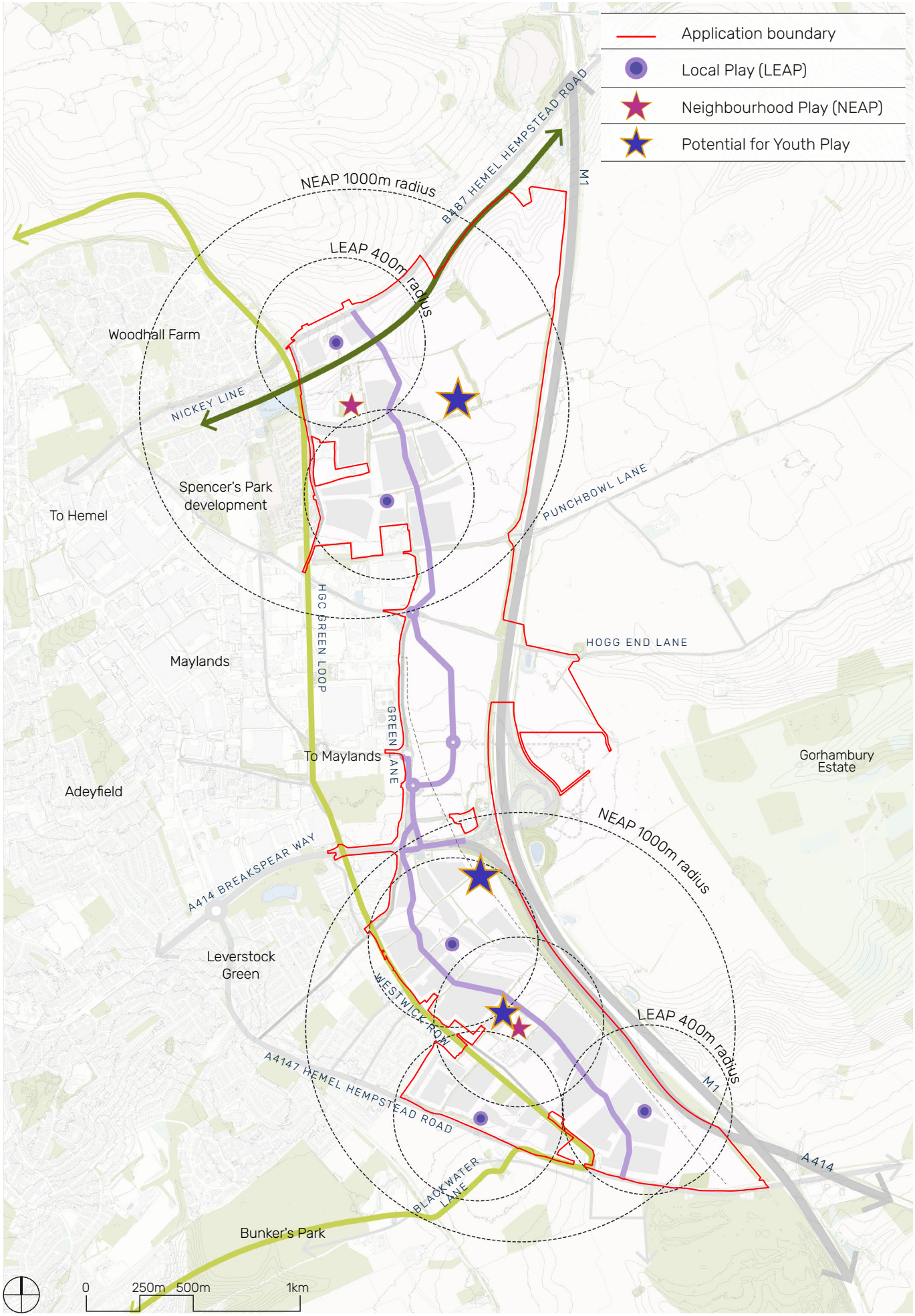


Fig 06.11 Play

06.2.4

Active & Healthy East Hemel

Inclusive Spaces

The landscape and public realm will be designed to support active, healthy lifestyles—creating accessible spaces that encourage movement, outdoor activity, and connection with nature. They will foster social interaction by providing welcoming places for people to meet, helping to promote community cohesion and reduce social isolation. This approach goes beyond policy requirements for sports provision and considers how the whole open space network can support physical and mental health to support healthy lives and maximise healthy life expectancy for residents.

Inclusivity is at the heart of the design approach, driven by The Crown Estate's commitment to inclusive spaces and places across its portfolio. The design will ensure public spaces are accessible and inviting for all ages, abilities, and backgrounds with careful consideration given to those less inclined, or able, to access formal sports or play, and those that may be suffering from poor mental health or loneliness, with consideration given to:

- Creating opportunities for community events such as Parkrun and yoga in the park which are run by volunteers and encourage people to get active
- Providing facilities such as accessible toilets and baby change in the Country Park visitor centre and sports hubs
- Ensuring local spaces are accessible; some parts of the parks have steeper topography that will be challenging for the some users, but all residents will have access to local green spaces accessible via wheelchair or mobility scooter
- Careful design of spaces to be accessible to those with sensory impairments.
- Careful consideration of spaces and facilities that would support older people and reduce social isolation
- Incorporating Make Space for Girls principles, as below
- Considering digital accessibility and connectivity within the public realm
- Introducing spaces of sensory play and discovery, to create calm and safe environments that support activity and connection with nature for all
- Engaging further with community groups including young people to develop detailed designs for open spaces and their relationships to community facilities, to ensure they are thoughtfully and inclusively designed

Make Space For Girls Principles

The Crown Estate intends to deliver inclusive spaces that cater for all needs. This will require a design approach that draws on best practice, for example, Make Space for Girls principles:

- Enhanced pathways: Wide, clearly defined paths to improve accessibility and wayfinding
- Improved lighting: Better illumination to enhance safety and usability
- Diverse play equipment: Swings and climbing and balancing structures to encourage active play
- Location of play adjacent to well-maintained, accessible toilets to support longer visits
- Inclusive access: Wider and step-free entrances to play areas to accommodate all users
- Flexible sports spaces: Smaller, subdivided sports areas alongsidemore open courts to cater to different activities
- Expanded seating: Grouped seating arrangements and additional seating within toddler play areas to improve comfort for parents and caregivers
- Varied sports options for MUGAs: Inclusion of facilities for netball, badminton, and volleyball to diversify recreational opportunities
- Perimeter walking routes: Circular paths around park edges for walking and jogging
- Sheltered areas: Provision of covered spaces for weather protection

Yoga classes in a park

Informal outdoor activities for older people

Group park run

Engagement in outdoor activities from an early age

Informal spaces for teenagers to hang out

06.2.5

Ecology

The ecology framework for East Hemel is guided by the principles of a mitigation hierarchy: prioritising the retention and enhancement of valued habitats while minimising adverse effects and offsetting unavoidable losses. It seeks to create connected, biodiverse spaces in the new major parks and wider green network, encouraging use of green spaces for wildlife and people. The resilient and well-integrated green infrastructure network will support species movement and enable natural colonisation and dispersal. The approach emphasises the maintenance of ecological connectivity for the benefit of species present on the Site and wider environment, to ensure their favourable conservation status in the long-term.

