surveys as a key noise source. Proposed Development will need to ensure a sufficient offset from the A130 and green infrastructure.

Access

- There are four existing public right of way footpaths that bisect the Site and connect to the wider PROW network. The A130 Essex Regiment Way currently forms a physical barrier, preventing onward travel and restricts the safe passage of pedestrian and cycle movement west towards the Chelmer Valley.

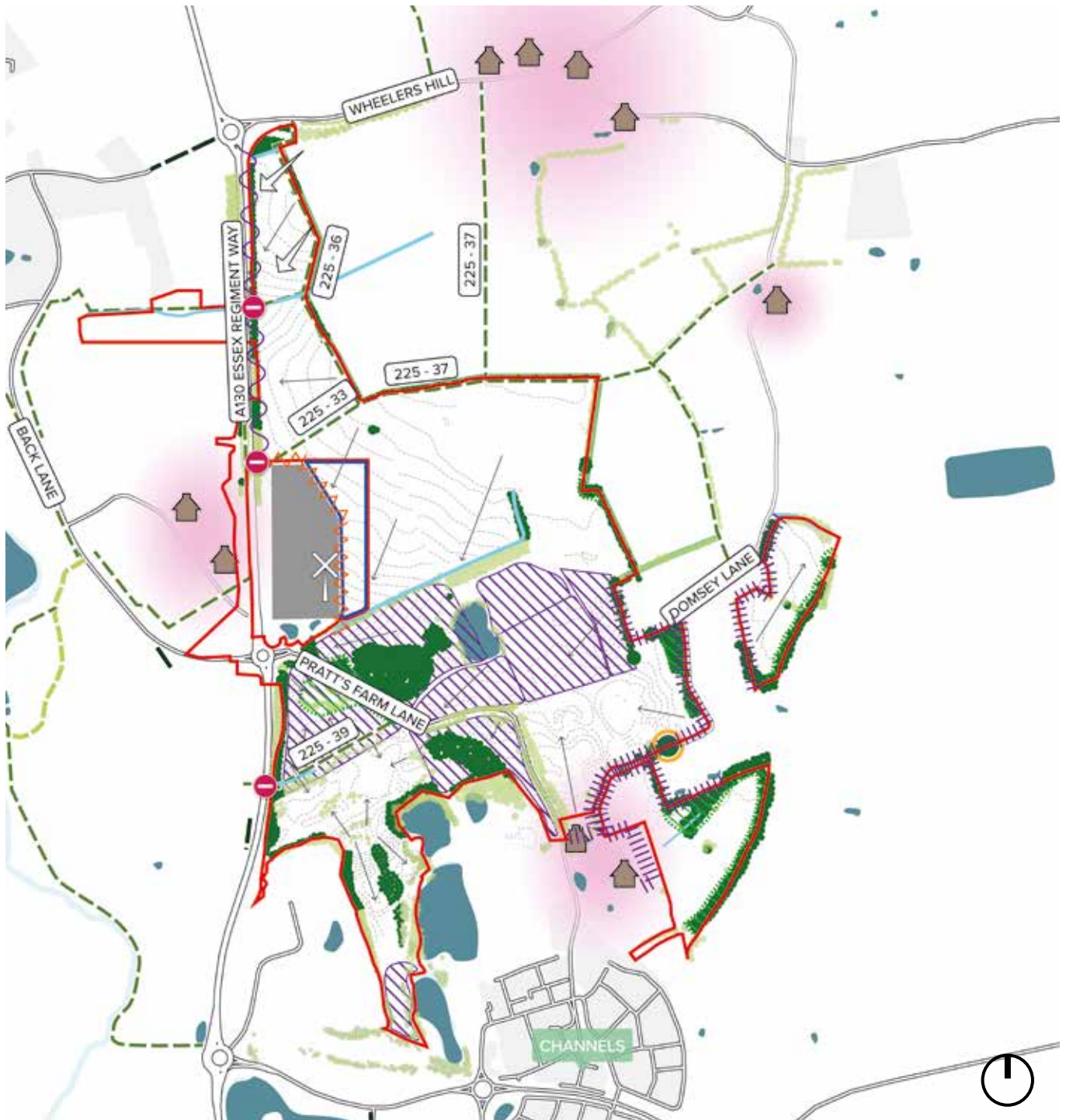


Figure 11. Constraints





CONSTRAINTS & OPPORTUNITIES

OPPORTUNITIES

Landscape & Visual

- Opportunity as part of the proposed Green Infrastructure network to contribute positively to the landscape strategy objectives and management guidelines for the Site's Landscape Character **LCA B1 Central Essex Farmlands**.
- Opportunity to protect and enhance features such as hedgerow and tree field boundaries that are essential in contributing to local distinctiveness and sense of place as part of the Greenway network.
- Encourage the reversal of habitat fragmentation and the creation and improvement of habitat links to create a series of interconnected green infrastructure corridors.
- Promote the retention and enhancement of the existing hedgerow network throughout the Site to provide visual and ecological links between existing and proposed woodland areas.
- Opportunity to enhance buffer planting along P&R and A130 Essex Regiment Way to assist in screening these visual detractors from future residents.

Biodiversity & Arboriculture

- Opportunity to enhance and connect existing onsite fragmented habitats (hedgerow, scrub areas and woodland blocks) as part of an interconnected habitat mosaic within the GI network.
- Opportunity to utilise existing and proposed hedgerow /woodland as foraging and commuter corridors for a variety of species.
- Opportunity for more biodiversity focused areas where public access is minimised to maximise biodiversity value.
- Opportunity to increase tree and woodland cover across the Site as part of the GI network and internally within the development areas.

Heritage

- Opportunity to reference and celebrate the Site's history as part of Discovery Trails through the public open spaces that uses wayfinding elements such as interpretation boards, public art and landscape features.
- Opportunity to provide an appropriate landscape design response in areas of heritage sensitivity close to existing Listed Buildings to minimise the effect of development on the setting.

Water & Topography

- SuDS should be integrated into the landscape where possible, to include above ground systems such as ponds and swales, maximising their contribution to biodiversity/ wildlife habitat and landscape character/ identity of the development.
- The undulating landform within the areas of historic landfill provide the opportunity for unique and characterful play areas within Channels Discovery Park, utilising and incorporating the landforms as part of the design and user experience.

Climate Change

- Carbon sequestration and urban cooling effect through tree and woodland planting, aimed to provide an attenuation function in relation to air quality and particulate filtration.
- Local flood alleviation down stream through integration of a SuDS (Sustainable Drainage Systems) network providing localised flood storage.
- Opportunity for the GI network to be designed to be resilient to climate change by incorporating mitigation and adaptation, including a diverse planting palette of native and non-native species, selected to be robust and able to withstand dramatic changes in weather, pollution, water logging and drought whilst managing responses to infectious diseases such as Ash Dieback and Dutch Elm Disease.

Public Open Spaces & Access

- Opportunity to provide a network of active travel routes throughout the development via proposed green corridors and public open spaces. Careful consideration will be given to not compromise ecological sensitivities when providing public access.
- The Site must demonstrate and incorporate the provision of new green space, play and sport in accordance with the quality and accessibility standards, based on the predicted population yield.
- Opportunity for a range of high quality open space typologies including parkland destinations (Channels Discovery Park), greenways, food production, play, village greens and gateways that respond to place, character and celebrate existing landscape features.

1

2

3

4

5

6

7

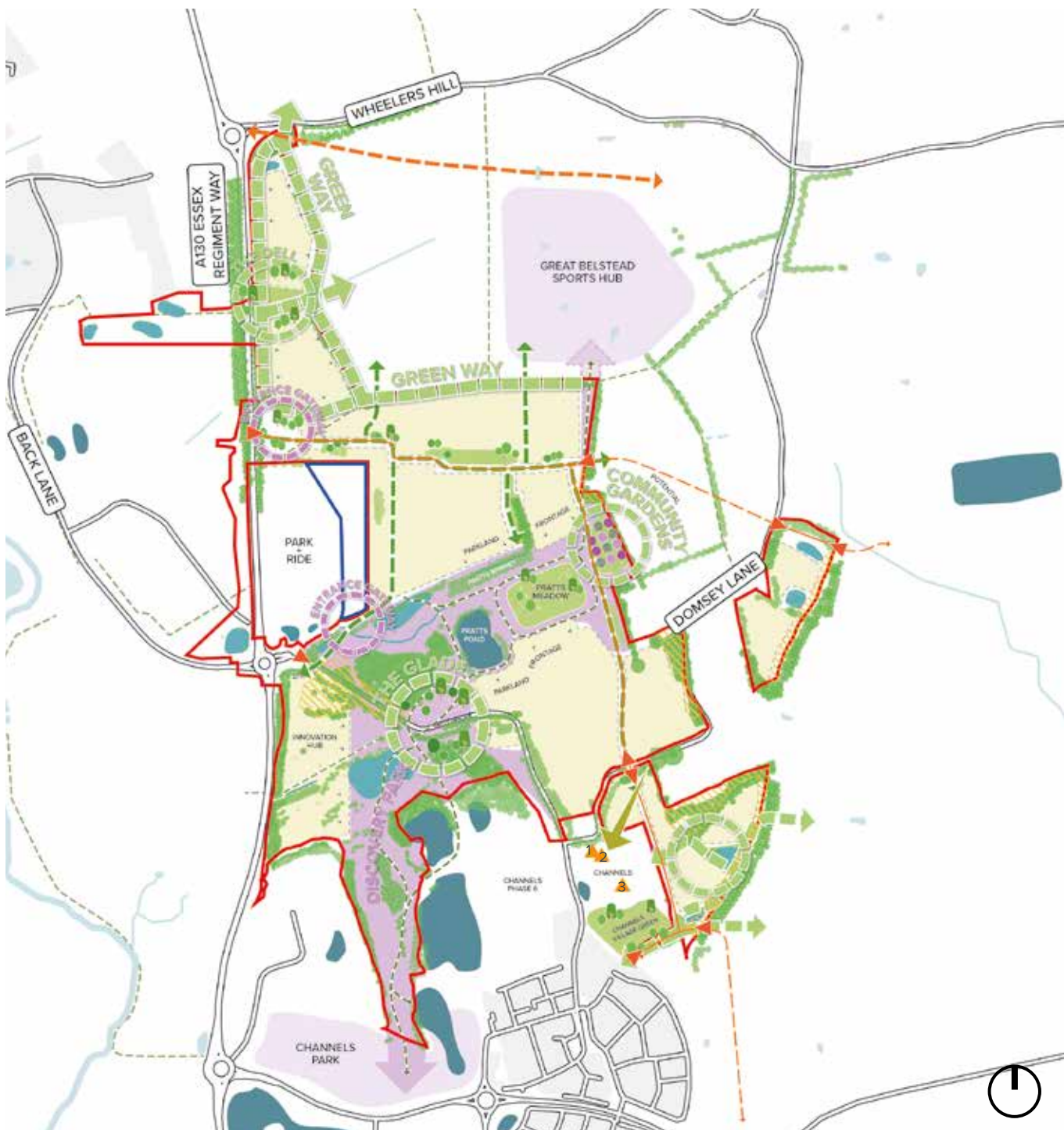
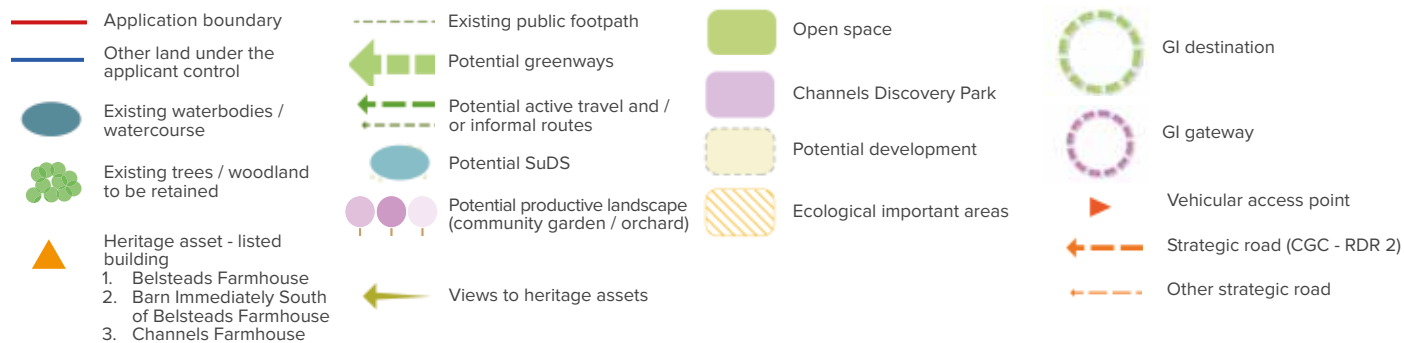


