

DESIGN

ECOLOGY STRATEGY

These pages provide a summary outline of the proposed biodiversity enhancements to be included within the proposed development. For more detail, please refer to the Ecology Strategy report prepared by Geosphere Environmental Limited and submitted as part of this outline planning application.

Summary

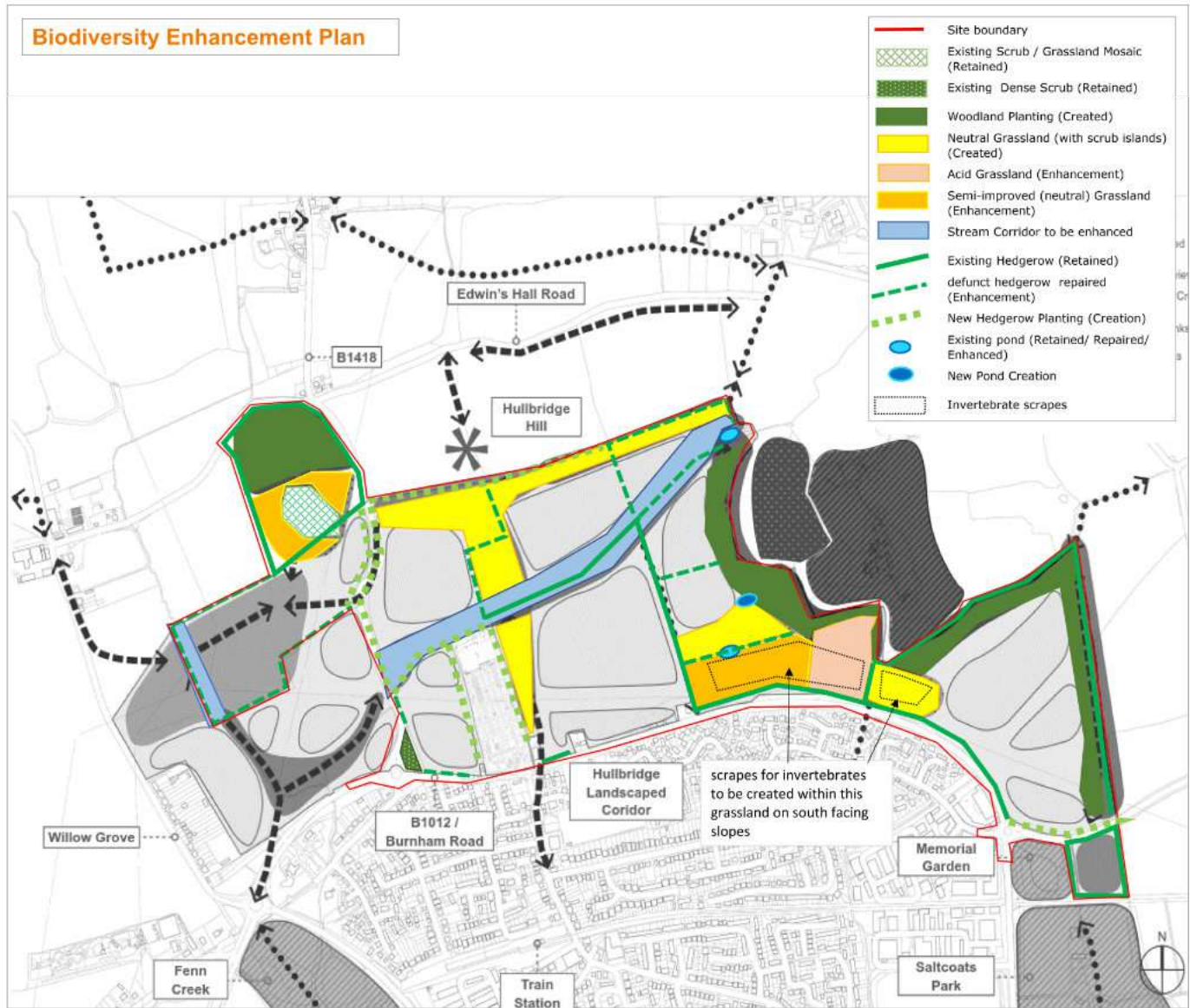
The proposals include the creation and enhancement of grassland, scrub, woodland, hedgerows, swales and basins, residential gardens and urban landscaping, ponds, and the stream corridor. These enhancements provide a 29.37% Biodiversity Net Gain for area-based habitats, with 23.18% net gain for hedgerows.

Additional features within the site will provide additional habitat enhancement for protected species, with the inclusion of log piles, vegetation piles, bird boxes, and bat boxes.

Grassland

Areas of existing grassland on site will be enhanced to increase the diversity of the sward, followed by long term meadow management of the grasslands. An area of acid grassland has been recorded onsite. This area will be retained and enhanced. New areas of grassland will be created within areas of existing Arable land, followed by long term meadow management of the grasslands.

Scrapes are present within parts of the acid



grassland associated with the Bushy Hill Local Wildlife Site. It is proposed to expand these habitats by introducing scrapes into the adjacent grassland areas. The scrapes will be created on south-facing slopes.

Scrub planting

Islands of scrub will be created within the grassland habitats. These islands will create a mosaic of scrub and grassland, providing stepping stone connectivity throughout the area, for species such as bats, reptiles, invertebrates and Great Crested Newt. The scrub planting will comprise of a mix of native species.

Woodland planting

An area of woodland will be created as part of the development. This will include a mix of native species, including a mix of trees and shrubs to create a diverse structure. A wide variety of species should be selected to ensure the new planting is resilient to climate change and pests and diseases.

Planting should be designed to create lots of woodland edges. Patches of scrub should be planted along the boundaries of the woodlands, to create a diverse structure and variety of habitats. Management of the woodland will ensure the ecological value does not degrade over time.

Hedgerows

Hedgerows will be predominantly retained, with a buffer of at least 5m from

each side where possible.

The grassland around the base of the hedge will be managed as described above (either as a meadow, field margin, or urban landscaping depending on the situation).

Gaps within hedgerows will be re-planted with native species to provide thicker hedgerows with no gaps.

SUDS Design

Attenuation basins and swales will have shallow, sloping banks, to provide as much area for plants to colonise as possible. As water levels rise and fall this will also provide a variety of habitat conditions.

A variety of substrates should be used within the base of the attenuation basins (such as sections of gravel). Additional habitat features could also be included such as logs, and boulders, where possible. Where possible, parts of the basins should be designed to remain wet at all times to provide additional habitat diversity for invertebrates and plants. The basins will be situated close to the existing ditch network to allow for species already present on site to colonise the SUDS habitats.

The SUDS should be designed such that the water quality of the existing ditches is not affected by drainage on the site. Where possible, the SUDS will be designed to include wetland planting with native species appropriate to the

conditions.

Urban Landscaping

Planting within the urban landscaping scheme should be designed to provide additional benefits to wildlife. The planting should aim to provide a diverse mix of structure (height and density), to provide a diverse mix of habitats. Flowering plants should be selected to provide a range of nectaring opportunities for invertebrates, with flowers available through the seasons. Trees and shrubs should be selected to provide fruit and berries.

Patches of dense scrub and evergreen shrubs and trees will provide hibernation and overwintering habitat for hedgehog, reptiles and invertebrates. These areas should not be tidied-up, dead leaves should remain on the ground and dead seed heads should remain on herbaceous plants.

Pond Enhancement

Existing ponds will be retained and enhanced. Ponds should be enhanced / restored if degradation is caused by construction works.

Works to the ponds will need to be managed to best avoid damage to existing wildlife.

Trees and scrub should be removed from the south and west sides of the pond, allowing the pond to receive morning sunlight and therefore stimulating aquatic plant development. The north and east

sides of the pond should retain approximately 10-30% of its current vegetation, with the rest removed to prevent overhanging shading. The logs and brash created during vegetation clearance should be piled near the pond, providing good habitat for amphibians.

The existing banks of the pond should be re-profiled to become gently sloping to create a larger area of marginal habitat.

The scrub and hedgerows removed as part of the pond restoration works will be replaced elsewhere onsite.

Once the pond has been fully restored, stock proof fencing should be placed around its perimeter to limit dogs entering the water. Appropriate signage explaining the species present within the pond and its ecological value should be placed upon the fencing to raise awareness amongst the public.

Stream Corridor

The main ditch onsite flows east to west through the centre of the site, with a second ditch flowing north to south along the western boundary of the site. These ditches are all seasonally dry. Other predominantly dry ditches are present within the hedgerows around the site.

A buffer of at least 5m should be maintained between the Proposed Development and the top of the banks of the ditches within the stream corridor, to provide a habitat corridor.

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PEDESTRIAN AND CYCLE ACCESS STRATEGY

The site is well located in relation to accessibility by means other than the private car; with regular bus routes, which link the site to the town centre and South Woodham Ferrers and Wickford railway stations; and the ability to walk and cycle to a number of local amenities, which will encourage residents of the development to travel by sustainable means, and to create a culture of sustainable travel from the outset.

The plan opposite shows the key pedestrian, cycle and equestrian routes proposed within the development overlaid on the proposed illustrative masterplan.

Pedestrian routes

A network of pedestrian routes are created throughout the proposed layout. These form a key element of street design within the development areas, and also run throughout the network of green spaces and corridors.

As well as enabling good accessibility between residential and non-residential uses within the development, these routes also provide connections through the development, both for residents of the development into the existing town and for residents of the existing town through the development into the wider countryside.

These routes also include permissive pedestrian routes within the agricultural land between the northern boundary of the site and Edwin's Hall Road.