Retained habitats of value include trees, woodlands and linear features such as hedgerows. Together, these form the Site's habitat corridors, designed to safeguard existing features while enabling wildlife movement across and beyond the Site.

Some of these features will be retained within new strategic open spaces. In the north, corridors primarily provide connectivity to and from Wood End Farm and the existing woodland within the Country Park. This will be particularly important to badgers and bats, and will complement habitat links provided by the Nickey Line. In the south, habitat connectivity is maintained between the M1 edge landscape through to Westwick Row woodland and connecting into the wider landscape including Bunkers Park and Blackwater Wood. Here, landscape connectivity is key to species such as dormice, as well as badgers, bats and birds.

Vegetation along sensitive edges such as Westwick Row, Cherry Tree Lane, A4147 and the M1 will be retained, except where removal is necessary for strategic infrastructure and new roads. These are further described in Section **06.2.8.**

Existing lanes and the Nickey Line are further described in **06.2.6**. Their main ecological role is to provide connectivity for a range of species to the wider countryside east to the M1 through motorway underpasses, including valuable habitats within the Gorhambury Estate.

Woodland planting along the M1 includes the existing woodland belt alongside newly planted trees that will help mitigate noise from the M1, soften the appearance of the noise barrier and filter views to the development from the east of the M1. This will create a substantial woodland habitat and a key connective north-south feature linking into the wider network of east-west green spaces and lanes across the Site.

Corridors for wildlife will provide connectivity for various species via existing and enhanced hedgerows and trees alongside new strategic open spaces providing links to wider landscape. Design of these corridors, including details such as lighting and planting, will be carefully considered depending on the species they support.

Features to aid species movement across the STC include underpasses to allow wildlife to safely cross. These features will be embedded into the landscape to ensure wildlife can find and use them effectively. They will align with larger habitat areas including SuDs ponds and woodland areas. Other features such as bat and barn owl flyover points will be designed in at strategic locations, alongside connectivity measures for dormice.

Habitat creation areas will provide valuable habitats for a range of species including badger, bats, birds and invertebrates. Habitat creation in these areas will reflect local species requirements, including badgers, bats, barn owl and nesting birds. It may also include the creation of features designed to attract butterflies and other pollinators, for example, species-rich grassland and butterfly banks using site-won or imported chalk over-sown with native chalk grassland seed mixes, and the planting of key food plants.

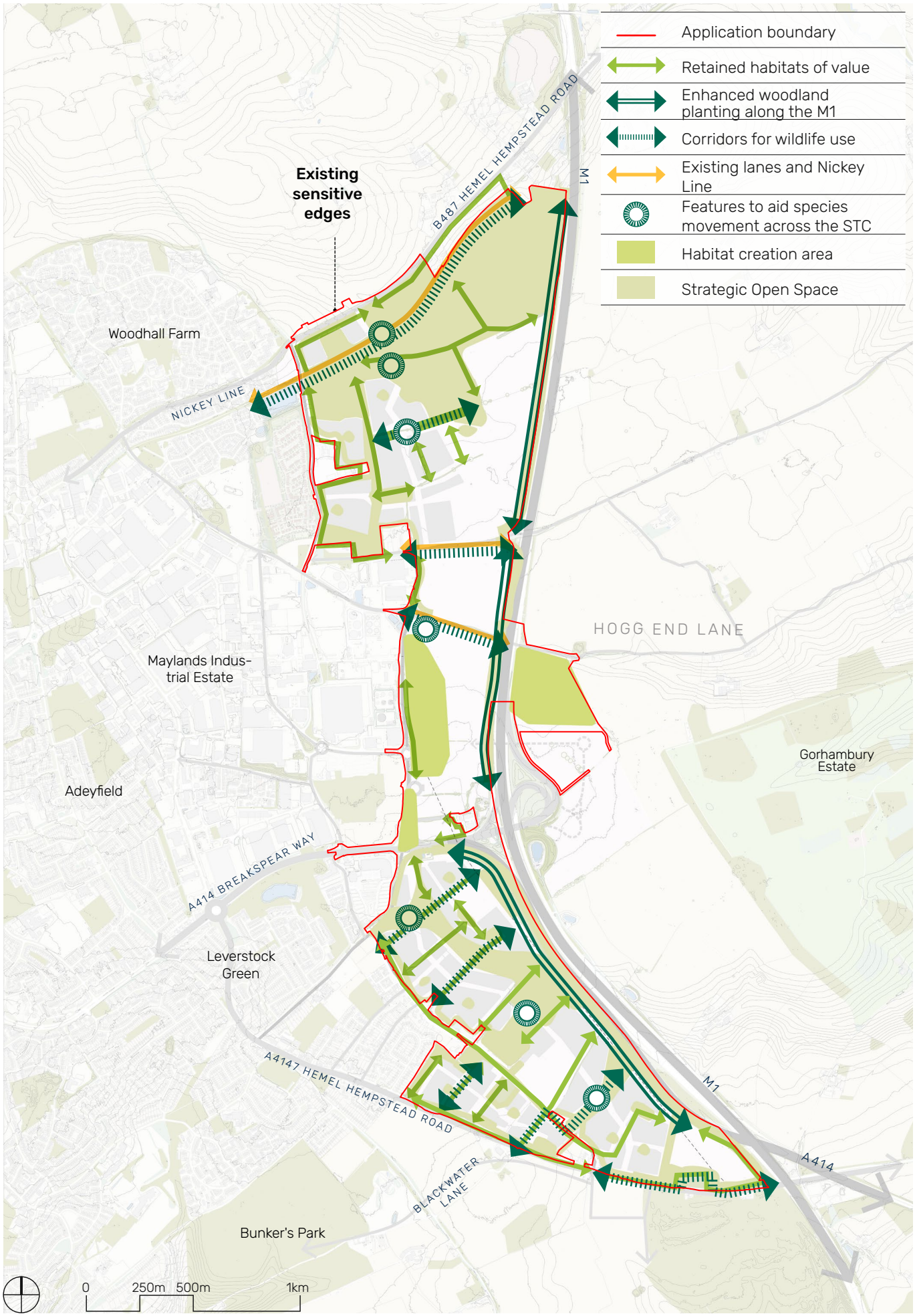


Fig 06.12 Ecological features

06.2.6

Lanes

The existing lanes form an attractive network of green ways. They are lined with mature hedgerows and trees, and will be conserved and re-purposed as a network of 'quietways' as part of the active travel network, providing benefits for both wildlife and people.

Together with the Nickey Line, the lanes provide important connections linking Hemel to the wider countryside east of the M1 motorway and to strategic open spaces north and south of the town via the HGC Green Loop.

With the exception of the Nickey Line which is a walking and cycling route as well as Green Lane, it is envisaged that the remaining lanes would be used by walkers, cyclists and horse riders. There will be some limited vehicle access to existing properties but no through vehicle access.

The lanes are not envisaged as a utility route for fast cycle commuting, but form part of a leisure network.