Figure 12. Opportunities





4 GREEN INFRASTRUCTURE FRAMEWORK

4.1 GREEN INFRASTRUCTURE VISION FROM THE DFD

“REWILDING EVERYDAY LIFE”

GREEN, BLUE AND WILD INFRASTRUCTURE EVERYWHERE

The Green Infrastructure vision for Chelmsford Garden Community (CGC) has evolved from a detailed analysis of Green Infrastructure baseline resources, key policy drivers and design principles shaped as part of the DFD process - identifying opportunities and constraints which were explored as part of the design process. The vision provides a strong conceptual framework as the basis for an imaginative and innovative application of Green Infrastructure.

“Rewilding Everyday Life” is one of the five key pillars of the shared ethos and vision for Chelmsford Garden Community (CGC), set out in the Development Framework Document (DFD). Zone 1 Planning Application is being brought forward in accordance with the vision and ethos for Chelmsford Garden Community. Zone 1 will deliver a comprehensive landscape and biodiversity network that will connect nature, heritage and communities and create an ecologically rich setting for the new neighbourhoods.

Three core GI themes which have been distilled from the CGC DFD and guiding framework principles that underpin the Green, Blue and Wild Infrastructure and that Zone 1 will achieve include:



PRIORITISING NATURE RECOVERY

- Connect People with Nature
- Contribute to the Nature Recovery Network
- Exceed Environmental ‘Net Gains’
- Protect, restore, enhance and create super habitat mosaics



GROWING HEALTHY ACTIVE COMMUNITIES

- Create access to nature and others
- Integrate healthy interventions for physical activity and mental wellbeing
- Nurture community identity and stewardship through activity, education and a range of community facilities



BUILDING IN RESILIENT LANDSCAPES

- Maximise planting (nature based solutions) for carbon storage and sequestration
- Prioritise a connected pedestrian and cycle movement network, reducing car dependency
- Adaptive landscapes to address climate change
- Stewardship and Legacy

1

2

3

4

5

6

7

PROPOSED GREEN, BLUE AND WILD INFRASTRUCTURE NETWORK AT ZONE 1

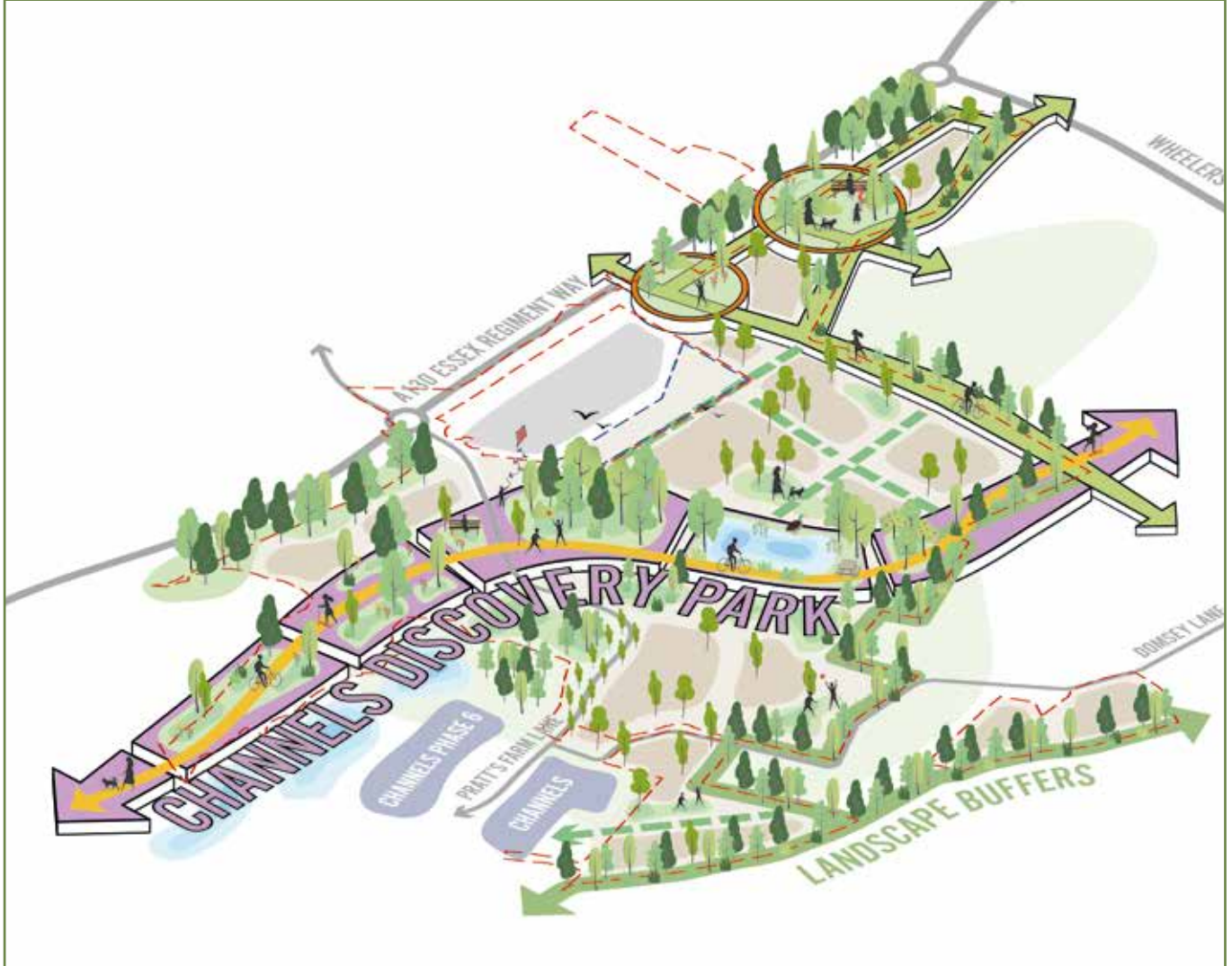


Figure 13. Green Infrastructure Vision





1

4.2 GUIDING FRAMEWORK PRINCIPLES FROM THE DFD

The DFD sets out key targets and metrics for all future development to work towards. In relation to Green Infrastructure, the CGC Zone 1 Outline Planning Application is aiming to achieve all the targets and metrics set out by the Masterplan documents which includes:



WORKING TOWARDS 20% BIODIVERSITY NET GAIN

- Ecologically enriching the biodiversity of the Site



50% GREEN INFRASTRUCTURE

- A Garden Community embedded in landscape



3 TREES PER DWELLING

- Routes and spaces enriched by the planting of trees

2

3

4

5

6

7

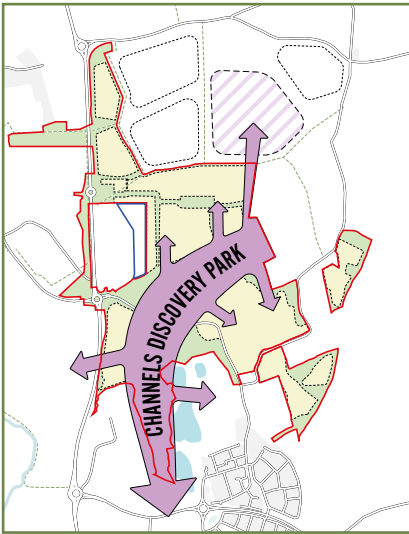
THE CGC DFD SAYS.....