Cycle routes

A network of cycle routes are also created across the proposed layout. These have been carefully arranged to link key destinations within the layout (such as the primary school and village centre) and key desire routes beyond the site. Cycle routes are provided as a key element within the spine streets within the layout, and also within the network of green spaces and corridors.

In addition, the development will implement a series of cycle improvements from the crossing points on Burnham Road, connecting to key destinations within South

Woodham Ferrers. Cycle familiarity training will also be provided for residents.

Equestrian routes

During the masterplanning process, the opportunity was identified to assist with the creation of a new equestrian route linking bridleyway 46 (within the eastern part of the site) with bridleyway 21 (beyond the western part of the site, leading from Ilgars Manor towards Hyde Hall).

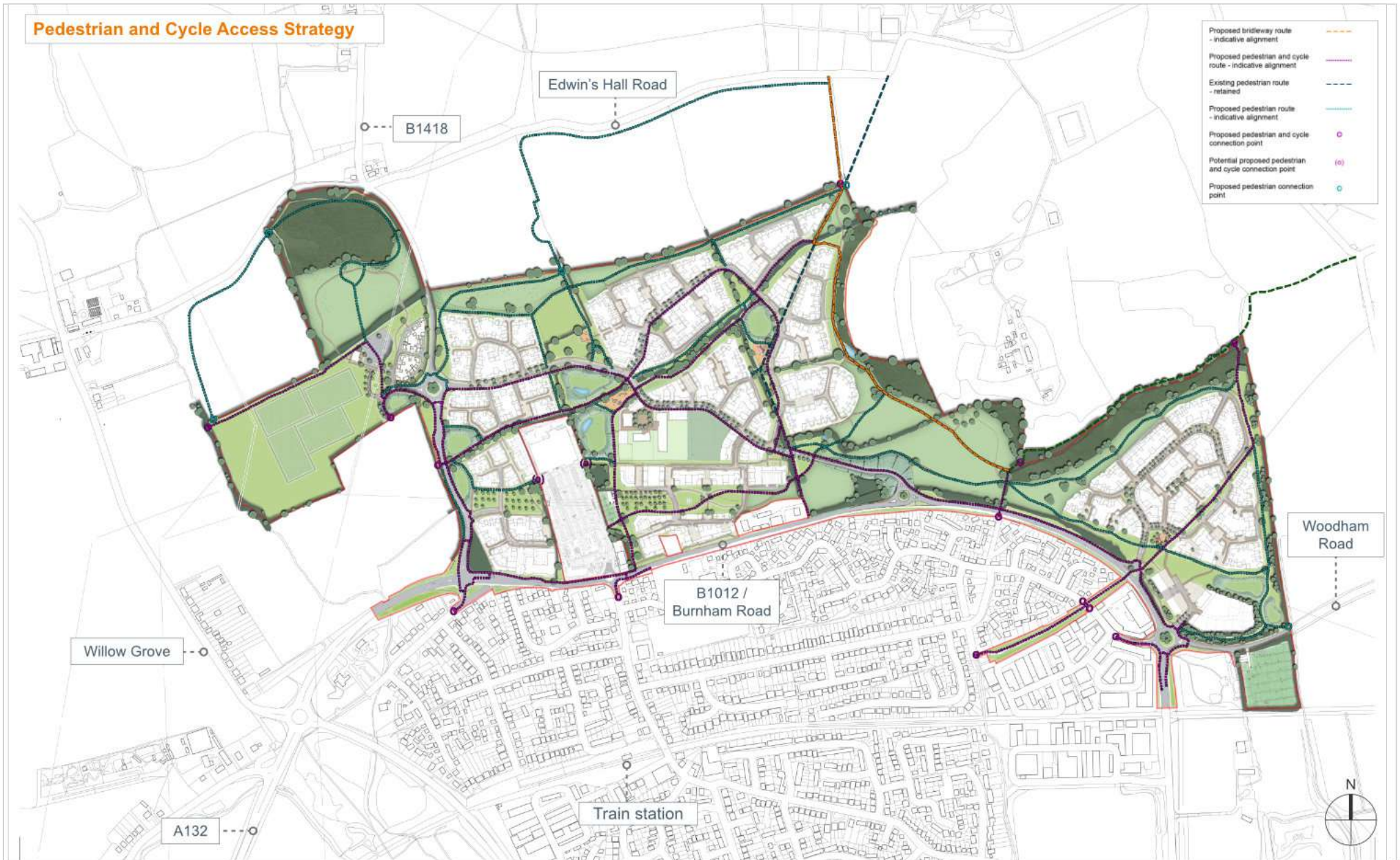
A new bridleyway is therefore proposed, forming a continuation of Bridleway 46 northwards across the base of Bushy Hill, across the existing stream, and continuing beyond the site boundary within adjoining land under the applicant's control to Edwin's Hall Road.

Pedestrian and cycle crossing points

The development proposals include for a comprehensive network of pedestrian and cycle links within the development, together with controlled crossing points over the Burnham Road and the B1418. For more details of these see the Transport Assessment. The crossing point locations are identified in summary form overleaf.



Pedestrian and Cycle Access Strategy



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CROSSING POINTS

A number of pedestrian and cycle crossing points are proposed, to provide sustainable links to the existing network and facilities:

- Crossing Point 1: Staggered Toucan crossing at the Willow Grove/Ferrers Road/Burnham Road junction;
- Crossing Point 2: Proposed footway /cycleway and island crossings provided at the B1418/ Burnham Road junction;
- Crossing Point 3: A Toucan Crossing and footway / cycleway upgrades to existing Hullbridge Road junction;
- Crossing Point 4: A Toucan crossing at existing Bridleway 46 crossing of Burnham Road;
- Crossing Point 5: A new crossing at Burnham Road (Left in/Left out junction);
- Crossing Point 6: A Toucan crossing and other improvements at Burnham Road/Ferrers Road/ Woodham Road junction;
- Crossing Point 7 – A Toucan Crossing forming part of the B1418/Burnham Road improvements;
- Crossing Point 8 – A Toucan Crossing at a midway point between the new site access roundabout on the B1418 and the B1418/ Burnham Road junction;
- Crossing Point 9 – An island crossing north of the new roundabout junction on the B1418.

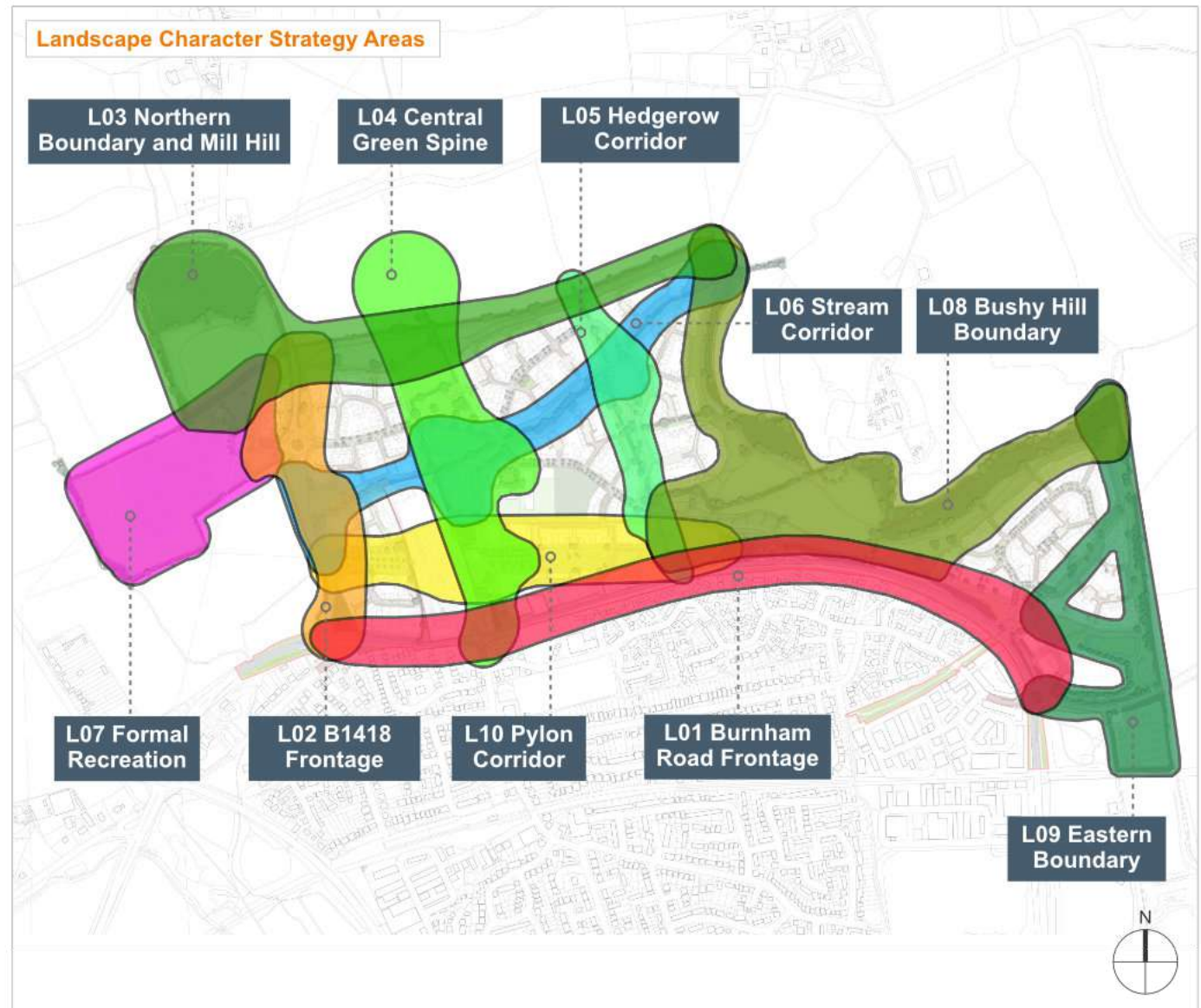


LANDSCAPE AND PLACEMAKING

The network of green spaces and corridors will make a significant contribution towards the establishment of a 'Green Ring' of interlinked landscaped spaces and routes all around South Woodham Ferrers. These spaces and corridors are multifunctional and offer a diverse and exciting benefit to the town as a whole for residents of all ages. They vary in character along their length or edges but are unified by a common function or feature. Each space and corridor is described over the following pages in terms of scale, function, features and benefits, with explanatory diagrams and images.