To protect the hedgerows and trees and enhance the biodiversity of the verges, green buffers to the lanes will be provided. These will vary in width and will be based on the surveyed tree root protection areas.

Fig 06.13 Buncefield Lane quietway

Fig 06.14 Punchbowl Lane

Fig 06.15 Hogg End Lane

	Application boundary
	HGC Green Loop
	Cherry Tree Lane
	Punchbowl Lane
	Hogg End Lane
	Green Lane
	Westwick Row

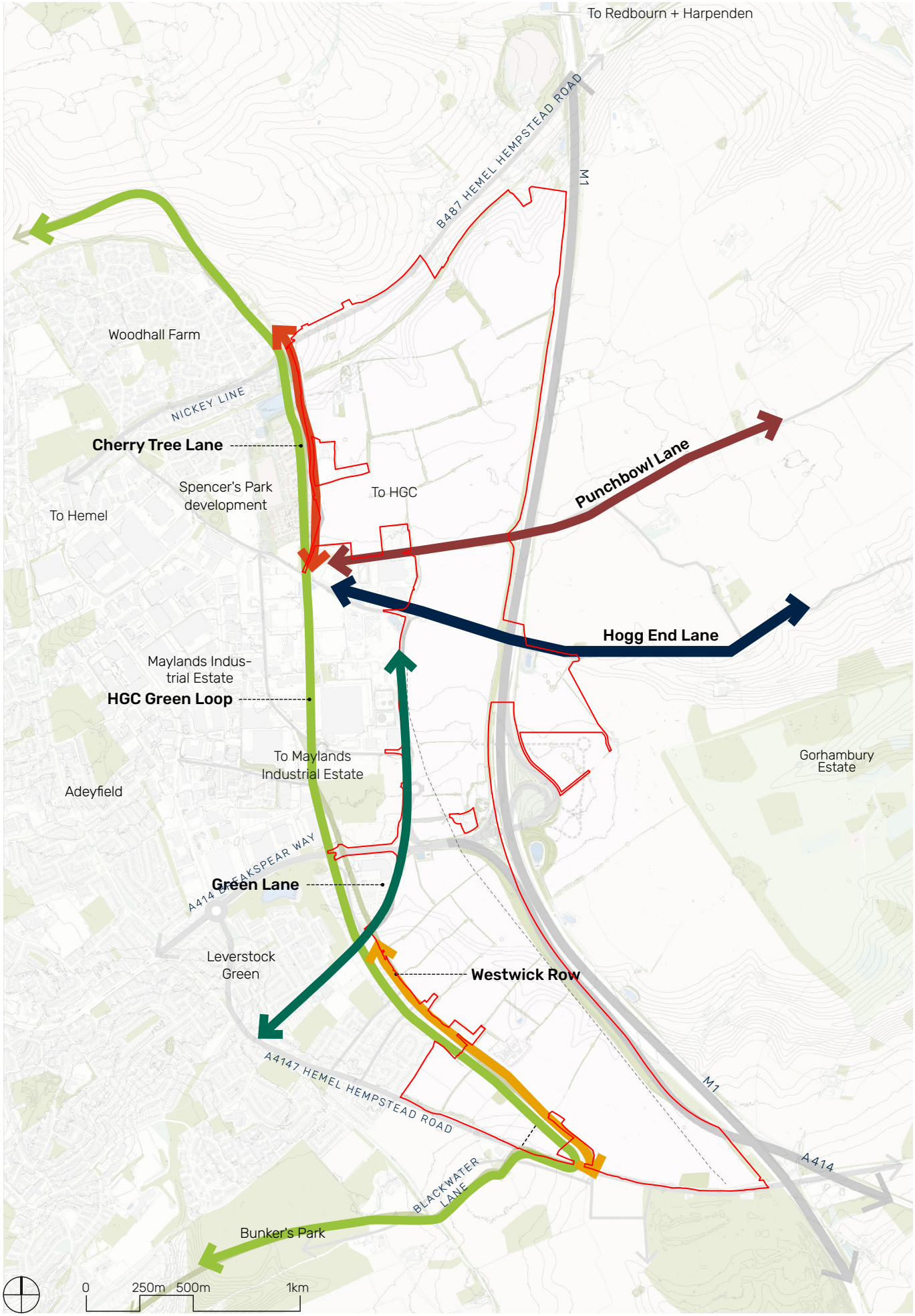


Fig 06.16 Lanes and hedges

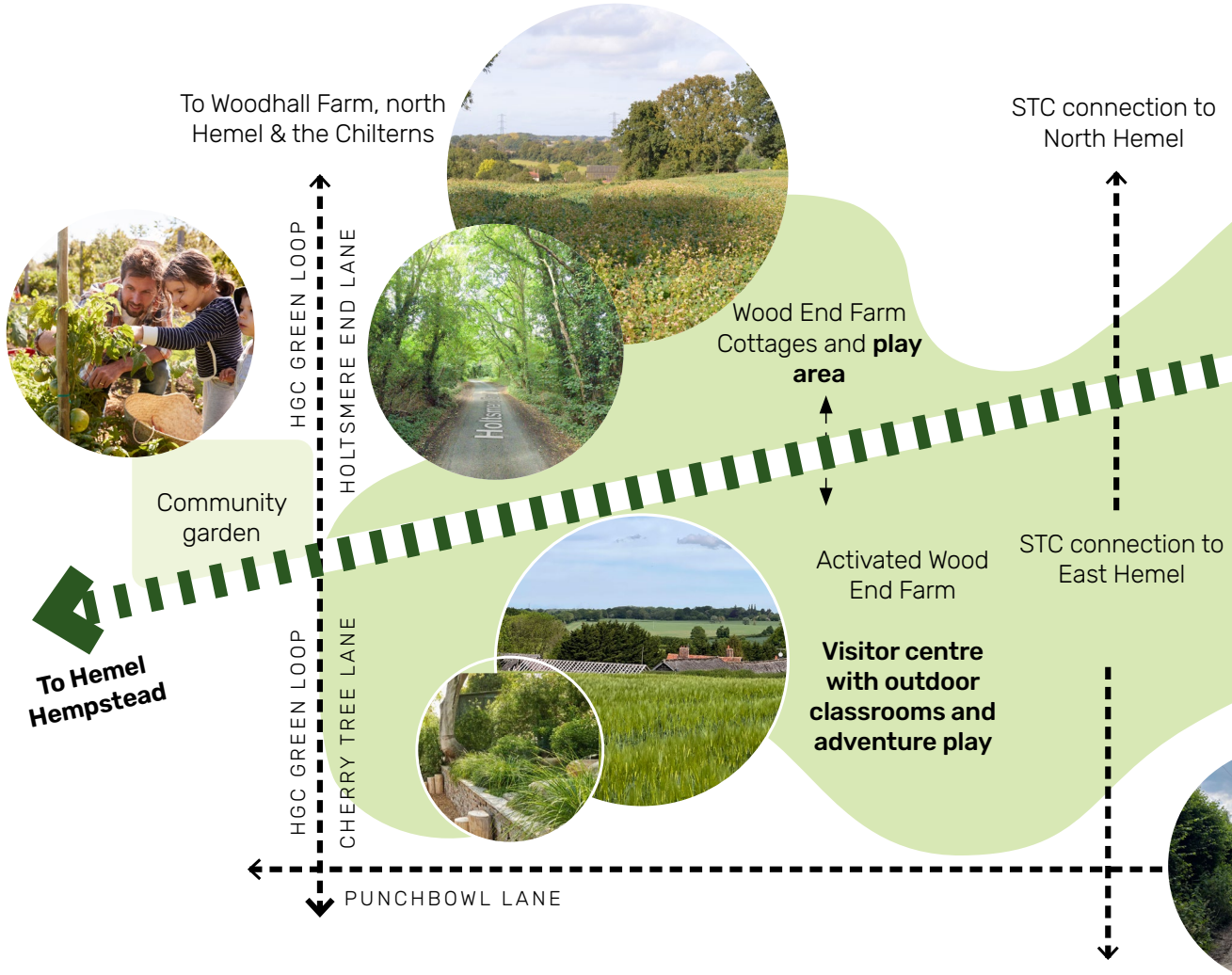
06.2.7

Enhancing Access to the Nickey Line

The Nickey Line is a popular walking and cycling corridor with potential to become a more active part of everyday life. While its enclosed, tranquil character is part of its appeal, long stretches without access can feel disconnected and underused.

The Masterplan Framework sensitively integrates the Nickey Line by introducing new and enhanced connections from the Nickey Line to the Country Park and community destinations in the park and development, in particular linking to the new secondary school and sports hub. By linking with the quietway network on the lanes, the Nickey Line will also support circular leisure routes to Redbourn and the River Ver.

Sensitive interventions, including improved access points, naturalistic surfacing, and opportunities for art or interpretation, can help strike the right balance—keeping the Nickey Line's green character while encouraging use and natural surveillance, improving legibility and better linking it to the wider movement network.



M1

Redbourn Village

To Harpenden

Country Park connection to **Ponds/wild swimming**

Meadows/picnic areas

Country Park connection to **Sports Hub & primary and secondary schools**

River Ver connection to **Redbournbury watermill and bakery**

Loop back via punchbowl lane

Ex. Ped / cycle route to Harpenden

06.2.8

Edge Landscapes & Habitat Creation Areas

Edge Landscapes