TO ACHIEVE THE SHARED ETHOS OUR COMMUNITY WILL;

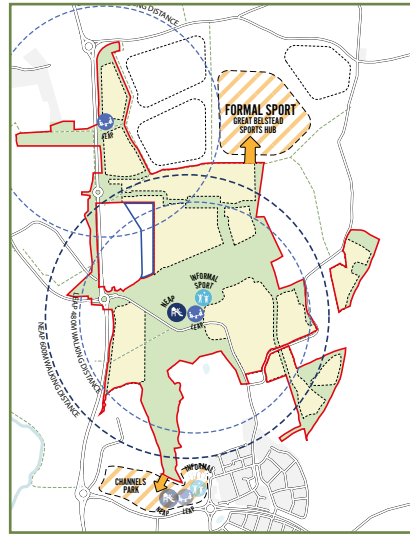
- Be shaped by its inherited **landscape, history and ecological assets**
- Prioritise **nature recovery** and connect people with nature
- Create a **linked network** of unique, inclusive and diverse **parkland destinations**
- Celebrate** the area's rich heritage through a network of **Discovery Trails**
- Prioritise **active travel** by creating attractive, inviting and safe **multifunctional Greenway corridors**
- Retain and enhance key habitats** and create a mosaic of interconnected habitats rich in biodiversity
- Encourage wildlife** into the built realm and public open spaces to increase biodiversity and **connect people with nature**

AT CGC ZONE 1 WE WILL



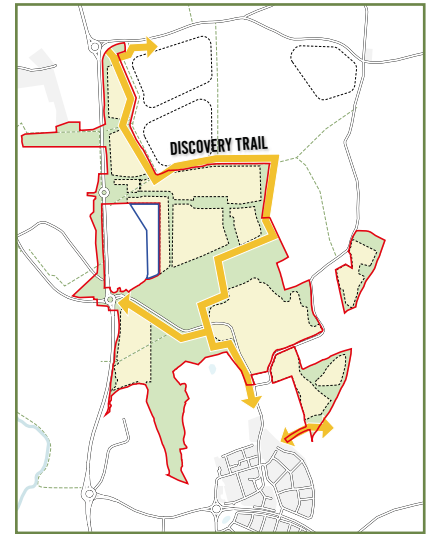
DELIVER A DESTINATION PARK

Channels Discovery Park will run north south through Zone 1 bringing 22ha of community parkland to the neighbourhood



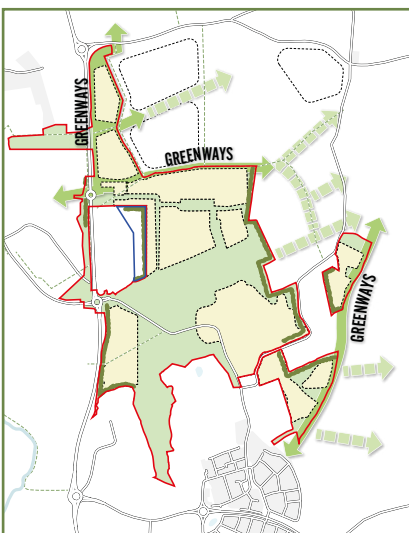
EMBED PLAY & SPORT INTO THE COMMUNITY

A combination of formal and informal green space, play and sports facilities will be distributed across the landscape



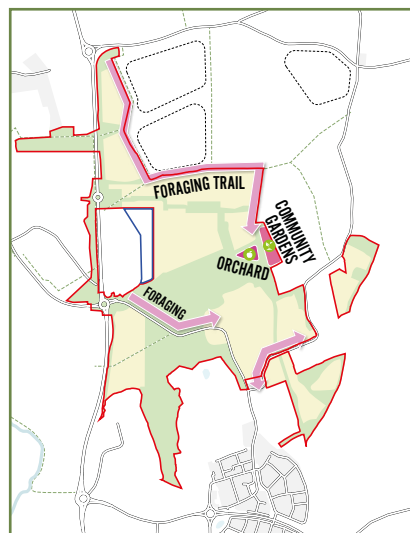
REFLECT HERITAGE THROUGH DISCOVERY TRAILS

A network of waymarked routes that celebrate, reference and interpret the area's rich history will run through parklands and greenways



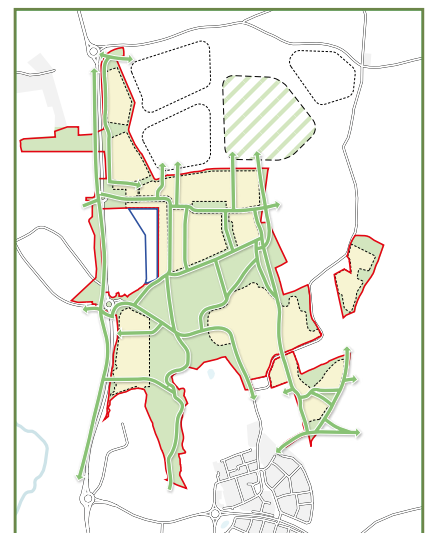
CREATE A NETWORK OF MULTIFUNCTIONAL GREENWAYS

A network of landscaped routes and spaces that support the safe movement of people and wildlife



SUPPORT HEALTHY LIFESTYLE THROUGH PRODUCTIVE LANDSCAPES

Provision for a community garden and orchard area within Channels Discovery Park



ACTIVE TRAVEL ENHANCED CONNECTIONS

Provide a direct, secure and landscaped network of routes making it the natural choice to walk and cycle



4.3 GREEN INFRASTRUCTURE FRAMEWORK

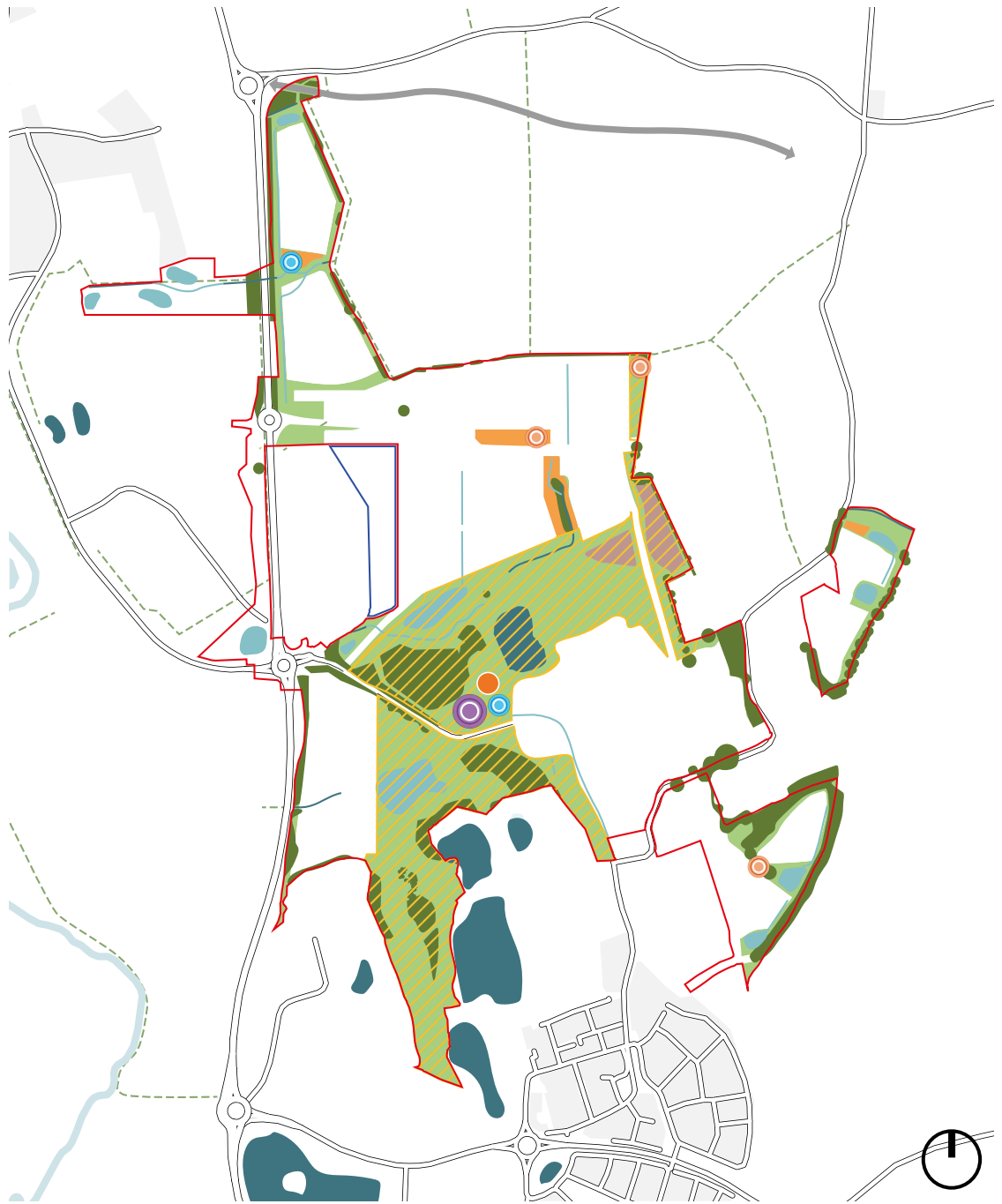


Figure 14. Green Infrastructure Framework

- | | | |
|---|--|-------------------------------------|
| Application Boundary | Other land under the applicant control | |
| Natural and semi-natural green space | Parkland | Play & Sports facilities |
| Existing woodland blocks & tree belts retained | Channels Discovery Park | Informal Sport |
| Existing waterbody | Amenity greenspace | NEAP |
| Proposed watercourse alignment and strategic swales | Informal amenity space | LEAP |
| Sustainable drainage basins | Productive Landscape | LAP |
| Meadow grassland | Community Orchards / Gardens | |

1

2

3

4

5

6

7

The proposed CGC Zone 1 Green Infrastructure Framework will:

- create a connected multifunctional ecosystem which embraces the Site's landscape, ecological and historical assets;
- habitat enhancement will be concentrated throughout Channels Discovery Park and along the Site boundaries;
- provide improved pedestrian and cycle connectivity through the inclusion of active travel and informal routes;
- deliver a high quality landscape setting to support a sustainable community;
- provide suitable open spaces with the opportunity for play and sport close to peoples homes.

PARKLAND



Channels Discovery Park will provide a public open space for people but also fulfil an important role of enhancing biodiversity across the Site. The park will provide recreation space for the community, connecting to Channels Park in the south. The park will be easily accessible via active travel routes and be within a 15 minute walk of every home.

PRODUCTIVE LANDSCAPE



The GI framework includes provision for communities to grow and harvest food. The provision for community gardens and orchards will be included to the eastern edge of the proposed development, within Channels Discovery Park.

NATURAL & SEMI-NATURAL GREEN SPACE



Natural and semi-natural green space covers meadows, woodlands, copses and waterbodies all of which share a trait of having natural characteristics and biodiversity value, and are also partly or wholly accessible for informal recreation. The proposals for Zone 1 seek to retain high value habitats, enhancing and supplementing as part of the GI framework for the benefit of wildlife and people.