The ten areas are:

- L01 Burnham Road Frontage;
- L02 B1418 Frontage;
- L03 Northern Boundary and Mill Hill;
- L04 Central Green Spine;
- L05 Hedgerow Corridor;
- L06 Stream Corridor;
- L07 Formal Recreation;
- L08 Bushy Hill Boundary;
- L09 Eastern Boundary;
- L10 Pylon Corridor.



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PUBLIC REALM AREAS - L01 BURNHAM ROAD FRONTAGE

The Burnham Road Frontage is a linear open space that runs the length of the southern edge of the site providing a link between the town and the new development. It varies along its length as it intersects other landscape areas but is principally a transport corridor.

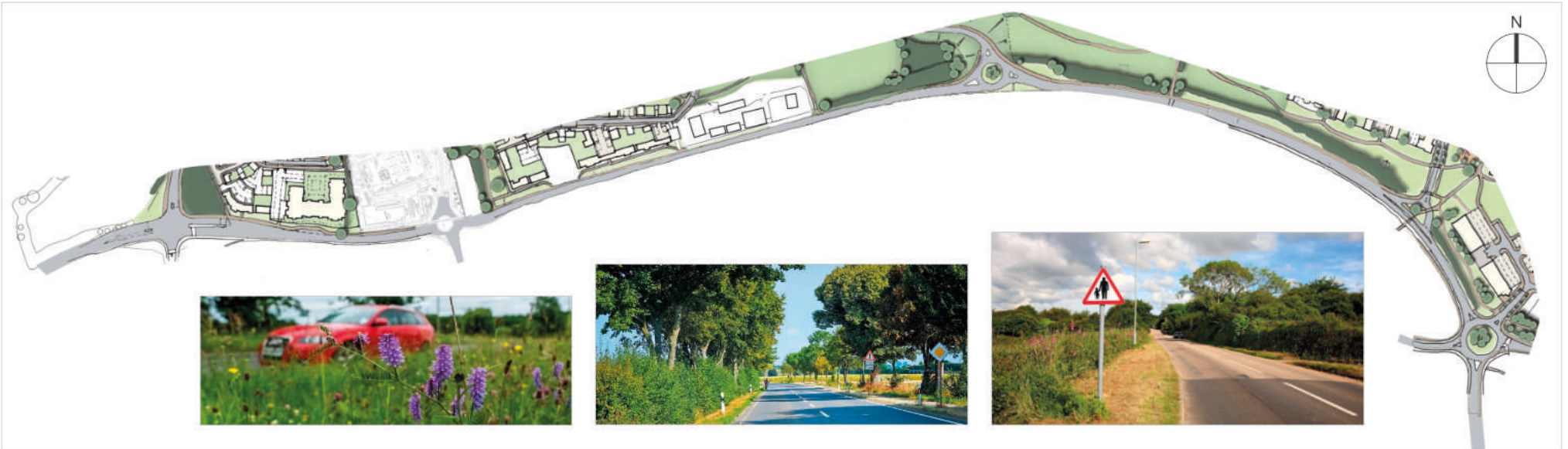
L02 the B1418 Frontage corridor, L04 Central Green Spine, L05 Hedgerow

Corridor, L08 Bushy Hill Boundary, L09 Eastern Boundary and L10 the pylon corridor intersect with this space.

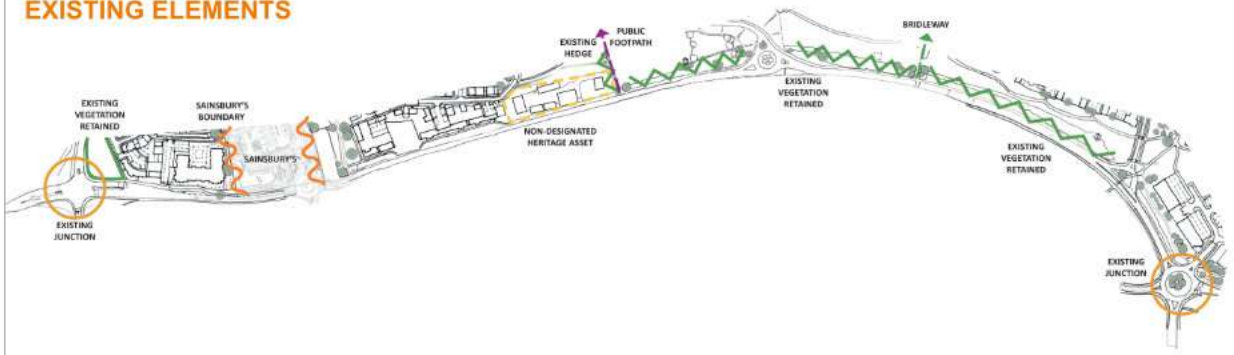
The existing roadside hedgerows and trees would be retained and form part of the landscape structure unless removed to form the access points.

The space would be well connected along its length, both northwards into the site and to the town to the south.

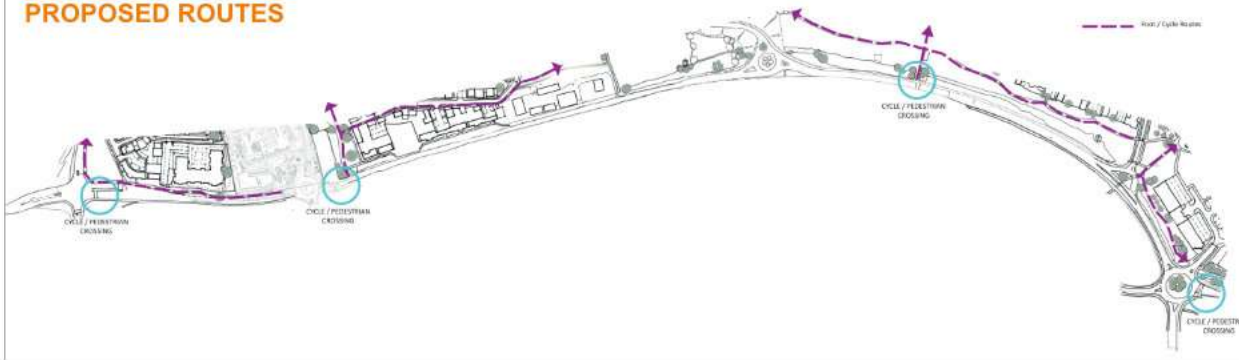
Enhanced boundary vegetation is proposed to complement the existing planting along the roadside.



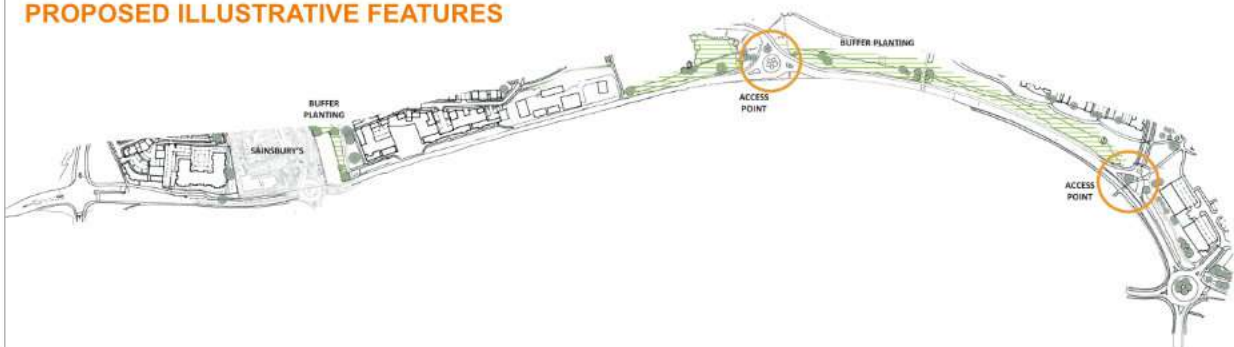
EXISTING ELEMENTS



PROPOSED ROUTES



PROPOSED ILLUSTRATIVE FEATURES



L01 BURNHAM ROAD FRONTAGE

- Scale** 1,600 x 50m
- Function** Linear corridor between Burnham Road and the existing town
Provides access points and linkages
Bridleway link to Bushy Hill
- Landscap e features** Existing trees and hedgerows retained
Proposed drainage basins
- Benefits** Wildflower grassland on northern edge at Bushy Hill
New copses and tree planting



DESIGN

PUBLIC REALM AREAS - L02 B1418 FRONTAGE

This linear movement corridor runs north – south, primarily connecting Burnham Road to the development site and the wider countryside to the north.