Edge landscapes will play a critical role in sensitively integrating East Hemel into its wider setting. They respond to a range of interface conditions including the M1 motorway, heritage assets, existing neighbourhoods and the Buncefield Oil Terminal. They will be designed to manage visual and acoustic impacts, protect amenity, and contribute to biodiversity and ecological connectivity.

A combination of carefully considered planting, fencing and landform strategies will filter new development from sensitive views, soften the transition to surrounding areas, and ensure edges remain functional, well-managed, and ecologically valuable.

Key functions of edge landscapes are:

- Assist with acoustic attenuation from busy roads such as the M1 motorway
- Limit visibility of Buncefield Oil Terminal and manage public access within its DPZ
- Filter views and protect the amenity of adjacent existing residential properties
- Soften views towards new development from sensitive locations including Gorhambury Estate
- Deliver acoustic attenuation where required, including planted bunds and acoustic fencing
- Support habitat creation and strengthen ecological connectivity along key routes around the site perimeter
- Manage access around retained and new sensitive habitats to discourage disturbance

Habitat Creation Areas

These areas will include biodiverse planting, drainage and will be managed for nature conservation with limited public access.

Tiered edge planting mix

Mix of native trees and shrubs

Noise bund integrated with pedestrian footways

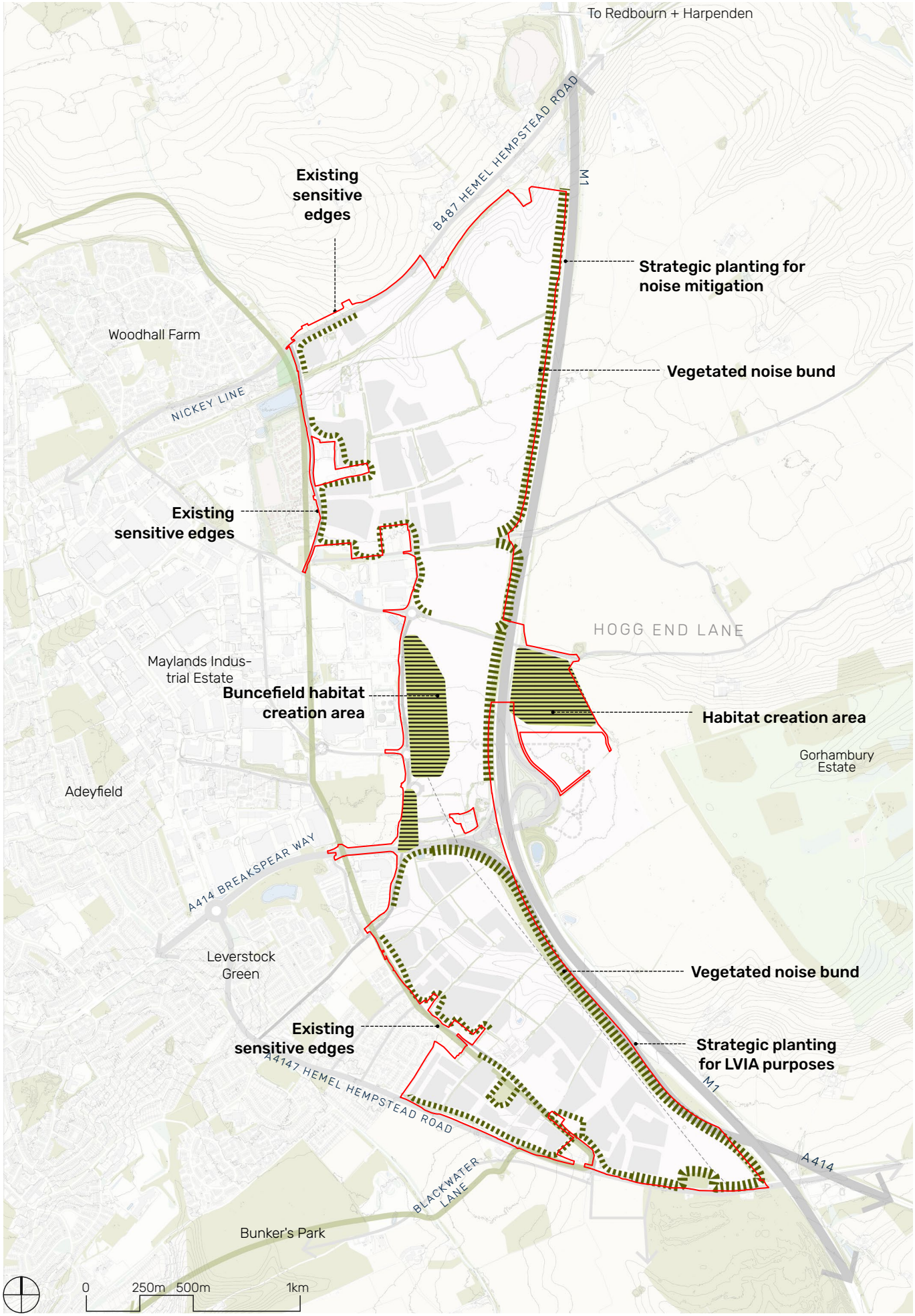


Fig 06.17 Edge landscapes and habitat creation areas

Interfaces with Sensitive Edges

Interface with existing urban areas

These are the edges where the Site boundary directly adjoins an existing neighbourhood. There is a policy requirement to provide buffer planting when adjacent to established urban areas which overlook what is currently open countryside. The boundary with Leverstock Green south of the A4147 is the only occurrence where this interface is present in East Hemel.