AMENITY GREENSPACE



Amenity green space includes informal recreation spaces such as pocket parks, village greens and garden squares in and around housing areas and play areas. They will contribute to a 'green' urban character and create a sense of place, making neighbourhoods desirable places to live and work.

PLAY & SPORT FACILITIES



Formal and informal play spaces will be distributed throughout the proposed development to meet local provision standards. these will include play areas for younger and older children and teenagers. Formal sports provision will be included as part of CGC Zone 2 & 3.



4.4 OPEN SPACE, PLAY & RECREATION REQUIREMENTS

The Chelmsford Local Plan, Appendix B, Development Standards - provides information about standards that apply to all new residential developments in Chelmsford, including open space. Paragraph B.24 of Appendix B sets out how much open space will be required for each new dwelling based on an average occupancy rate of homes in Chelmsford, which is 2.4 persons per-dwelling (Census 2011). The Local Plan sets out the quantum of open space required for all developments based on the Chelmsford Open Space Study 2016 -2036.

The table below outlines the open space requirements based on the open space standards for Chelmsford and based on a population of 3,600 residents (1500 dwellings x 2.4 persons per-dwelling average occupancy rate of homes in Chelmsford) the Green Infrastructure framework for Chelmsford Garden Community (Zone 1) is required to deliver a **minimum of 12.42 hectares** of open space on Site to meet the open space standards. The Chelmsford Open Space Study recommends that the provision of amenity green space is considered in tandem with provision of natural green space in new development.

OPEN SPACE TYPOLOGY	CHELMSFORD OPEN SPACE PROVISION STANDARDS FOR NEW HOUSING DEVELOPMENTS				
	HA/ PER 1000 POPULATION	HA/3,600 POPULATION*	STRAIGHT LINE WALKING DISTANCE (M)**	PROPOSED DEVELOPMENT PROVISION (HA)	UNDER OR OVER PROVISION (HA)
Accessible Open Space					
Allotments, community gardens and/or orchards	0.30	1.08	720	1.10	+0.02
Amenity Green Space	0.40	1.44	480	1.44	Provision Met
Play Space (Children) Local Equipped Area of Play (LEAP)**	0.05	0.18	480	3no. LAP 2no. LEAP 1no. NEAP 1no. Incidental Sport = 2800m ² /0.28ha	-0.08***
Play Space (Youth) Neighbourhood Equipped Area of Play (NEAP) - inc. Incidental Sport **	0.05	0.18	600		
Strategic Open Space					
Parks and Recreation grounds (for public and private provision)	1.65	5.94	600	22.50	+16.56
Natural and Semi-Natural Open Space					
Natural and Semi-Natural Green Space	1.00	3.60	-	8.16	+4.56
TOTAL:	3.45	12.42	-	33.48	+21.06

Table 01.

*Based on a population of 3600 residents (1500 dwellings x 2.4 persons per-dwelling average occupancy rate of homes in Chelmsford)

**Based on Chelmsford City Council (CCC) standards

***Based on the housing mix for Zone 1 there is a predicted child yield of 720 children. Estimated child yield assumes 1,500 residential dwellings, with all dwellings assumed to be homes. Estimated playspace requirements are based on 3m² of playspace per child in line with Essex Design Guide (2005) - Playspace Requirement = 2160m² /0.21ha

Source: Chelmsford Local Plan (Appendix B Development Standards) & Chelmsford Open Space Study)

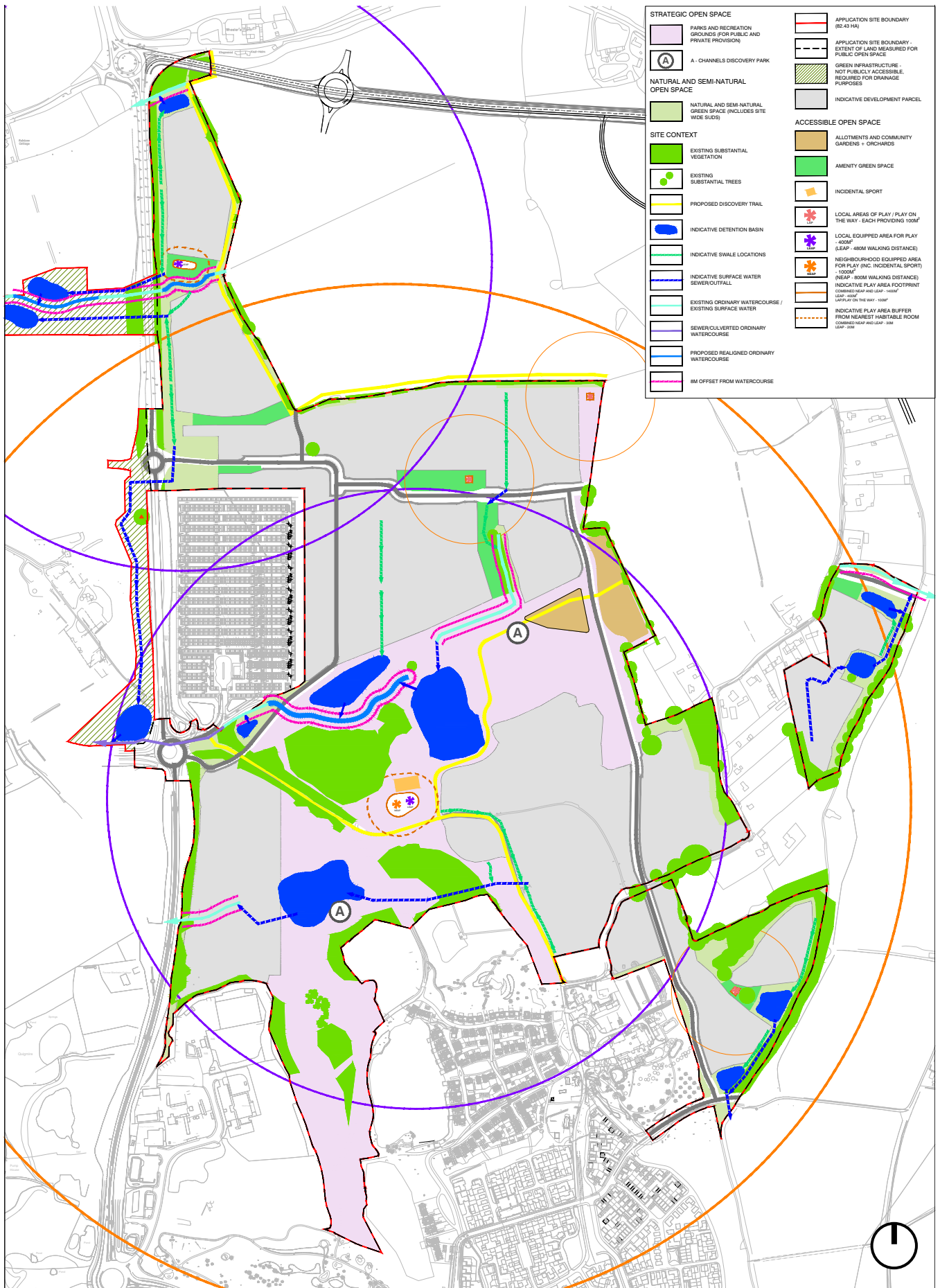


Figure 15. Land Budget / Open Space Plan



5 GREEN INFRASTRUCTURE STRATEGIES

5.1 PLAY, RECREATION & SPORT

The play, recreation and sports strategy for Zone 1 interacts with existing and proposed landscape elements and offers equipped designated play spaces, informal natural play opportunities and informal sport.

Local Equipped Areas for Play (LEAP), Neighbourhood Equipped Areas for Play (NEAP), Local Areas of Play (LAP) and informal play areas for Zone 1 will deliver a range of play experiences that suit all ages and abilities and will be connected by a network of active travel routes that encourage social interaction and a healthy community.

The formal play provision (child playspace) is based on the predicted child yield of 720 children which equates to a requirement of **2160m² (0.21ha) of play area required**. Estimated playspace requirements are based on 3m² of playspace per child in line with the Essex design Guide (2005). Estimated child yield assumes 1,500 residential dwellings, with all dwellings assumed to be houses.

OPEN SPACE TYPOLOGY	WALKING GUIDELINE (walking distance from dwellings)	WALKING GUIDELINE (straight line distance)
Equipped/ designated play areas	LAPs - 100m LEAPs - 400m NEAPs - 1,000m	LAPs - 60m LEAPs - 240m NEAPs - 600m
Other outdoor provision (MUGAs and skateparks)	700m	420m

Table O2. Fields in Trust (FIT) Recommended Benchmark Guidelines for Children’s Playing Space

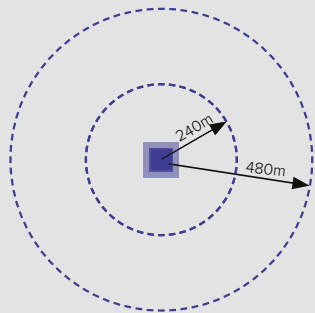
The Play & Sports Strategy Plan opposite illustrates the play and sports provision CGC Zone 1 will deliver:

- A combined NEAP / LEAP formal play area, including incidental sport (i.e. MUGA / ball court) within Channels Discovery Park.
- 1no. LEAP between CH 1 and 2 and 3no LAP throughout the GI network within Amenity Green Spaces.
- Formal sports provision will be included as part of Zone 3 as part of Great Belsteads Sports Hub.
- An existing NEAP/LEAP and skate park is located to the south within Channels Park.
- The straight line walking distances for indicative play locations on the Play & Sports Strategy Plan opposite are based on **Chelmsford City Council (CCC) standards**.
- Further informal and natural play opportunities will be identified and detailed as part of future reserved matters applications within developable areas.
- The Chelmsford Open Space Provision Standards for play differ to the Essex Design Guide. The CCC standards require in total **0.36 ha/3600m²**, where the Essex Design Guide is based on child yield for the development which for Zone 1 equates to **0.21 ha/2160m²** of play.