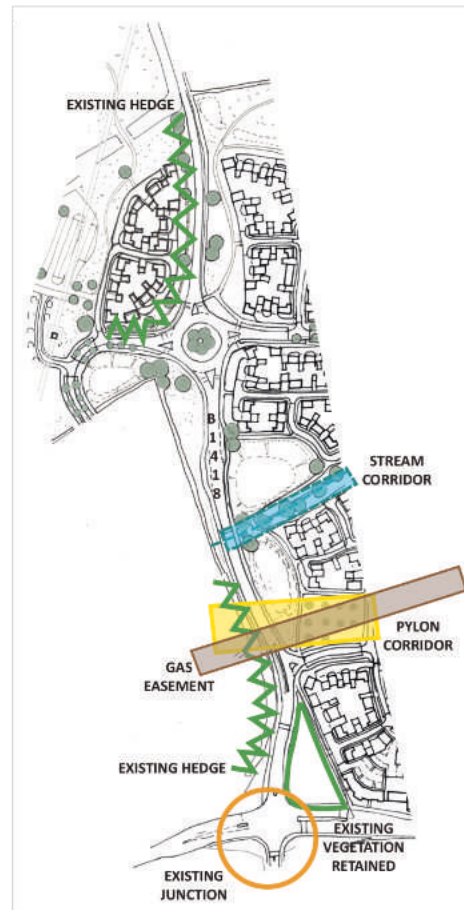
The new alignment of the B1418, and the surrounding landscape proposals retain the existing vegetation, including hedges around the new access.

The proposed junction forms the access point into the site with dry basins featuring as the part of the entrance open spaces to the east and west.

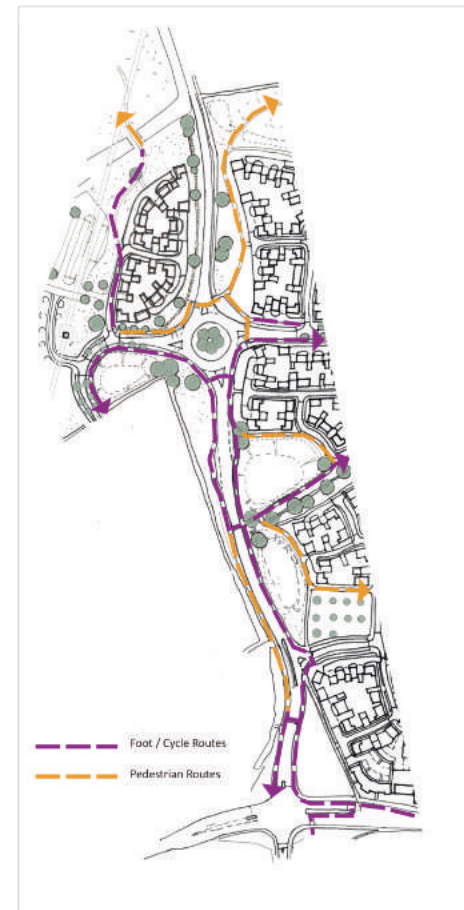
The southern part of this corridor features a retained block of woodland to the east and the transition between Countryside Properties land and the Bellway land to the west.

The northern section of the B1418 Frontage intersects with L03 Northern Boundary providing foot and cycle links to Mill Hill and the open countryside to the north.

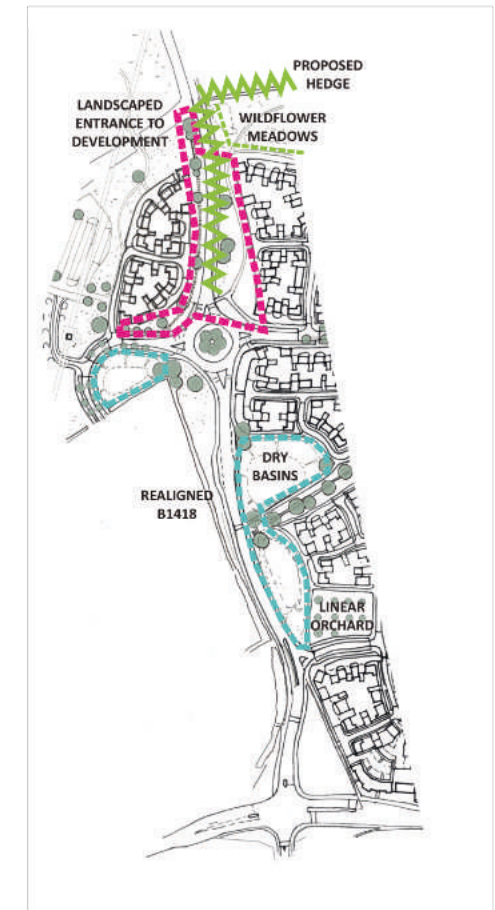
The B1418 Frontage also intersects with, and provides access to, L07 Formal Recreation.



EXISTING FEATURES



PROPOSED ROUTES



PROPOSED ILLUSTRATIVE FEATURES





L02 B1418 FRONTAGE

- Scale** 635m x 190m
- Function** Linear transport corridor from Burnham Road northwards through the site t
Provides access points and linkages
- Landscap e features** Existing trees and hedgerows retained
Proposed drainage basins
- Benefits** Tree planting
Connection with the countryside beyond
Green spaces at the entrance points into the development



DESIGN

PUBLIC REALM AREAS - L03 NORTHERN BOUNDARY AND MILL HILL

Located on the site's northern boundary is an east-west, linear, open space corridor that is naturalistic in character. This space provides a transition from the new development to the open countryside beyond.

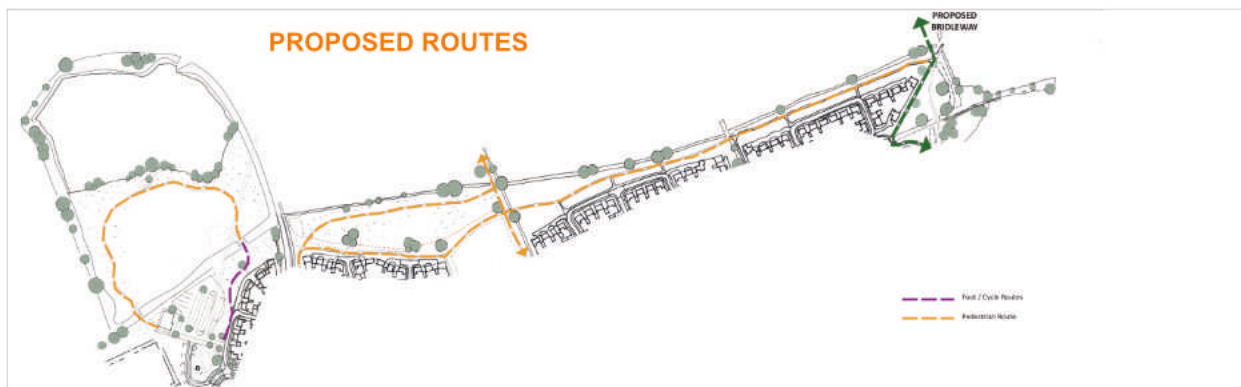
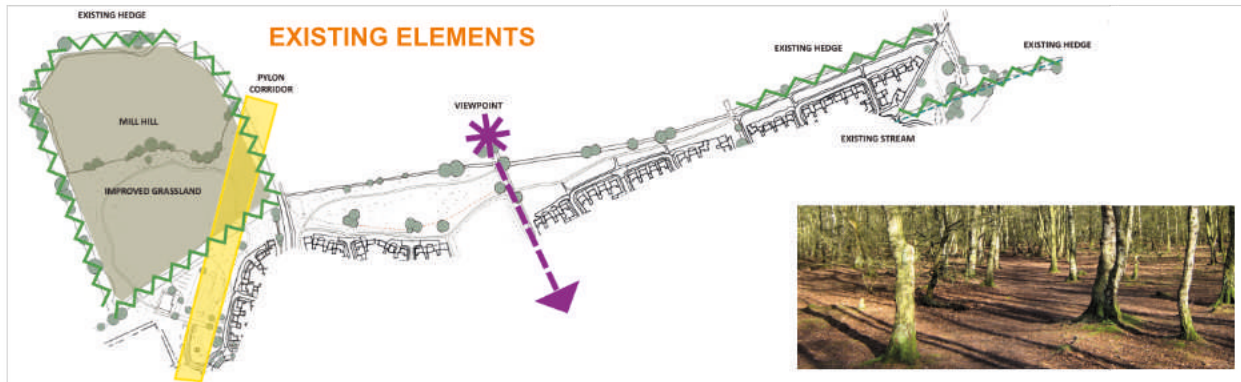
The corridor features wildflower meadow and informal planting. Existing vegetation is retained and reinforced, hedgerows with occasional trees are to be replanted on the northern edge of the

site.

Foot and cycle routes throughout the open space link to the higher ground and to Edwin's Hall Road to the north, encouraging both existing and future residents to connect with and enjoy the countryside.

To the west of the corridor new access routes are introduced on the southern slopes of Mill Hill and the existing grassland retained for biodiversity purposes. The northern face of Mill Hill is to be planted with new woodland for carbon sequestration and habitat creation benefits.





L03 NORTHERN BOUNDARY AND MILL HILL

- Scale** 345m x 1165m
- Function** Linear corridor on the northern edge of the site providing a transition between the development and open countryside
- Landscape features**
 - Existing trees and hedgerows retained and reinforced
 - New woodland and enhanced grassland on Mill Hill
- Benefits**
 - Informal Planting and wildflower meadows
 - Connections to the countryside and PRoW network
 - Biodiversity enhancement
 - New tree planting



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PUBLIC REALM AREAS - L04 CENTRAL GREEN SPINE

The Central Green Spine is a vibrant and varied multi-functional open space that runs through the heart of the site between the Burnham Road / Hullbridge Road junction and the central hilltop to the north of the site. This alignment retains the existing visual connection across the site from Hullbridge Road and Burnham Road, and also provides an extension through the site of the existing movement corridor along Hullbridge Road, linking the heart of the new development with the railway station and the heart of the town.