To soften and filter the views to and from the adjacent neighbourhood, the masterplan framework introduces a generous buffer of approximately 40m width. This edge is treated as part of the natural / semi natural landscape, consisting of retained mature hedgerow and trees, leisure paths, new planting and biodiverse planting, creating a multi-functional edge. An illustrative example of how this edge may be designed is indicated on Section A-A, adjacent.

Interface with existing individual dwellings

Where there are existing individual residential dwellings located immediately adjacent to the Site boundary, a setback of minimum 10m is proposed as an edge treatment. These edges will function both to create a softer edge to the Site and to protect existing vegetation and their associated root protection zones, in order to retain the existing mature vegetation around these dwellings.

Where appropriate, the 10m edge can include gap planting, hedgerow strengthening, new tree planting or biodiverse verges to accommodate access to the existing vegetation for maintenance.

Existing lanes

In order to retain the character of existing country lanes as important site assets, proposed development areas are set back to create edges which protect mature hedgerows and trees which line the lanes. A minimum setback of 5m or the extent of the surveyed root protection area (whichever is greater) is retained as landscape edges where the lanes have development proposed adjacent to them, as illustrated on Section B-B.

Punchbowl and Hogg End lane have enhanced setback along the edges, as illustrated on Section C-C, due to surveyed root protection areas and their role as key ecological links to the wider countryside east of the M1.

In areas where the existing lanes are bordered by proposed new open space, a setback distance is not sought as the root protection of the existing mature vegetation can be safeguarded within the new green spaces.

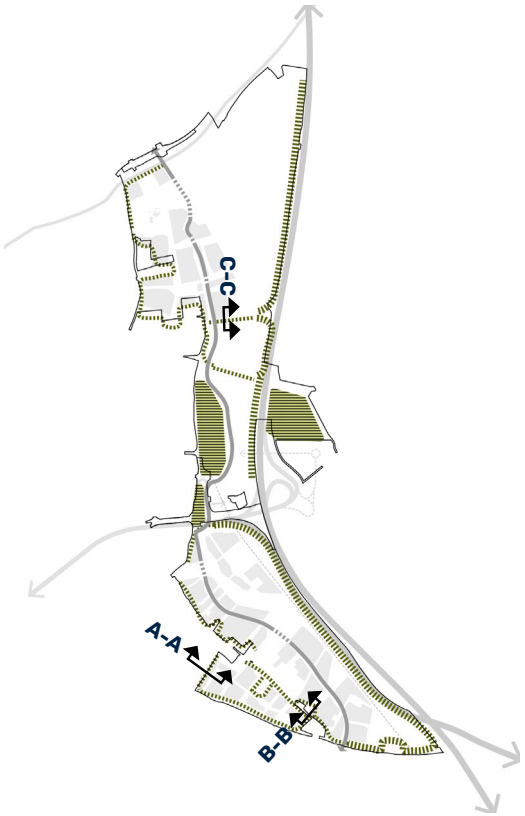


Fig 06.18 Section location plan A-A, B-B and C-C

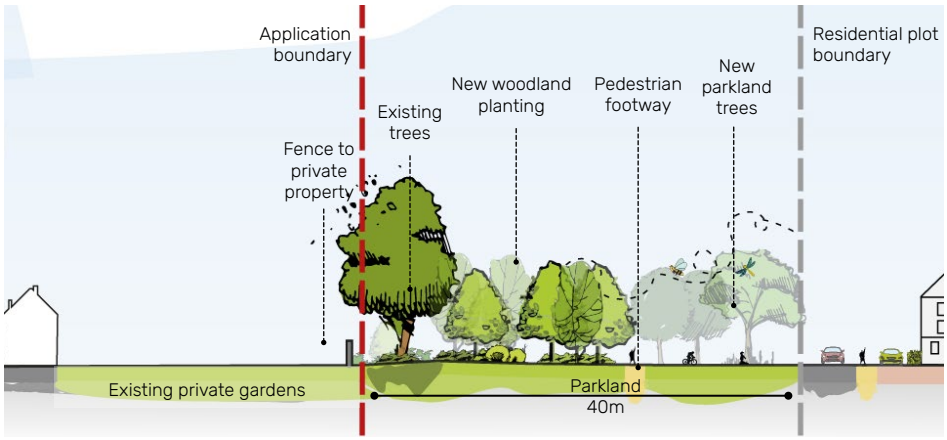


Fig 06.21 Section A-A Interface with existing urban areas (Leverstock Green)

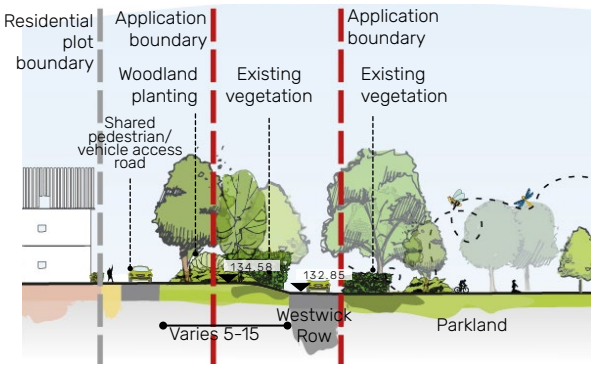


Fig 06.20 Section B-B Westwick Row interface with the park and proposed residential units

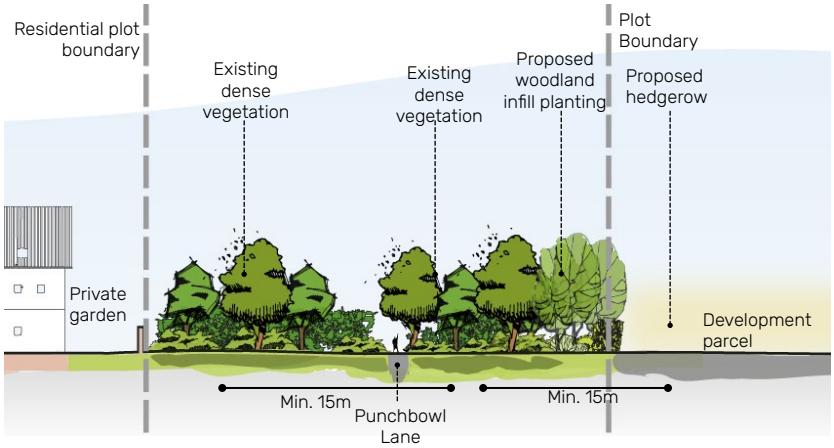


Fig 06.19 Section C-C Punchbowl lane interface with proposed residential plots and potential G&T site.