The total onsite child play space provision for Zone 1 as part of the Green Infrastructure and Open Space Parameter Plan equates to 2800m²

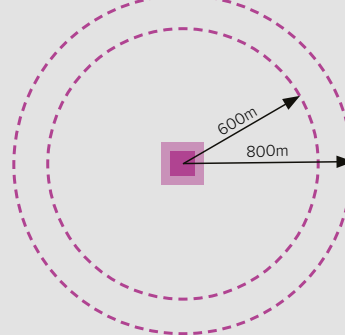
Local Equipped Area for Play (LEAP)

min. 400sq.m activity zone
min. 10m buffer zone
FIT - 240m walking straight line distance
CCC - 480m walking straight line distance



Neighbourhood Equipped Area for Play (NEAP)

min. 1000sq.m activity zone
min. 30m buffer zone
FIT - 600m walking straight line distance
CCC - 800m walking straight line distance



1

2

3

4

5

6

7

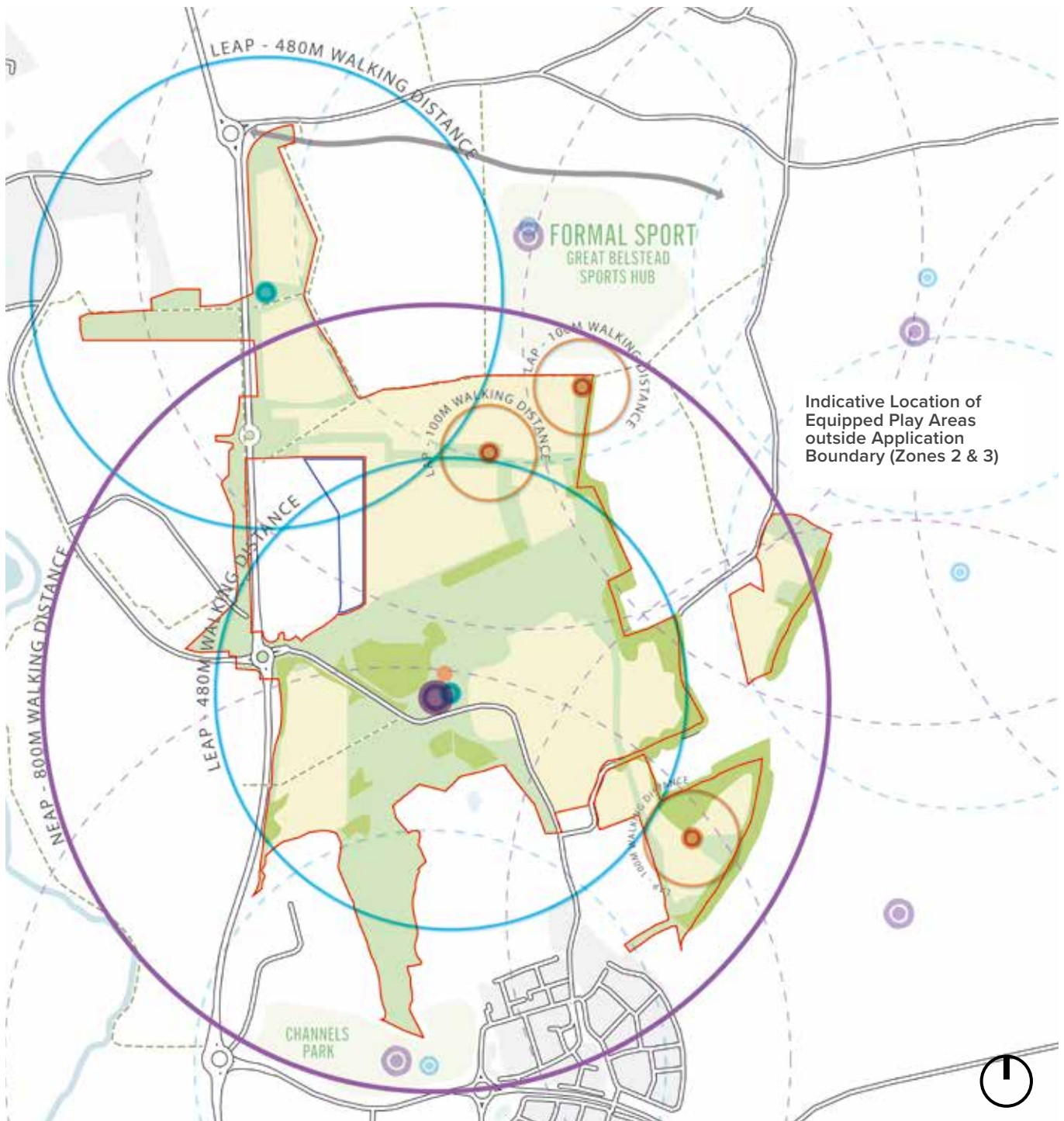


Figure 16. Play & Sports Strategy Plan





1

2

3

4

5

6

7

5.2 BIODIVERSITY & NATURE

The Green Infrastructure for CGC Zone 1 is shaped by inherit green infrastructure and biodiversity assets which includes important trees, vegetation and habitats from both an arboricultural and ecological perspective and taking account of existing key habitat corridors and connections. The proposed layout and parameter plans follow detailed interdisciplinary team working and stakeholder engagement. The high value habitats, veteran trees and the majority of boundary vegetation will be retained. The majority of the vegetation removals are lower quality and condition.

Biodiversity Opportunities:

- The design is focused on – maximising biodiversity opportunities, habitat connectivity, local biodiversity priorities, supporting present species and attracting new.
- The Green Infrastructure Strategy in combination with the Biodiversity Strategy seek to create connectivity to/from larger nodes that provide good opportunities for a range of species.
- Habitat retention, enhancement and creation within the Site is focused on the area that will become the 'Channels Discovery Park' and key habitat corridors providing permeability for wildlife throughout the development and beyond.

Key Habitat Corridor Connections:

The existing hedgerow, tree and habitat boundary vegetation of CGC Zone 1, that form important habitat and species connections, are being retained and enhanced as part of the Green Infrastructure Strategy. Field boundaries, Domsey Lane and Pratts Lane are focused on retaining fragmented habitats (hedgerows, trees and woodland), enhanced through appropriate buffer zones, additional planting and gapping up and connecting as part of a key habitat corridors, within CGC Zone 1 and wider to Zones 2 & 3.

Destination Parks - Channels Discovery Park

Channels Discovery Park provides a wide-range of opportunities for biodiversity. Channels Discovery Park is scheduled to be delivered early within the programme, providing early and significant Biodiversity Net Gain.

A – Channels Discovery Park – South: Enhance the ecological value of the former golf course and fairways, through strengthening additional woodland, scrub and grassland habitat linkages, limiting recreation and public access to movement networks (cycle/ pathways) and an appropriate management regime to benefit biodiversity. Create a diverse habitat mosaic of mature trees, woodland, scrub, marshy grassland within swales and a diverse grassland sward.

B - Channels Discovery Park – Central:

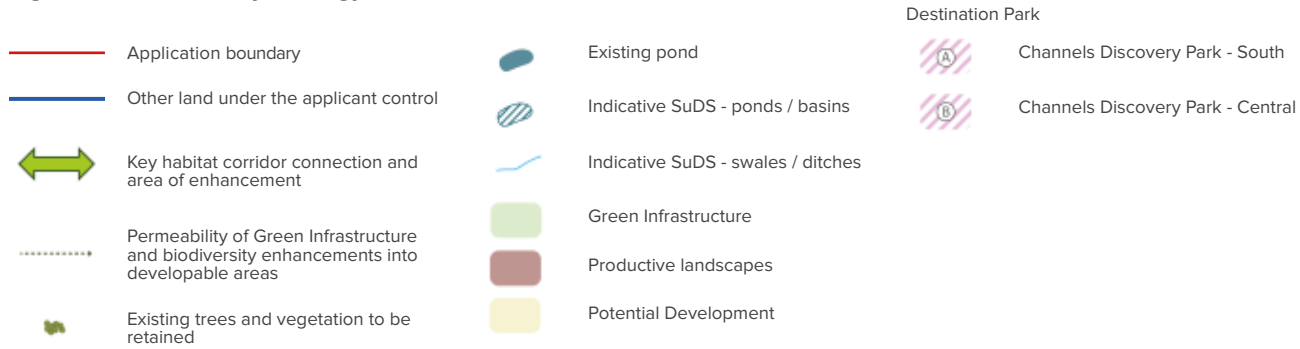
Enhance the ecological value of the former golf course, lake and former landfill area. Manage and enhance the existing areas of plantation woodland from a biodiversity perspective through diversity of species, woodland compartments providing a range of habitats, creating eco-tones, glades and appropriate ground flora and a range of deadwood habitats. Introduce parkland trees on the development edges to provide canopy cover, species diversity and shade. Amenity grassland to be focused in and around the proposed play areas with the rest of the parkland to be maximised for meadow grassland.

Biodiversity Net Gain:

The Biodiversity Net Gain Information report (produced by Logika) provides an assessment of the CGC OPA Zone 1 masterplan. The report presents the methods and results of the analysis using Natural England's Biodiversity Metric 3.1 to demonstrate how each stage of development within CGC OPA Zone 1 will deliver BNG. The report concluded the Proposed Development and proposed on Site habitat creation and enhancement will result in an overall Biodiversity Net Gain (BNG) of just over 20% for CGC OPA Zone 1 as a whole, from its baseline condition. It is also considered possible that achieving even higher levels of BNG may be attainable when detailed landscape design proposals are put forward as part of future reserved matters applications.



Figure 17. Biodiversity Strategy Plan





1

2

3

4

5

6

7

5.3 SUSTAINABLE SURFACE WATER DRAINAGE

A Flood Risk Assessment and Drainage Strategy has been produced for CGC Zone 1 and supports this outline planning application.

In line with local policy and the Lead Local Flood Authority (LLFA) guidance, surface water runoff from the Site will be restricted to the 1 in 1 year greenfield rate, with attenuation provided to accommodate up to the 1 in 100 year plus 45% climate change rainfall event.

The surface water drainage strategy for the Site maximises the use of Sustainable Drainage Systems (SuDS) to manage and control the flow of surface water from the proposed development. Wherever possible, green SuDS features are included within the Site and will be designed to align with the landscaping design, maximising their biodiversity and amenity benefits. For clarity, it is proposed that the following green SuDS will be incorporated within the proposed development:

- Detention basins are to be provided outside of the development plots and at strategic low spots within the Site, which will provide the majority of the required attenuation. Where feasible, it is proposed that terracing with marginal planting would be provided within the basins, along with smaller areas of permanent water to increase amenity and biodiversity benefits.
- Green roofs will be incorporated where possible within the school development,

commercial areas, and town centre, utilising flat roof areas.

- Raingardens will be proposed wherever possible across the Site, to provide water quality, conveyance and amenity benefits at source.
- Strategic planted swales are proposed to replace traditional pipework where possible, to provide conveyance or surface water runoff from the development to the detention basins.