L01 the Burnham Road corridor, L03 the stream corridor, and L10 the pylon corridor intersect with this space. Part of the western edge of this space is formed by the Sainsbury's site.

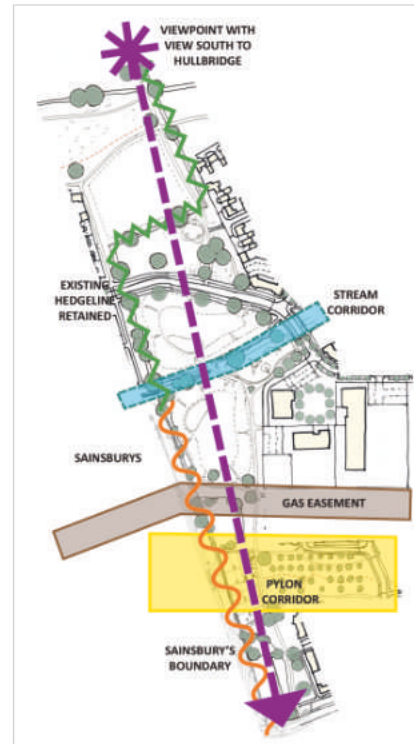
The existing hedgerows and trees would be retained and form part of the landscape structure.

Part of the cycleway network for the site runs through this space, linking to Burnham Road through the Village Square and Spine Road. The space would be well connected along its length, both within the site, to the town and to the open countryside to the north.

A planted buffer zone is proposed along the western boundary to complement the screen planting within the Sainsbury's site. This is broken by the pylon corridor. The allotments are located within the pylon corridor in conjunction with a linear orchard of low growing fruit trees.

A NEAP is located adjacent to the Village Square to provide a focus to the corridor. Opportunities for informal play and local events are provided to the north of the Spine Road.

The wildflower meadow on the northern boundary marks a gentle transition to the open countryside beyond and the permissive route to the high point on Hullbridge Hill and Edwin's Hall Road beyond. The corridor is more informal in nature to the north to reflect this link to the countryside.



EXISTING FEATURES



PROPOSED ROUTES





PROPOSED ILLUSTRATIVE FEATURES



L04 CENTRAL GREEN SPINE

Scale 760m x 175m

Function Linear corridor from Burnham Road northwards through the site to the high point at "Hullbridge Hill".
The Sainsburys site forms part of the western edge. The pylon corridor forms part of this space

Landscap e features Watercourse and streamside vegetation
Buffer planting

Benefits Existing trees and hedgerows retained
Proposed drainage basins
NEAP, plus opportunity for play space north of Spine Road,
Events space
Linear orchard, Allotments
Wildflower grassland on northern edge,
New copses and tree planting



DESIGN

PUBLIC REALM AREAS - L05 HEDGEROW CORRIDOR

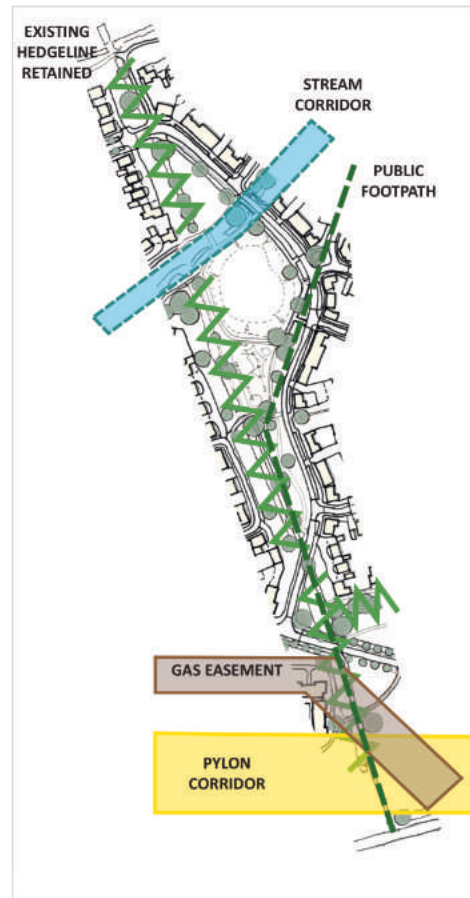
The Hedgerow Corridor is a north-south green finger that runs through the site. It contains an existing hedgerow, tree line and public footpath. This linear open space is created around these valuable features within the existing landscape structure to preserve and enhance them.

Due to the focus on existing features the proposed landscape throughout the corridor is naturalistic in character, bringing the countryside onto the resident's doorsteps.

The footpaths connect to a wider network leading to walking routes beyond the site to Mill Hill and Edwin's Hall Road.

A strategic play area is set within this sequence of greens.

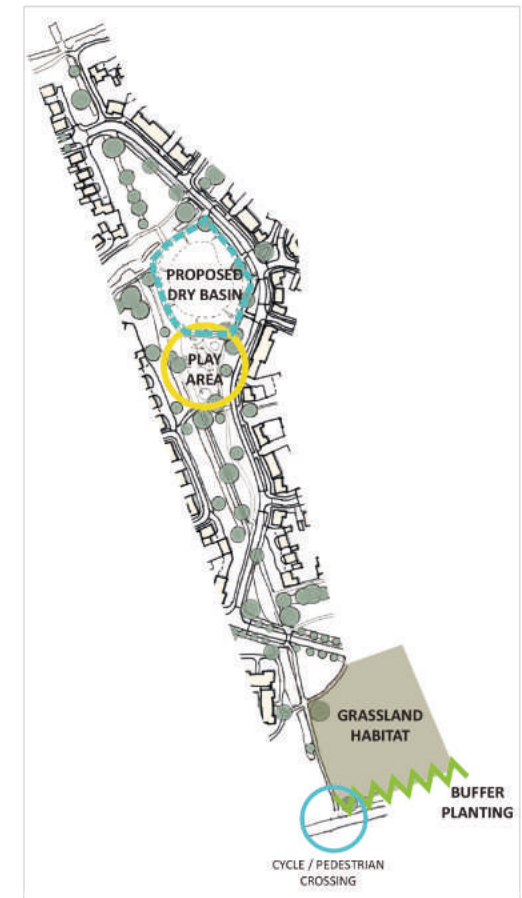
A dry basin forms part of the open space to the east where the corridor intersects with L06 Stream Corridor.



EXISTING FEATURES



PROPOSED ROUTES



PROPOSED ILLUSTRATIVE FEATURES





L05 HEDGEROW CORRIDOR

- Scale** 680m x 100m
- Function** Linear corridor with a sequence of green spaces focused along an existing hedgerow
Retaining existing PRow route
- Landscap e features** Existing trees and hedgerows retained and reinforced
Proposed drainage basins
- Benefits** Play space
New tree planting
Connections to the wider PRow network



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PUBLIC REALM AREAS - L06 STREAM CORRIDOR

Running east-west through the site, an existing watercourse connects the central areas of the development and provides the opportunity to bring landscape, biodiversity, and water management to the heart of the site.

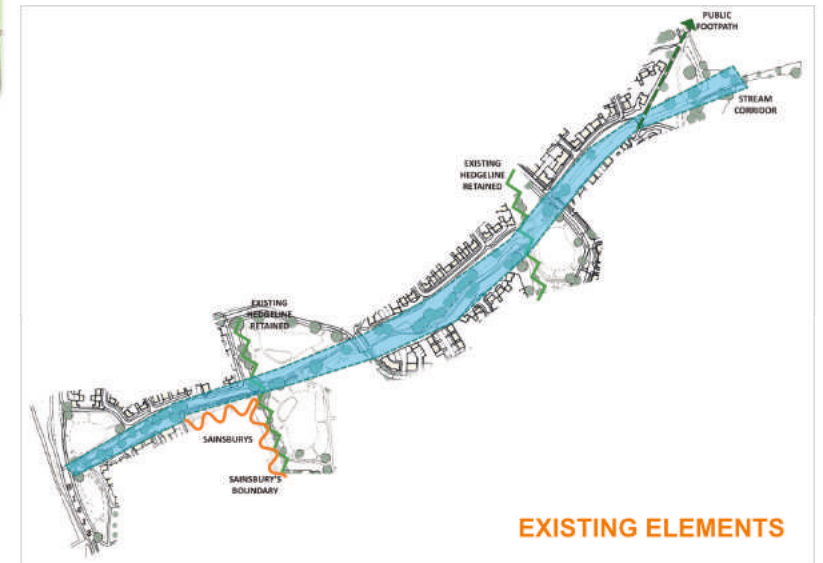
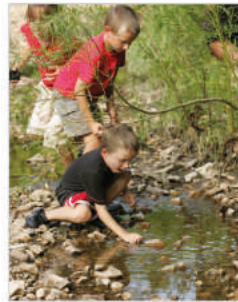
The L06 open space corridor is focussed on the existing watercourse and surrounding landscape structure of hedgerows and tree lines, creating a naturalistic feel to the landscape.

The combination of existing and proposed landscape elements within the corridor offers opportunity for habitat creation, and biodiversity enhancements.

The drainage strategy aims to mimic the natural drainage regime therefore placing dry basins along the watercourse both to the north and south.

The green spaces along the stream feature key walking and cycling routes that help connect the strategic open spaces across the development while also leading to walking routes beyond the site to Mill Hill and Edwin's Hall Road.