Noise mitigation against the M1
Noise mitigation in the northern and southern neighbourhoods is proposed in areas adjacent to M1, to mitigate the noise impact on residential and education uses.

Noise mitigation is addressed via an earth bund with varying height and width, with an acoustic fence or barrier on top. In the southern neighbourhood, the width of the bund is defined by the BPA pipeline easement, which limits the extent of earthworks.

Landscape proposals will incorporate woodland and scrub planting on the slopes of these bunds to positively integrate the bund into the masterplan, contribute to the Site's biodiversity and provide an ecological linear link for wildlife. An example of how this may come forward is illustrated on section D-D.

Interfaces with other busy roads
In areas where residential development is proposed in proximity to busy roads such as the A4147, a setback of 10 to 20m is incorporated into edge landscapes. This will include existing vegetation and the associated RPA zones for safeguarding, and can integrate new woodland and tree planting and verges for maintenance and biodiversity contribution, as illustratively shown on section E-E.

The M1 edge to the Commercial Area
While the central commercial area uses does not require noise mitigation, a setback of min. 15 m is incorporated into the proposals to contribute to strengthening this edge, while also providing visual and ecological benefits.

Due to the nature of employment buildings, this part of the development is likely to be visible from surroundings, including countryside paths east of the M1. The landscape edge treatment along this boundary will include wide strips of woodland which in combination with the existing mature Highways vegetation will provide a softening of appearance of built form in views, as illustratively shown on section F-F.

The edge will also function as an ecology feature, providing a link between Punchbowl Lane, Hogg End Lane and the existing mature vegetation around the listed Breakspears. This will be augmented by new tree planting within the site boundary to the east of the M1 in the vicinity of new attenuation ponds.

Habitat Creation Areas
These are areas suited to limited or restricted public and recreational use, which presents opportunities for valuable habitat creation.

One of these areas is in the commercial area adjacent to Green Lane, which falls within the Buncefield Oil Terminal DPZ, illustrated on section G-G. Here, no development and limited infrastructure are permitted, and public congregation must be discouraged and limited.

The other location is east of the M1 where sustainable drainage ponds for the commercial area are located. Public access here is intended to be limited to existing footpaths (PRoWs).

The habitat creation areas intend to provide biodiverse planting, dry and wet meadows around drainage ponds and will be managed for nature conservation.