In addition to the above green SuDS, it is also proposed that permeable surfacing will be incorporated within the development plots along with internal rainwater harvesting within the school and commercial areas with rainwater butts included for the residential dwellings. The potential for rainwater harvesting will be confirmed at the detailed design stage.

Furthermore, it is proposed that a number of existing ordinary watercourses within the Site will be enhanced by realigning them to provide a more natural meandering route. The realigned watercourses will be further enhanced through the inclusion of marginal planting to improve biodiversity and provide connectivity to the development.



Figure 18. Surface Water Drainage Strategy Plan

- Application boundary
- Other land under the applicant control
- Existing trees and vegetation to be retained
- Existing pond
- Indicative SuDS - ponds / basins
- Indicative SuDS - swales / ditches
- Green Infrastructure
- Potential Development



1

5.4 PRODUCTIVE LANDSCAPES

The Green Infrastructure Framework includes provision for the community to grow and harvest food through productive landscapes. This will not only include community gardens and orchards located centrally within Discovery Park, but also incidental food production integrating edible environments such as foraging trails, orchard clusters and edible streets within public open spaces, greenways and developable areas.

CGC Zone 1 at Chelmsford Garden Community delivers 1.10ha of 'Productive Landscapes', in excess of the Chelmsford Open Space Standards (refer to section 4.4), and includes the following:



COMMUNITY ORCHARDS

- To feature a varieties of fruiting trees set within meadow grassland to support wildlife, where possible use local heritage varieties of fruit and nut trees.
- Co-located and integrated alongside the community gardens within Discovery Park.
- Interpretation boards should be included within public open spaces to reference orchard tree species, educate people on the history of the variety and how to use the fruit in recipes.



COMMUNITY GARDENS

- Neighbourhood spaces within the green infrastructure intended to give all local residents the opportunity to engage in food production within reach of their homes.
- Designed in various forms including a range of plot sizes either as raised planters, ground level plots or informal planting beds
- At detailed design (RMA) provision should be made for storage facilities, composting area, water points, and possible vehicular servicing and deliveries.



FORAGING TRAILS

- Harvest native planting for foraging fruits, nuts & berries to be integrated through new planting and supplementing the existing hedgerow network.
- planting mixes that include safe foraging species such as blackberries, sloes, hazelnuts and elderflower.
- Food production for wildlife, providing foraging opportunities for a variety of species and provide additional connectivity through green corridors.



2

3

4

5

6

7

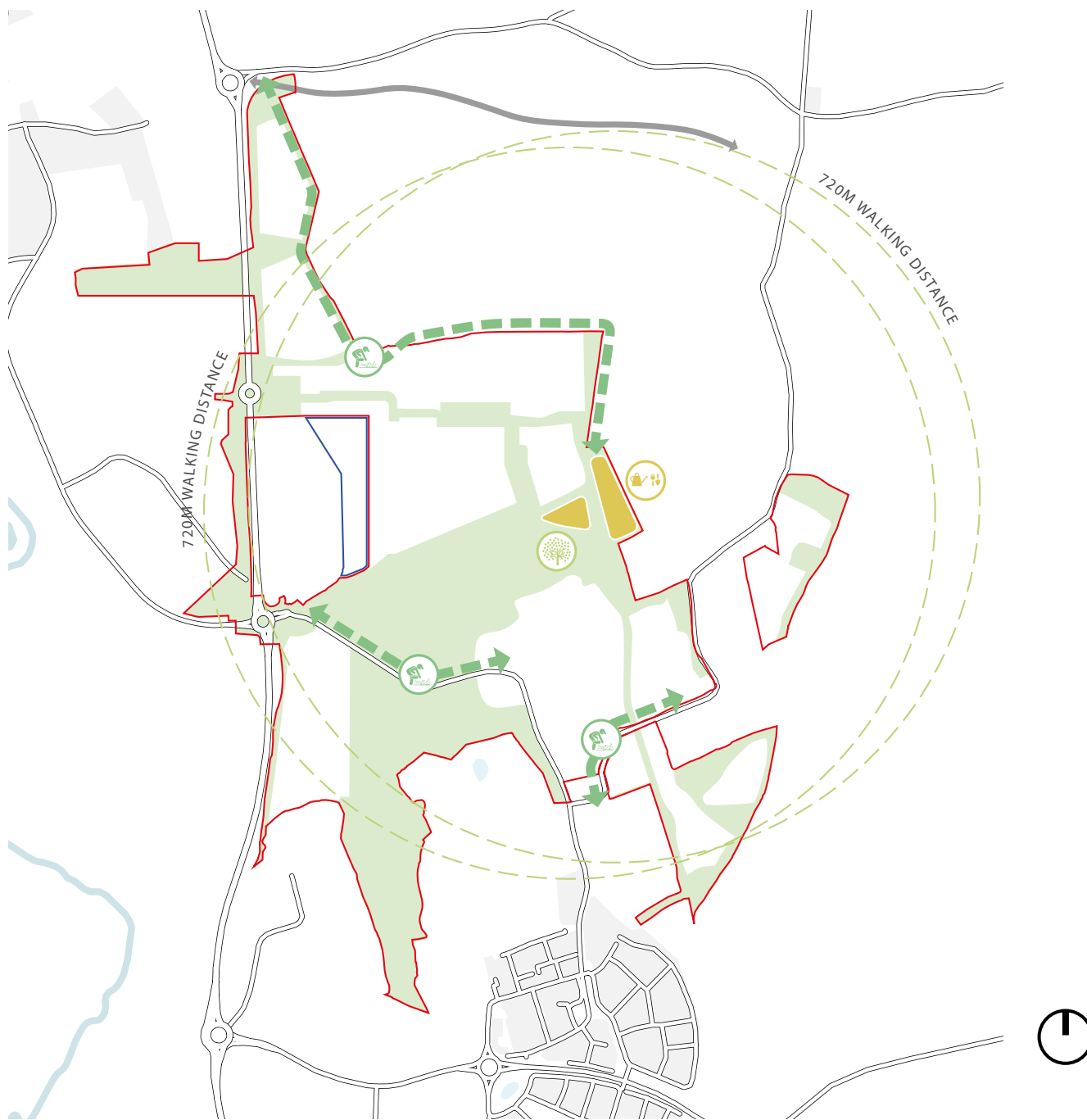





Figure 19. Productive Strategy Plan

- Application boundary
- Other land under the applicant control

Indicative community gardens, orchards and foraging trail locations

-  Community gardens
-  Foraging trails
-  Community orchards

Additional Resource:

- www.applesandorchards.org.uk/essex-information/
- Natural England Technical Information Note TIN013 - Traditional orchards, Edition 2.



5.5 CULTURAL HERITAGE

THE CGC DFD SAYS.....

CGC should respect and respond to the rich heritage of the site and its surroundings, by:

- delivering **high-quality development** that reinforces historic character and local distinctiveness
- retaining and reinforcing **historic landscape features**
- reusing **historic routes and linkages** between the heritage assets

AT ZONE 1 WE WILL:

Respect the existing heritage assets - buildings and features with historical significance - and ensure all proposals have been informed by historic research and heritage assessment of the Site and its surroundings.

The rich heritage of the Site will be celebrated in two main ways;

1 CHANNELS COMPLEX EMPLOYMENT AREA

- The new Channels Employment Area and the residential proposals will be designed respectfully and sensitively in response to the setting of the existing historic farmsteads within the Channels Estate complex.
- To the north of the complex a “new farmstead” of employment and residential uses is proposed with **significant landscape buffer** between the historic two farmsteads and the newly proposed one. Single storey “barn like” buildings will cluster around the courtyard allowing views through to the roofs of the historic farmsteads.



2 DISCOVERY TRAILS

- A network of waymarked routes that celebrate, reference and interpret the area’s rich history. The trails will feature either interpretation boards, public art and/or landscape features along the way that tell a story and celebrate, reference and interpret the area’s rich history in each location.