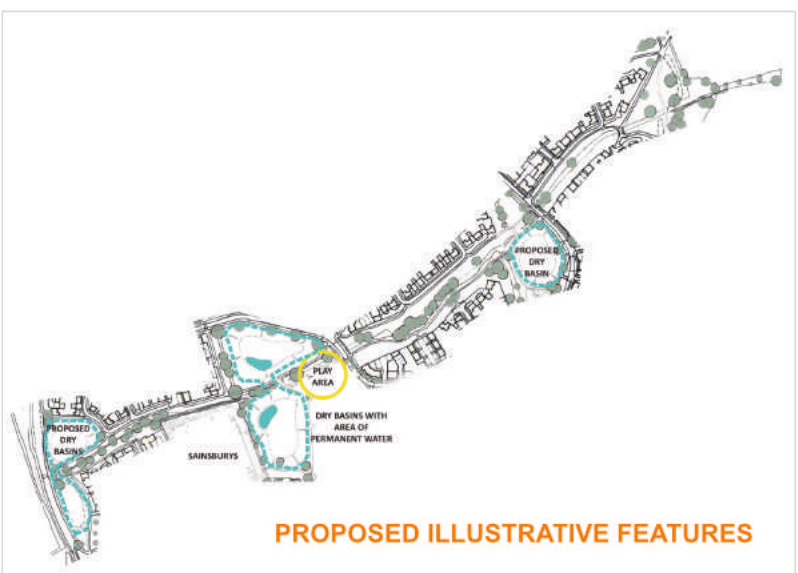
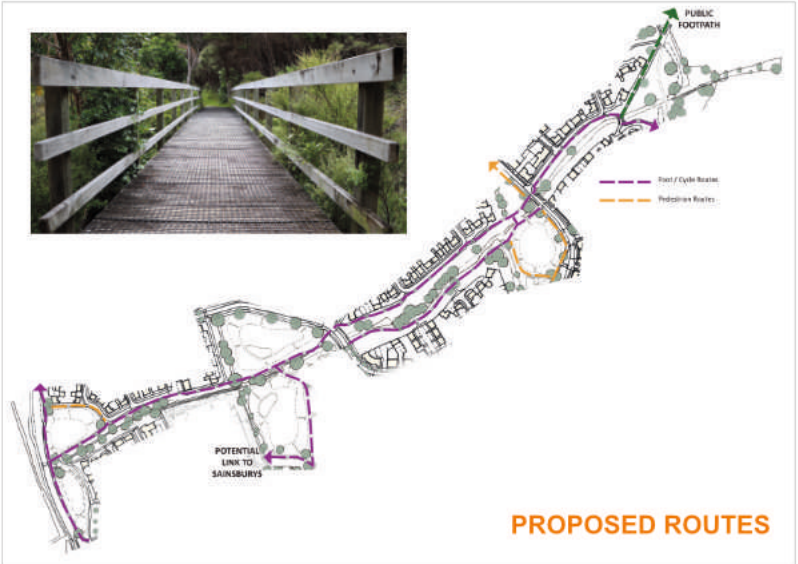
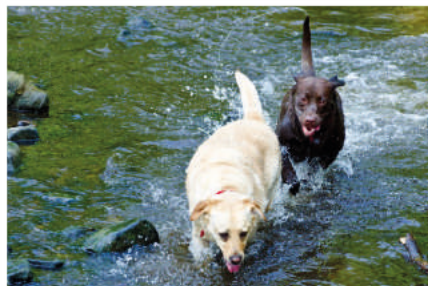
A central play space is set in a sequence of greens around the village centre where the Stream Corridor intersects with The Central Green Spine.



EXISTING ELEMENTS

L06 STREAM CORRIDOR

- Scale** 80m x 1100m
- Function** Key walking, cycling, landscape and biodiversity corridor through the heart of the site
Focuses on the existing watercourse
- Landscap e features** Watercourse and streamside vegetation
Existing trees and hedgerows retained
Proposed drainage basins
- Benefits** NEAP
Biodiversity enhancements



DESIGN

PUBLIC REALM AREAS - L07 FORMAL RECREATION

This is an area of formal sports provision and associated infrastructure, including parking and changing facilities. The application will secure the use of this area for formal recreation with detailed design to be subject to future reserved matters submissions.

Its location on the north western part of the site provides a green edge to the development, creating a more naturalistic feel to the western and northern edges of this space where existing

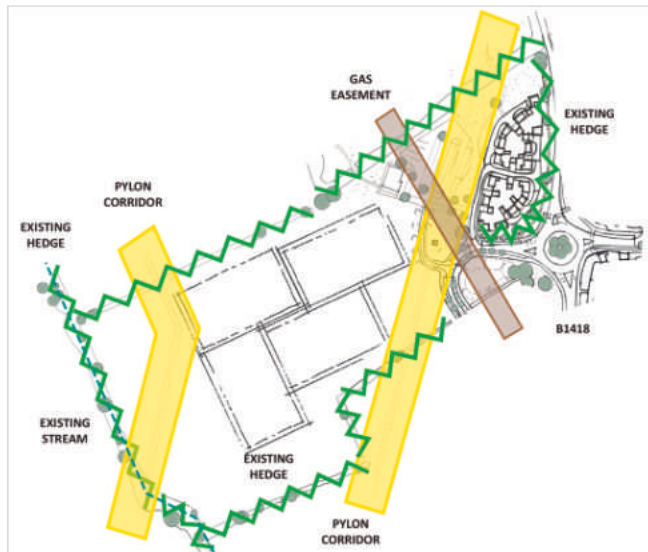
watercourses are found.

A dry basin forms part of the open space in the south-east corner where B1418 junction intersects with, and leads to, the Formal Recreation area. The entrance space also provides a connection to the future development land to the South.

Additionally, this open space leads to the walking route on Mill Hill, Public Rights of Way to the west and north, and pedestrian and cycle routes along the northern boundary and Edwin's Hall Road.



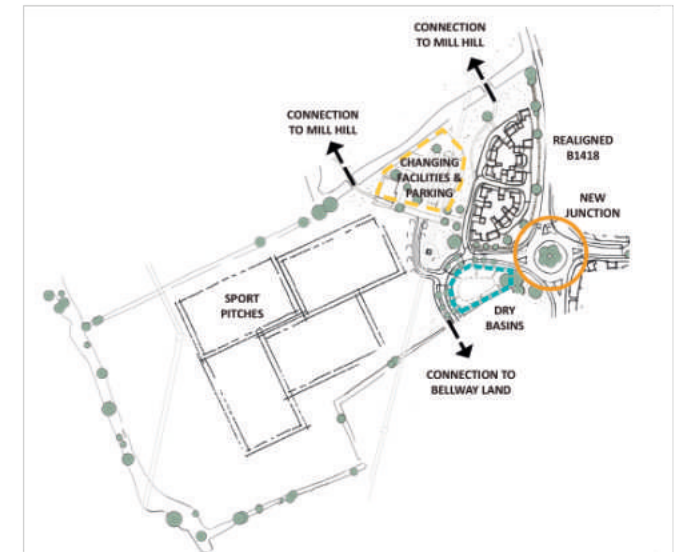
EXISTING FEATURES



PROPOSED ROUTES



PROPOSED ILLUSTRATIVE FEATURES





L07 FORMAL RECREATION

- Scale** 250m x 415m
- Function** Area of formal sport provision and associated facilities
- Landscap e features** Watercourse and streamside vegetation
Existing trees and hedgerows retained
Proposed drainage basins
- Benefits** Formal sport pitches
Connections to the wider PRoW network
Provides a green edge to the north western part of the site



DESIGN

PUBLIC REALM AREAS - L08 BUSHY HILL BOUNDARY

Bushy Hill is a vantage point offering views of South Woodham Ferrers to the south and the open countryside to the north. A Local Wildlife Site (LWS) takes up part of Bushy Hill and extends within the site's boundary.

The landscape strategy for the eastern boundary of the site, which wraps around the bottom of Bushy Hill, is focussed around the LWS and, as such, is viewed as a key biodiversity enhancement area within the development.