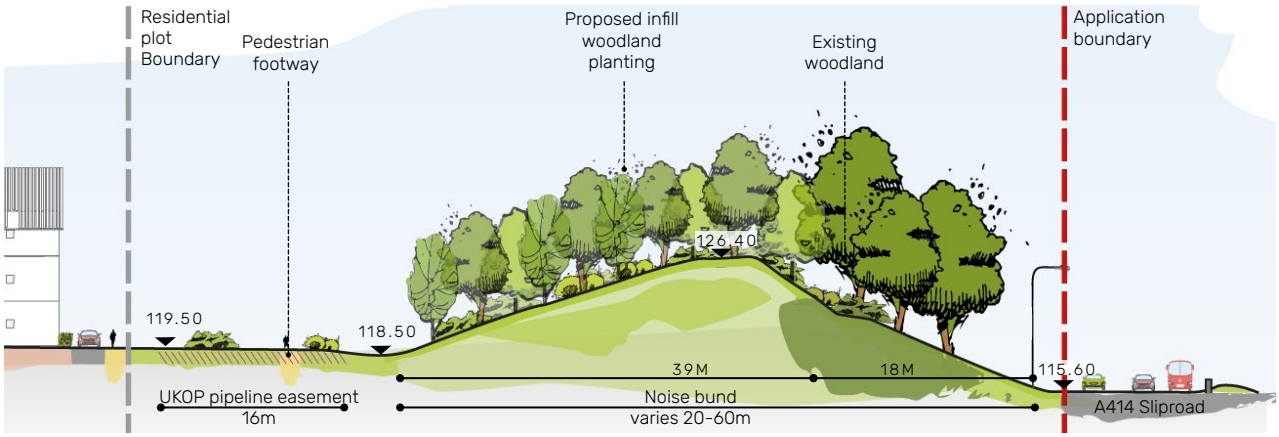


Fig 06.22 Section D-D planted bund

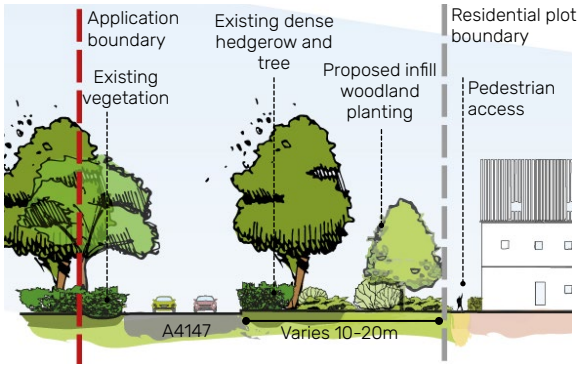


Fig 06.23 Section E-E A4147 Hemel Hempstead Road edge

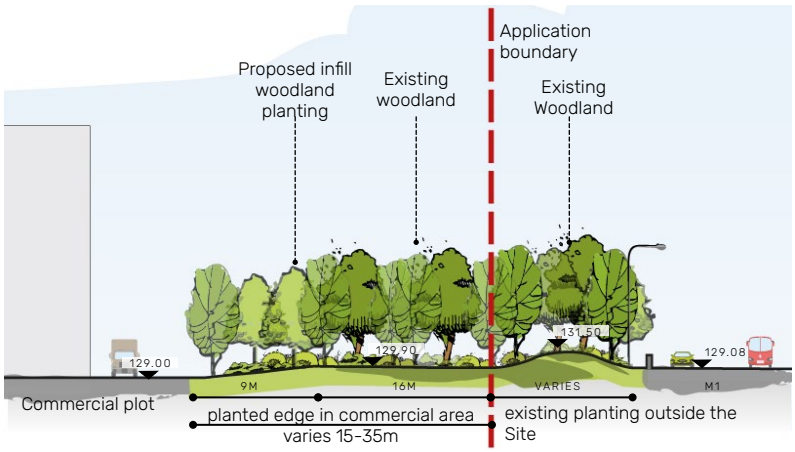


Fig 06.24 Section G-G commercial area M1 edge

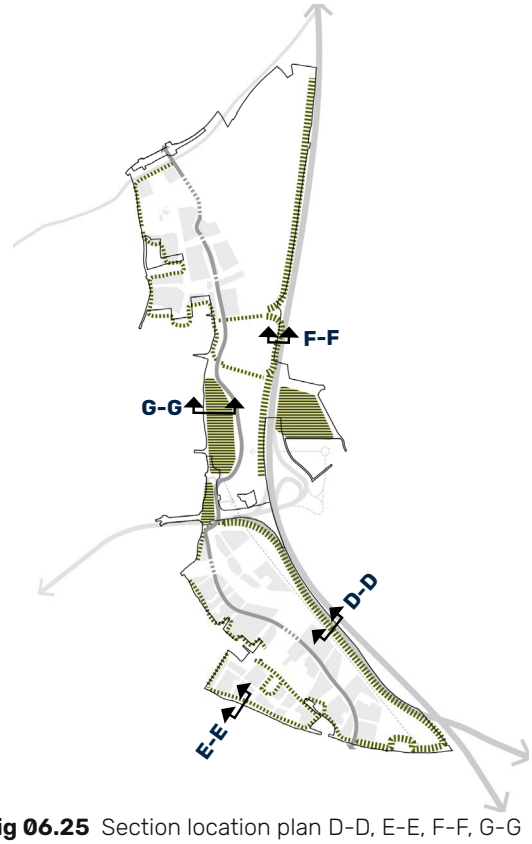


Fig 06.25 Section location plan D-D, E-E, F-F, G-G

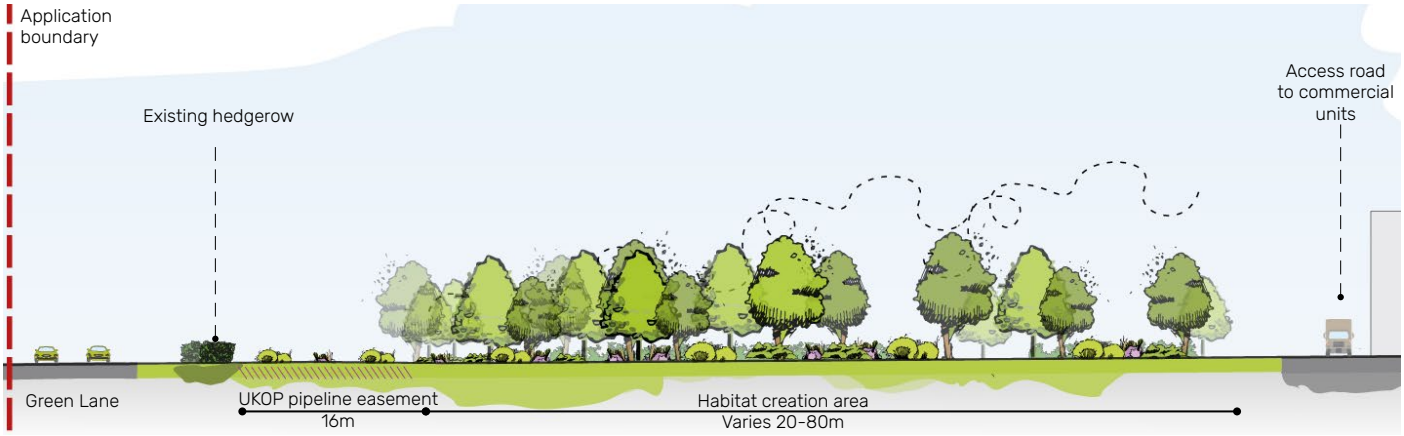


Fig 06.26 Section F-F commercial area habitat creation area

06.2.9

Surface Water Management

A sustainable drainage strategy has been developed, integrated with the green infrastructure framework. This focusses on an integrated design approach with climate resilience, nature, and people at its heart.

The development of a large greenfield site requires significant volumes of stormwater attenuation and slow release into the local sewer and river system to avoid increasing flood risk elsewhere. Most of the stormwater attenuation volumes will be provided in efficient, multi-functional cascading ponds which respond to the topography, minimise earthworks and add character to the landscape. Pond design will include permanent water to sustain varied habitats, protects existing hedgerows and integrated with existing surface water overland flow routes.

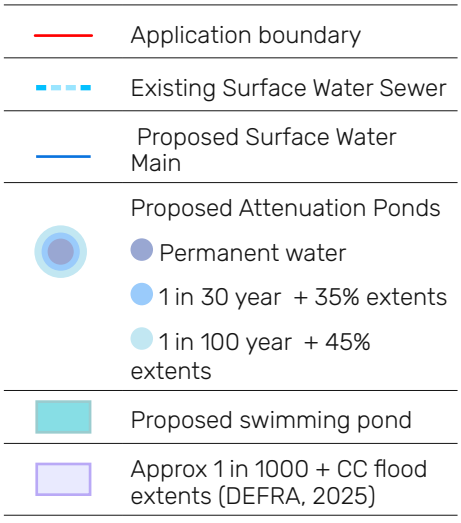
The strategy will also include a fine grain of sustainable urban drainage systems (SuDS) within streets and parcels, complementing larger ponds in strategic open spaces. These will include raingardens, bio-swales and smaller ponds integrated into the public realm. This approach will control pollution at source, support biodiversity and enhance landscape quality, and will be supported by a framework for adoption and maintenance of these features over their lifetime.

Stormwater flows from the northern neighbourhood will be attenuated in a chain of cascading ponds within the Country Park, before being discharged to the River Ver through the 375mm diameter sewer along B487 Hemel Hempstead Road.

A chain of ponds nested in the Valley Park and integrated with existing hedgerows will discharge to an existing 375mm diameter Thames Water sewer running across the southern neighbourhood, under the M1 motorway and ultimately to the River Ver.

The commercial area will all drain to an attenuation pond east of the M1 motorway though a new connection under the motorway. This pond, away from development and within limited public access, offers the opportunity for habitat creation.

This strategy is aligned with planning requirements, supported by key stakeholders, and founded on exemplar sustainable drainage principles. Flood risk and diffuse urban pollution are minimised, and landscape and biodiversity benefits are maximised.