1

2

3

4

5

6

7

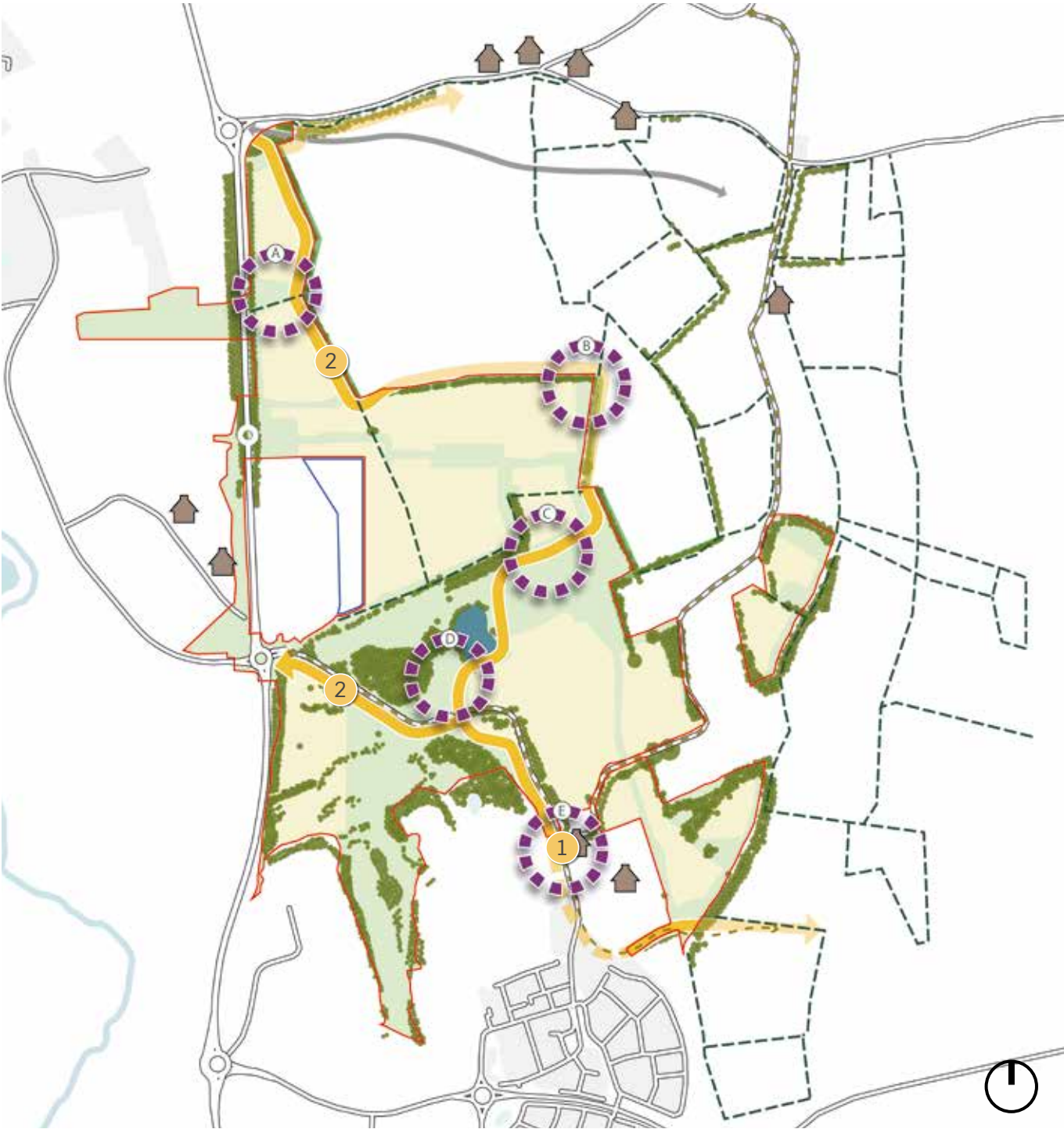














Figure 20. Cultural Heritage Strategy Plan

- | | | |
|--|--|--|
|  Application boundary |  Historic field boundary |  Heritage nodes for heritage interpretation - Potential Opportunities |
|  Other land under the applicant control |  Historic lane | A & D Play theme that reflects the site's rich history through interpretation & signage |
|  Existing pond |  Discovery Trail within Zone 1 | B Incorporating historic field boundaries |
|  Green Infrastructure |  Discovery Trail within Zones 2 & 3 | C Orchard using historic fruiting tree species |
|  Potential Development |  Discovery Trail outside CGC | E Existing Channels complex and Channels new employment area. Public realm and landscape to reflect farmstead heritage with potential for public art |
| |  Listed building | |



6 KEY PLACES & SPACES

6.1 ILLUSTRATIVE MASTERPLAN

The illustrative masterplan plan opposite illustrates how the Green Infrastructure Strategy can be delivered at CGC Zone 1.

The illustrative masterplan demonstrates one way in which these parameter plans could be interpreted, based on the parameters of the application drawings.

An important aspect of this is that the plans include a degree of flexibility, where appropriate, in order to accommodate changing circumstances.

- 1 Channels Discovery Park
- 2 Community gardens and orchard
- 3 Channels Park
- 4 Combined Local Equipped Area of Play (LEAP) & Neighbourhood Equipped Area of Play (NEAP)
- 5 Existing vegetation to be retained
- 6 Indicative active routes through open space and greenways
- 7 Indicative SuDS basins / ponds

- 8 Primary School and associated grounds
- 9 New neighbourhood centre
- 10 Channels Employment Area
- 11 Innovation Hub

1

2

3

4

5

6

7



Figure 21. Illustrative Masterplan



1

2

3

4

5

6

7

6.2 CHANNELS DISCOVERY PARK

Three substantial new Destination Parks will be provided in locations evenly distributed across the Chelmsford Garden Community. CGC Zone 1 will deliver a 'Destination Park' in the form of 'Channels Discovery Park', which will run north south through Zone 1 bringing 22 hectares of community parkland to the heart of the neighbourhood.

Channels Discovery Park will include a mosaic of habitats, managed for biodiversity and provide opportunities for people to experience, interact with and appreciate nature and heritage alongside a wide range of recreational and educational opportunities.

Channels Discovery Park will provide a long community park that links with existing green open spaces and Channels Park to the south. The park will be easily accessible via active travel routes along greenways, through public open space and through developable areas.

Built form is laid out to frame and overlook the park. The parkland is located on the former Channels golf course and where possible retains existing woodland, hedgerows, trees and wetlands and will be supplemented with new enhanced areas of planting.

CGC Zone 1 - Channels Discovery Park will be characterised by two key areas:

1 CHANNELS DISCOVERY PARK - SOUTH

- The linear southern parkland is characterised by landscape and ecological features associated with the former Channels golf course, including an undulating landform.
- The strategy is to retain, where possible, the existing tree, woodland, wetlands and meadow grassland, bring into a new management regime, strengthen linkages, supplement with new enhanced areas of planting and increase biodiversity value.
- The park will provide a network of surfaced paths for pedestrians and cyclists.



2 CHANNELS DISCOVERY PARK - CENTRAL

- The central part of the park will be focused around amenity, recreation and community uses, within easy access of Great Belstead Village and primary school.
- The park will feature a combined NEAP and LEAP play area, community gardens and orchards and informal recreation and seating areas.
- Existing landscape features, where possible are retained and enhanced to help shape and characterise the park including woodland, hedgerows, trees and ponds.



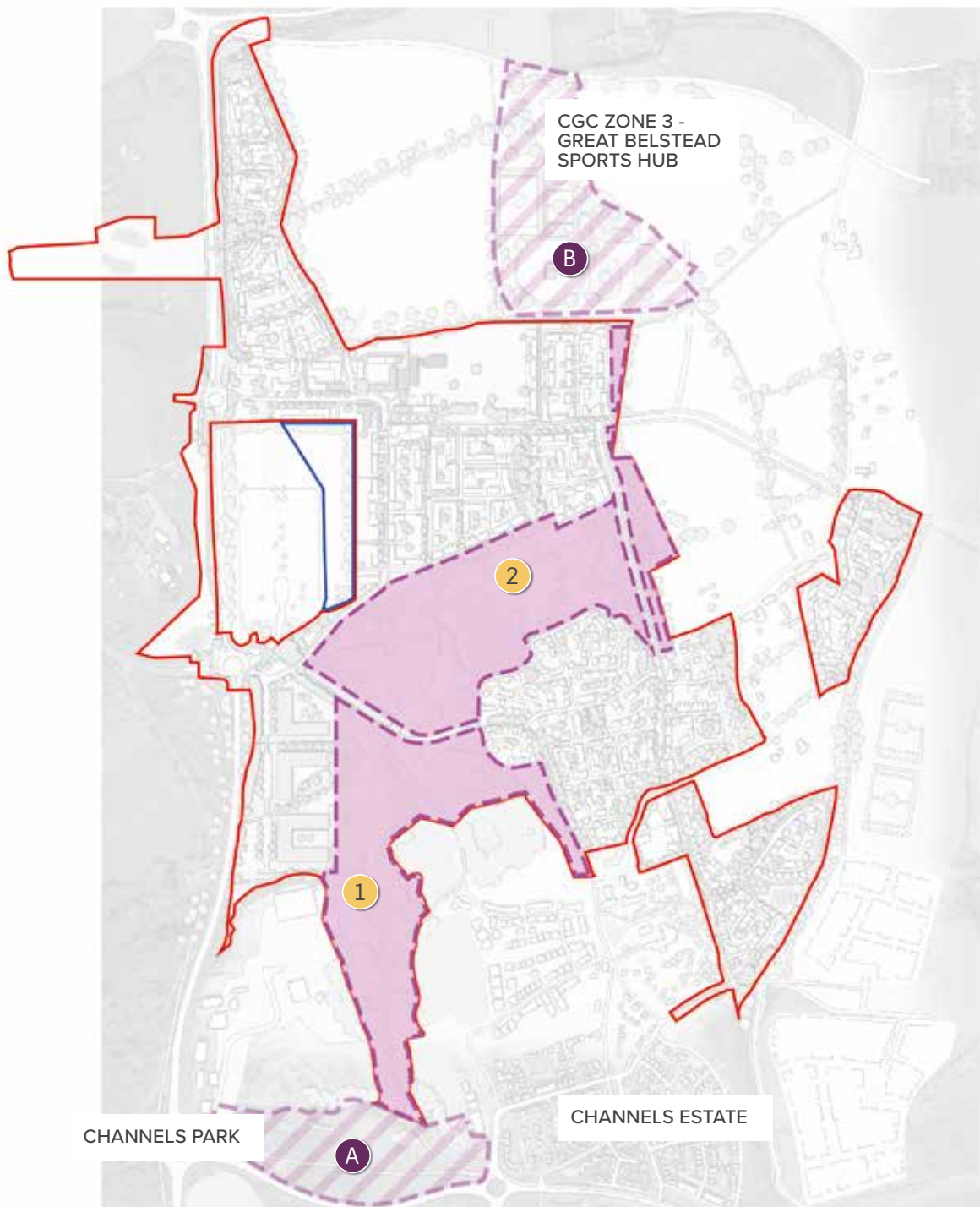


Figure 22. Channels Discovery Park - Character Areas

— Application Boundary
 — Other Land Under The Applicant Control

- 1 Channels Discovery Park - South (CGC Zone 1)
- 2 Channels Discovery Park - Central (CGC Zone 1)

- A** Channels Park (Part of Channels development to the South)
 Existing parkland on former golf course serving the Channels development, featuring an equipped play area, skate park and a series of surfaced footpath and cycle trails.
- B** Channels Discovery Park - North (CGC Zone 3)
 Proposed Great Belstead Sports Hub featuring a series of formal sports pitches and equipped play areas (NEAP / LEAP), framed by residential development in the west and existing tree and hedgerow vegetation in the east.



1

6.3 GREENWAYS

The Greenways are a key part of the sustainable movement strategy within CGC Zone 1 - offering the inclusion of informal routes, active travel and designated Public Rights of Way (PRoW's) for pedestrians and cyclists. The Greenways in Zone 1 primarily feature on the boundaries with Zone 3 and seek to incorporate, retain and enhance the existing hedgerow network as part of a biodiversity corridor where habitat enhancements are focused.

Greenways will protect, restore, enhance and create nature-rich habitats encouraging species movement and the thriving of wildlife. They incorporate the movement of people and water through the inclusion of Sustainable Drainage features. Additionally, the Greenways provide high quality amenity space incorporating opportunities for play on the way, recreation and areas for seating to stop and rest.

The general character is an informal and nature led landscape. The meandering nature of the greenway means that widths will vary throughout, depending on location, which will enable the creation of different characters and settings to adjacent housing areas.