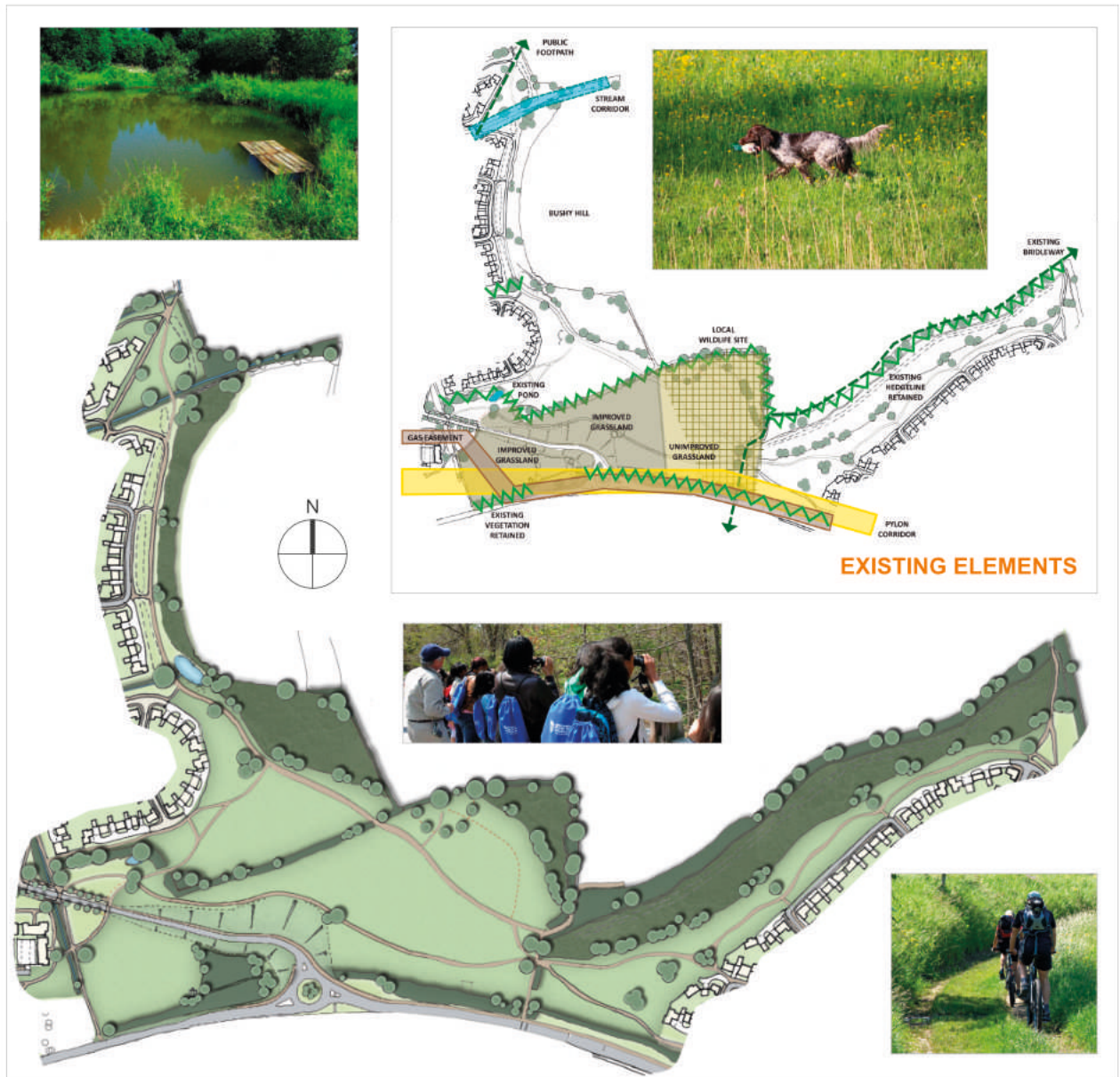
The enhancements proposed include additional biodiversity ponds together with enhancements to existing grassland areas. Woodland planting within the site boundary, around the base of Bushy Hill, will be incorporated to extend Edwin's Hall Wood and provide visual mitigation. These proposed elements will maintain and enhance the naturalistic feel of the landscape along the Bushy Hill Boundary.

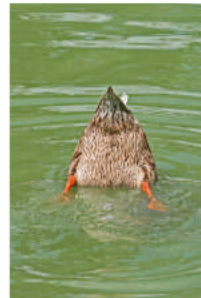
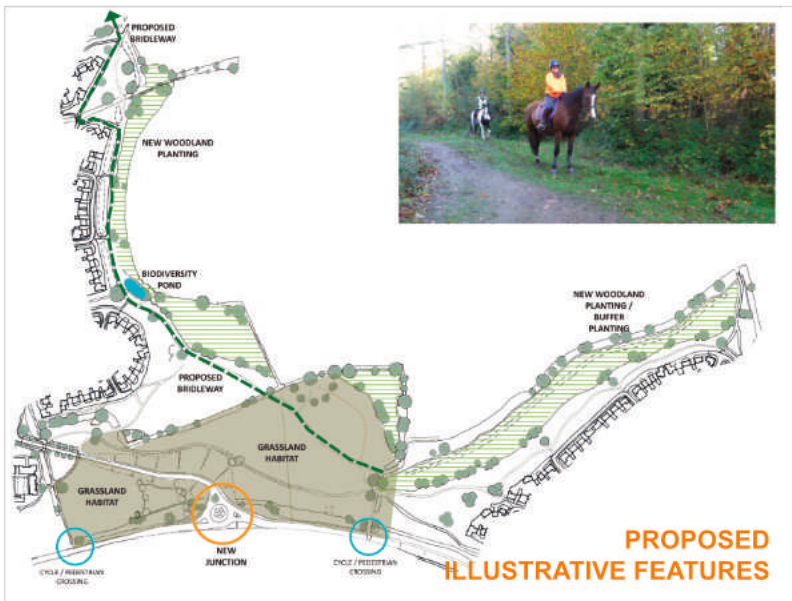
This boundary also includes a network of walking and cycling routes that link to the wider walking routes and the PRoW network beyond the site.

A new bridleway route, wrapping around the western edge of the hill, will connect two existing Public Rights of Way. The route will lead north-eastward from the site to Edwin's Hall Road and the wider countryside beyond.

This open space will provide places for quiet contemplation.

One of the access points from Burnham Road into the development is located on south west corner of this open space, providing an open naturalistic entrance space to the development.





L08 BUSHY HILL BOUNDARY

- Scale** 705m x 970m
- Function** Key biodiversity enhancement area focussed around the Local Wildlife Site
- Landscap e features**
 - Buffer planting
 - Existing trees and hedgerows retained
 - Existing grassland enhances
 - Biodiversity ponds
- Benefits**
 - Biodiversity enhancements
 - New woodland planting
 - Connections to wider PRoW network
 - Place for quiet contemplation



DESIGN

PUBLIC REALM AREAS - L09 EASTERN BOUNDARY

The open spaces in this area are of a semi-natural character, creating a transition between the development parcels and the surrounding landscape.

A landscape buffer to the eastern edge features new woodland planting to provide added visual mitigation. Dry basins in the south east form part of this landscape buffer.

The existing and proposed landscape structure to the south of this open space provides a landscaped setting to the access points from Burnham Road and Woodham Road.

This sequence of green spaces provide pedestrian and cycle routes which connect this area of the site to the rest of the development. They also connect Bushy Hill to Burnham and Woodham Road, and connect the site to the countryside and wider PRoW network.

The south east corner, separated from the main site by Woodham Road contains new allotment provision and a link to the Garden of Remembrance and Saltcoats Park to the south.



EXISTING FEATURES



PROPOSED ROUTES



PROPOSED ILLUSTRATIVE FEATURES





L09 EASTERN BOUNDARY

- Scale** 775m x 305m
- Function** Semi-naturalistic landscape buffer providing a transition between the development and open countryside
- Landscape features**
 - Buffer planting
 - Existing trees and hedgerows retained
 - Proposed drainage basins
- Benefits**
 - Visual mitigation
 - New woodland planting
 - Links to Garden of Remembrance, Saltcoats Park and wider PRoW network
 - Allotments
 - Biodiversity enhancements



DESIGN

PUBLIC REALM AREAS - L10 PYLON CORRIDOR

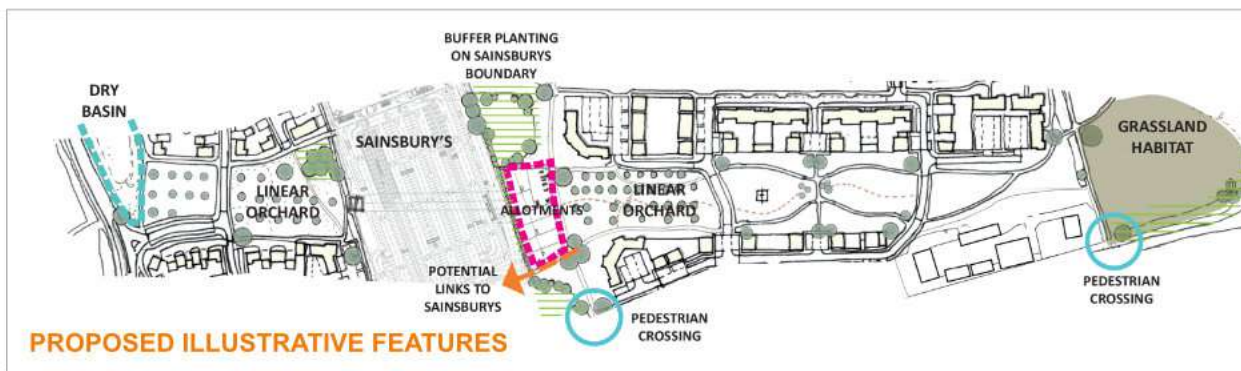
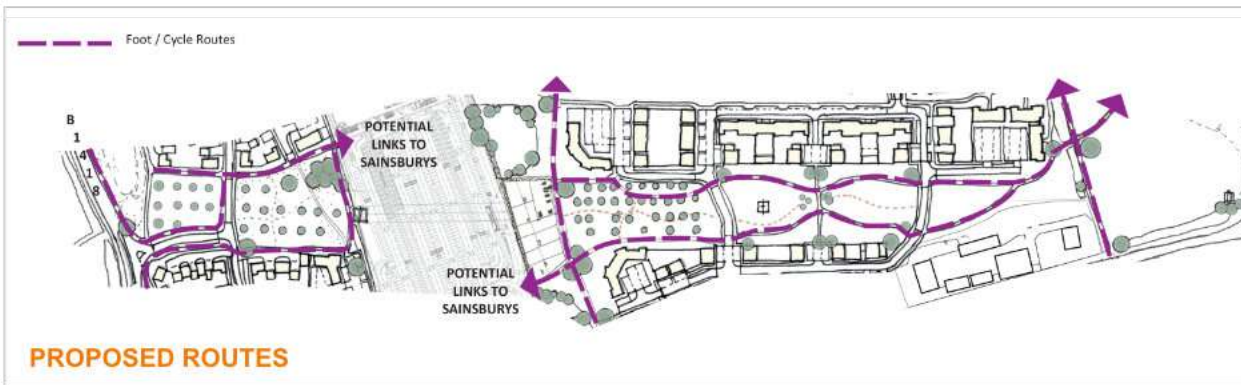
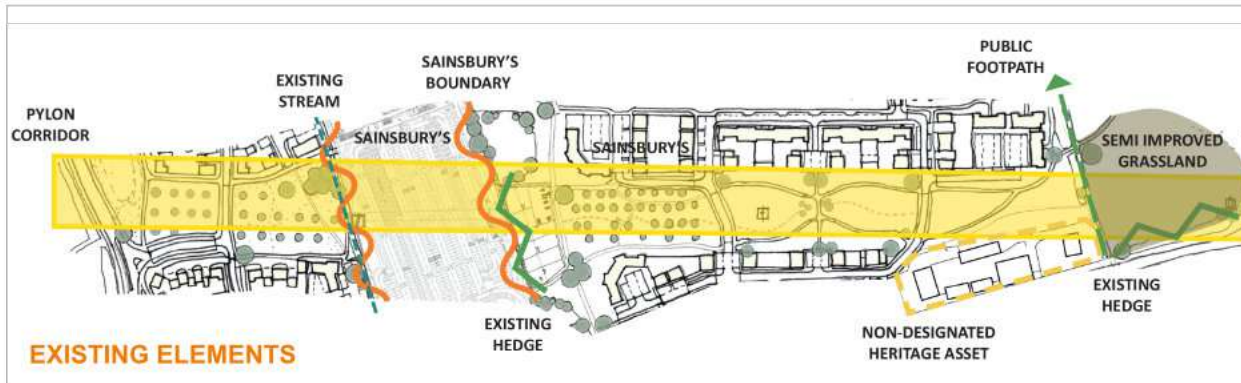
The Pylon Corridor open space turns a site constraint into an opportunity to provide an additional green link that runs east-west through the site.