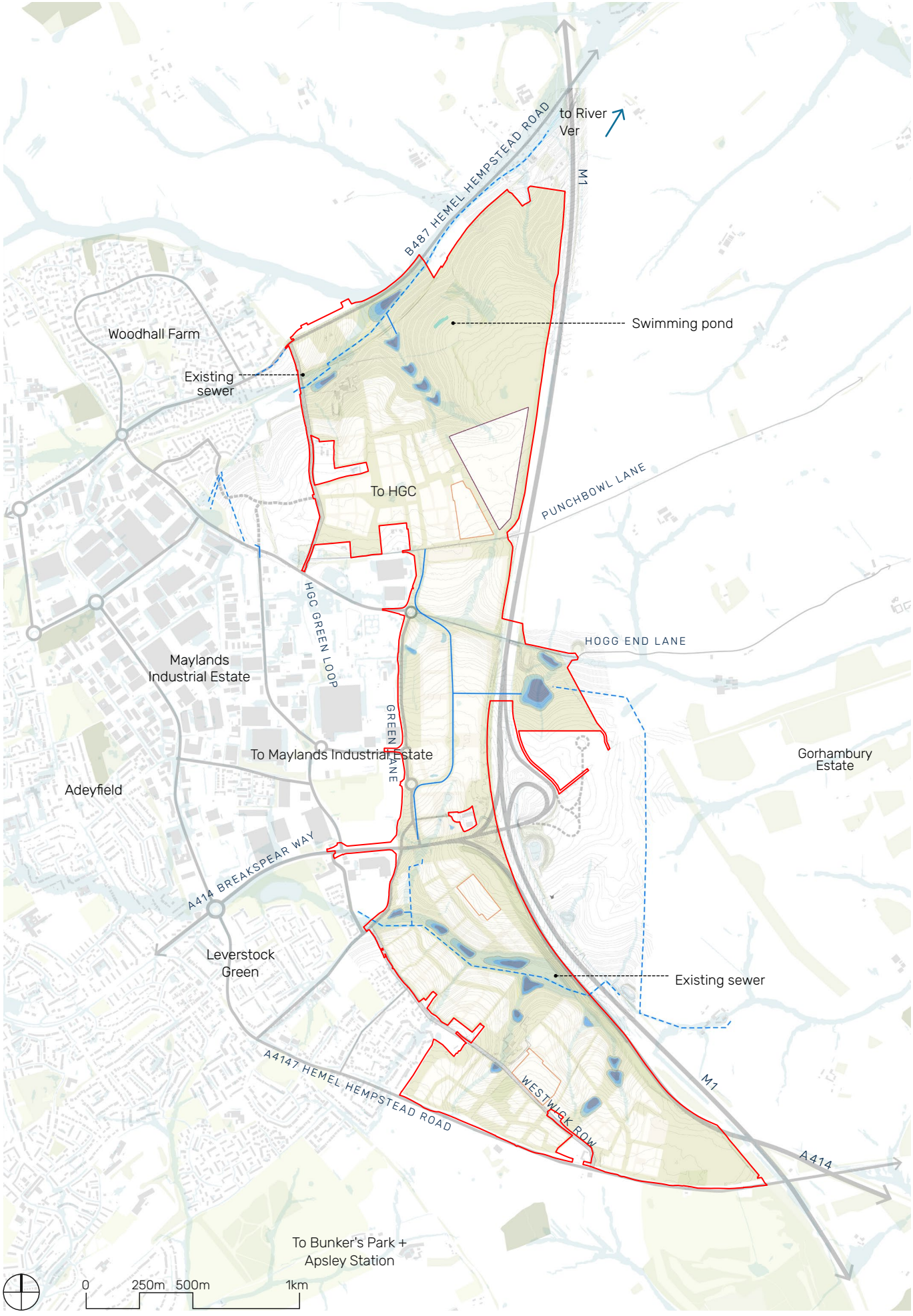


Fig 06.27 Surface water drainage strategy

06.2.10

Landscape Management

The management and stewardship of the landscape and open space will be key to ensure the landscape delivers on its potential and to protect the substantial investment in green infrastructure that is planned. It is important to establish clear management objectives for each landscape type based upon its use, function, ecological value, visual amenity, and location capacity for seasonal or temporary events.

Management Mechanisms

A stewardship strategy is being developed for East Hemel to secure the long term management of the landscape and open space and other community assets, and to ensure they are maintained to a high standard both during the build-out and beyond, in the very long term.

It is anticipated that some assets could be managed in partnership with a community trust, wildlife charity and some elements such as landscape associated with streets may be adopted by the local authority.

Requirements for habitat management will be set out within a Landscape and Ecological Management Plan submitted following Outline Planning consent.

Wildflower meadow | Barton Fields, Abingdon

Volunteers group cutting the meadow in late summer | Barton Fields, Abingdon

06.2.11

Green Infrastructure Parameter Plan

The Green Infrastructure Framework presented in Section **06.2** has informed the Landscape Parameter Plan.

The purpose of the Green Infrastructure Parameter Plan is to fix the location and spatial extent of proposed green space typologies and features. This has been developed on the basis of the Green Infrastructure Framework presented throughout Section **06.2**, which provides confidence that the proposed development can provide the right amount of green infrastructure to accommodate its needs. Integral to the plan is an appreciation of and commitment to meeting drainage and ecology mitigation requirements, and requirements for public open space and sports pitches.

The Green Infrastructure Parameter Plan should be read alongside the Development Specification, which provides additional information about the planned components of the Development.

There are five principle types of green infrastructure within the Parameter Plan, in direct response to policy requirements:

01 **Strategic open space** is required to fulfil SADC's Open Space Standards requirements. This includes the provision of amenity green space, natural and semi-natural green spaces, parks and gardens, allotments and play areas.

02 **SANG** is required to mitigate the impact of the propsoed development on the Chilterns Beechwoods SAC, provided at a minimum rate of 8ha per 1000 population; resulting in a minimum of 76.8ha. SANG will be provided in the form of a Country park in the northern neighbourhood, and a Valley Park in the southern neighbourhood. SANG has been scaled, and will be designed, to meet Natural England's criteria.

03 **Playing pitches** will be provided in accordance with the Sport England Calculator, which identifies pitch requirements for the new population. Playing pitches will be provided in two Sports Hubs within the northern and southern neighbourhood, both offering a mix of grass and artificual pitches, with the north also providing an indoor sports hall.

04 **Edge landscapes** safeguard retention of existing vegetation, filter views with adjacent dwellings, contribute to ecological connectivity and acoustic mitigation along major transport corridors.

05 **Habitat creation areas** will include biodiverse planting and drainage, and will be managed for nature conservation with limited public access. They do not contribute towards policy provision for public open space.

Within these typologies, the Green Infrastructure Parameter Plan contains the following features:

- **Retained woodlands** within the site to be enhanced and protected
- The **extent of a planted noise bund**, determined on the basis of acoustic modelling, providing acoustic mitigation to protect residential areas and schools from noise from traffic on the M1 motorway and A414
- **Green corridors,** linear features ensuring connectivity for wildlife, public access, amenity and sustainable drainage, to include existing and new vegetation
- The **Nickey Line** protected as a key existing linear green space
- **Location where the STC must narrow** as much as possible to minimise impact on the Nickey Line
- **Flexible location for a new Nickey Line connection** within the Country Park, provided at grade and with minimial disruption to existing trees and hedges
- **Habitat connectivity across the STC**, locations where underpasses provide continuous movement corridors for wildlife within strategic open spaces
- A **location that could accommodate an indoor sports hall**
- A **commercial area public square**, providing amenity to the central commercial area
- **Multi-Value SuDS Ponds** with permanent water and biodiverse margins which will contribute to drainage infrastructure
- **Multi-Value Ponds** with ecological or recreational use which are not connected to the drainage network
- **Neighbourhood Equipped Areas of Play,** large-scale equipped playspace appealing to a wide range including older children and teenagers
- **Neighbourhood Parks,** flexible locations for public parks that provide high quality recreation opportunities including playspace

Smaller amenity greenspace for local POS provision will be provided within areas of built development, to provide doorstep open space access to the community.

Public Open Green Space Provision*		
	Reg 19 Policy **(m2/person)**	Required total area for East Hemel **(hectares)**
Natural & Semi-Natural	34.6 m2/person	33.21 hectares
Parks and Gardens	7.1 m2/person	6.82 hectares
Amenity Greenspace	15.3 m2/person	14.68 hectares
Subtotal of Multi-Functional Green Space	**57 m2/person**	**54.71 hectares**
Allotments	4.5 m2/person	4.32 hectares
Sports	Based on Sport England Pitch Calculator guidance	
SANGs	8ha/ 1000 population	76.8 hectares

*Area requirements assume a household occupation rate of 2.4 person per dwelling

1 hectare = 10,000m2