2

3

4

5

6

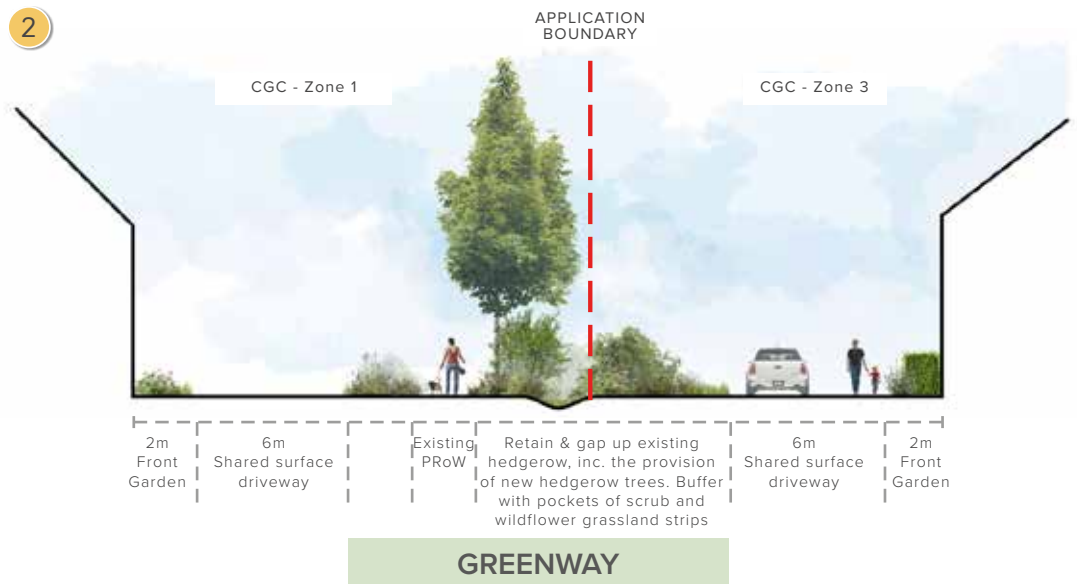
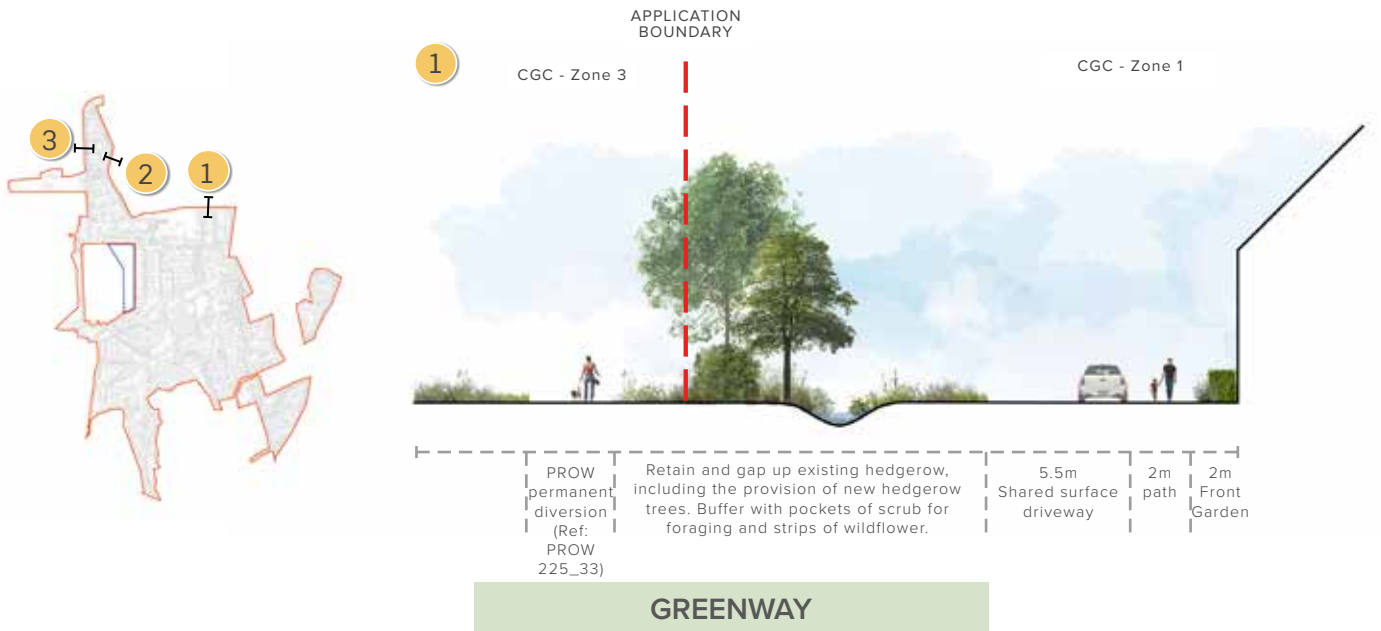
7

ECOLOGICAL ENHANCEMENT PRINCIPLES

- Existing hedgerow within Greenways retain and gap up, including the provision of new hedgerow trees.
- Supplement the hedgerows with new hedgerow trees no more than 20m apart (Field Maple, English Oak, Hornbeam, Wild Pear, Crab Apple and Wayfaring tree)
- Creation of pockets of scrub and wooded copse along and within corners of the Greenways (biodiversity corridors).
- Buffer zones to existing hedgerows with scrub transitioning to wildflower grassland. Creation of wildflower grassland buffer zone strips 2 - 5m wide.
- Include ecological features along their length - including the use of deadwood from the Site for habitat piles and standing deadwood.
- Retain existing ditch lines under hedgerows.
- Ponds - retain and enhance existing field ponds (along hedgerow boundaries) – in addition to creating ponds for pure biodiversity value where space allows.



CGC Zone 1 - Illustrative Greenway and boundary interface sections





7 CONCLUSION & SUMMARY

7.1 CONCLUSION & SUMMARY

Strategic Growth Site Policy 6 (SGS6), of **Chelmsford City Council's adopted Local Plan (2020)** sets out the vision for a high quality comprehensively planned new sustainable urban extension at Chelmsford Garden Community (CGC) that provides a framework of multi-functional.

The DFD Green Infrastructure Framework and guiding principles have been a key consideration in the design of the Green Infrastructure across CGC Zone 1 and the wider CGC particularly in relation to:

- Green and Blue Infrastructure
- Cultural Heritage
- Biodiversity Net Gain
- Sustainable Surface Water Drainage
- Arboriculture
- Open Space, Play and Sport

This Green Infrastructure (GI) Strategy demonstrates that the Proposed Development at CGC Zone 1 has taken account of baseline Green Infrastructure assets, national, regional and local policy aspirations as well as sub-regional guidance and will deliver significant gains in Green Infrastructure value, which will be achieved through:

- Safeguarding and enhancement of existing GI assets including hedgerow and tree field boundaries, woodland, ponds and historic features.
- Creating a new connected multifunctional habitat mosaic (habitat corridors and Discovery Park) linking hedgerows, grasslands, woodlands, wetlands and water, to form a biodiversity rich landscape for wildlife and enjoyment by new and existing communities.
- A comprehensive internal network of people-focused movement routes (active travel) for walking, cycling and running. This connectivity is a structuring principle to the Proposed Development, promoting sustainable modes of transport as well as healthy living and improved well being.
- Creating a high quality landscape setting to support sustainable economic growth and attracting inward investment of jobs and people.

- Integrating a suite of SuDS applications to provide biodiversity, visual amenity and help alleviate flood risk off site and down stream.
- Promoting local food production with provision for community allotments, gardens and orchards.
- Delivery of a Destination Park - Channels Discovery Park will run north south through Zone 1 creating over 22ha of community parkland for the neighbourhood

The Biodiversity Net Gain Information report (produced by Logika) concluded the Proposed Development and proposed on site habitat creation and enhancement will result in an overall Biodiversity Net Gain (BNG) of just over 20% for CGC OPA Zone 1 as a whole, from its baseline condition.

Subject to the approval of the Outline Planning Application for CGC Zone 1, Reserved Matters Applications (RMAs) would need to be submitted for the various phases of the development. Some strategic infrastructure (such as transport infrastructure) and the Channels Discovery Park, which is a central element of the green infrastructure, will be delivered through a standalone reserved matters application allowing it to be delivered prior to the commencement of residential development.

In relation to Green Infrastructure, future RMAs for Zone 1 would need to cover the detail of the landscaping and include the following, where applicable and in agreement with Chelmsford City Council (through the PPA Pre-Application Process) the following:

- Landscape General Arrangement Plan - illustrating hard, soft, boundary and furniture treatment.
- Detailed Planting Plans
- Illustrative landscape sections
- Tree pit details
- Landscape and Ecological Management Plan (LEMP)

1

2

3

4

5

6

7

Overall CGC Zone 1 will deliver over 60% Green Infrastructure

The indicative quantum of overall Green Infrastructure illustrated on the Land Budget / Open Space Plan is as follows:

OPEN SPACE / GI TYPOLOGY	PROPOSED DEVELOPMENT PROVISION (HA)
Productive Landscapes: Allotments community gardens and/or orchards	1.10ha
Amenity Green Space	1.44ha
Play Space (Children) Local Equipped Area of Play (LEAP)	2no. LEAP 1no. NEAP
Play Space (Youth) Neighbourhood Equipped Area of Play (NEAP) - inc. Incidental Sport	1no. Incidental Sport = 2800m ² /0.28ha
Parks and Recreation grounds (for public and private provision)	22.50 ha
Natural and Semi-Natural Green Space	8.16ha
Total GI / Public Open Space*	33.48ha

	AREA (HA)	%
Application Site	82.47ha	100%
Developable Area****	39.8ha	48%
Green Infrastructure / Public Open Space *	33.48ha	41%
Existing and proposed road infrastructure and utilities	5.19ha	6%
Green Infrastructure Within Developable Area**	11.94ha	na
Green Infrastructure to west of Essex Regiment Way for drainage purposes	4ha	5%
Total Green Infrastructure ***	49.42ha	60%

* Publicly accessible GI (excludes land west of Essex Regiment Way used for SuDS drainage purposes)

** Assumes 30% green and blue infrastructure within developable areas - street verges, pocket parks, incidental open space and rear gardens.

*** Includes all green infrastructure within the Application Site, developable area (at 30%) and GI to the west of Essex Regiment Way

**** includes residential, school, innovation hub and village centre

BMD

Bradley Murphy Design LTD
6 The Courtyard, Dark Lane, Hatton
Warwickshire, CV35 8XB