This linear green space contains walking and cycling routes linking the site to the wider PRow network.

New allotment provision is located to the east of the Sainsbury's boundary, in conjunction with a linear orchard of low growing fruit trees.

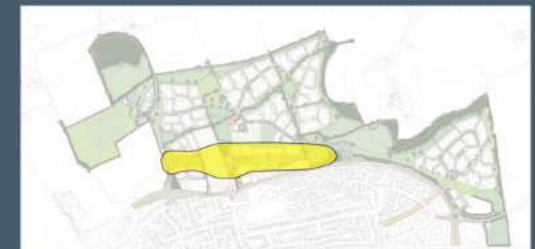
The corridor also contains areas of enhanced grassland, adding to the biodiversity benefit of the space.





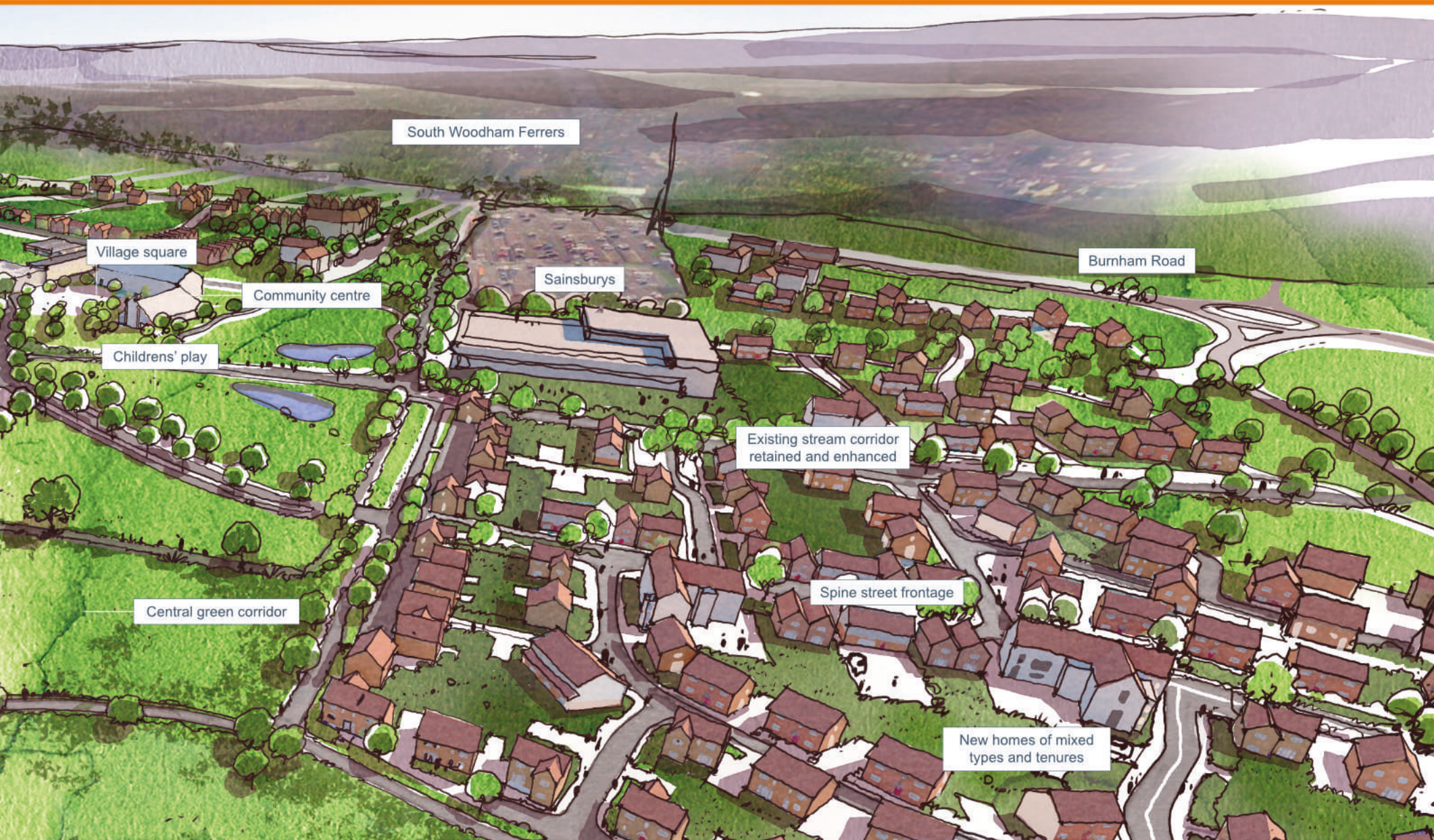
L10 PYLON CORRIDOR

- Scale** 60m x 880m
- Function** Linear corridor through the site with walking and cycling routes connecting the development
- Landscap e features** Linear Orchard
Enhanced grassland
- Benefits** Allotments
Biodiversity enhancements
Connections to the PRoW network



DESIGN





DESIGN

DESIGN PRINCIPLES

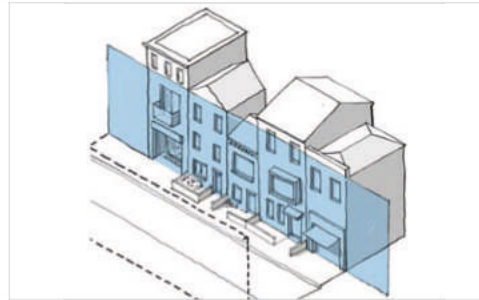
The following pages illustrate the design principles proposed for each of the development areas. Shaped by the landscape framework of the masterplan, six development areas are identified and described.

For each of these areas, key design features and characteristics are identified. These elements together will create a sense of individual identity for each of the development areas, within a rich overall urban design framework across the masterplan as a whole. The key design features and characteristics identified are considered under two main headings; structure and legibility, and frontage characters.

Structure and Legibility

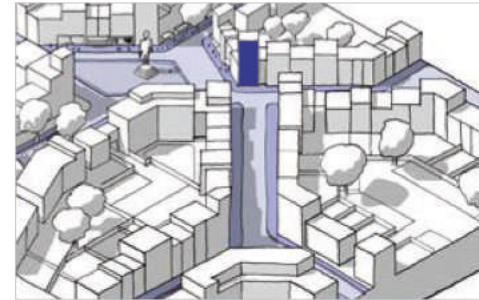
For each development area, a layout diagram shows a number of key elements, which work together to create a structured and legible urban design framework. These are summarised here.

The diagrams here are taken from the National Model Design Code.



Primary frontages

facing either landscaped areas adjoining the parcel boundary or within the parcel, or key streets within the development areas;



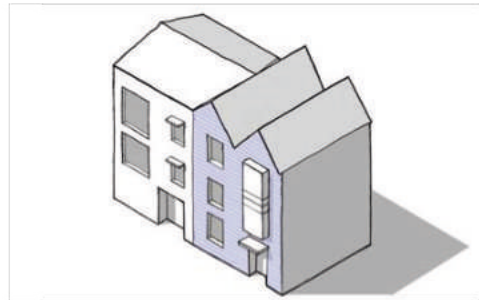
Significant vistas

towards or across significant buildings, spaces or landscape features;



Gateways

created most commonly by pairs of buildings either side of an entry point into a development area;



Feature buildings

located at particularly significant points within the layout, characterised by special treatment (for example use of materials, variation in scale, use of strong built form);



Focal spaces

located within the development areas at key locations, providing punctuation to spine streets through the development areas and / or a local focus within larger development parcels;



Landscaped areas

which create the setting for the development parcels or in some cases provide linear features within them;