Landscape Strategy:

Landwades Woodland Park - Hybrid Application

Redevelopment of Former Animal Testing Research Facility, Kentford.

Date: 25th February 2025 (Rev C)

Client: Lochailort Kentford Ltd

Kirsten Bowden
CHARTERED LANDSCAPE ARCHITECT

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References:

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1.0 Introduction - Landscape Strategy

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Proposed Development

1. Proposals for the development of Lanwades Woodland Park at the former animal health research facility, Kentford. It is proposed to build 302 houses in the eastern sector (and retain the listed visitor center) a shop, and a further 649 units (including a 90 bed care home) and school in the western sector.
2. In addition to the residential provision, proposals will include demolition of existing buildings in the eastern part of the Site, conversion of the existing listed stable block to community use, a shop, provision of open space, play space, and associated infrastructure.
3. As part of the application, a landscape strategy has been drawn up to manage the landscape assets of the Site and to ensure that the proposals integrate a well-designed landscape scheme which works with and enhances not only the setting, but also the experience of those living there in years to come.

The key design principles are described below:

- Promote links and permeability
- Establish a hierarchy of streets and access
- Create distinct character settings
- Create a hierarchy of materials and planting
- Create green streets, gardens and parkland
- Provide for flexible outdoor uses and activities
- Encourage play and fitness in the public realm
- Provide functional level access
- Maximise sustainability gains
- Promote biodiversity net gain

Figure 01. Location Plan and Application Area.

2.0 Vision & Existing Points of Interest

2.0 Vision & Existing Points of Interest

Purpose of this document

1. The landscape proposals for the redevelopment at Lanwades Woodland Park, Kentford is supported by the following landscape strategy, defining the character of the area, the features of value and areas for improvement in conjunction with the proposals.
2. The existing site comprises of the buildings and grounds of the former veterinary research and development campus at Kentford. The existing buildings mainly consist of vacant research, clinical and ancillary buildings which are surrounded by paddocks. The Site is well treed, with bands of woodland dividing up the Site, as well as smaller groups of trees. A tree survey has been undertaken to assess their condition, value and long-term potential contribution. This has also helped shape the management strategy for the retained vegetation and future planting requirements.
3. The aim of the landscape is to ensure that the green character of the area is retained, promoting a healthy natural environment within a semi-rural context. This document considers the following points associated with the development of the Landscape Strategy:

- Design principles
- Design evolution
- Landscape character areas
- Tree planting strategy
- Hard landscape strategy
- Soft landscape strategy
- Street furniture strategy
- SUDs and water management
- Ecology and biodiversity
- Amenity and open space
- Play, sports and fitness
- Arts and culture

Photo 01. Aspect of Western Sector.

4. The aim is to create a highly attractive development which responds to and respects the fabric, landscape and heritage of the setting. The development will enhance key assets including the bands of trees and beech avenues, whilst creating an attractive and socially inclusive neighbourhood with a variety of public open spaces. This would include:

- The creation of an attractive and multi-functional green and blue infrastructure network which links NEAPS/LEAPS, footpaths, the school and other recreational spaces within the Site, as well as nature conservation areas and surface water drainage features.
- To create a place with good access to a variety of public open spaces on the site.
- To retain, protect and enhance landscape features of value within the site.
- To provide sensitive landscape edges to the development through careful design and appropriate planting.
- To provide a network of safe and convenient footpaths and cycleways to access schools, local amenities, parks and open spaces on the site and further afield.
- To provide a series of exciting play spaces that are easily accessible and convenient for the local community.
- To create a high quality development that is environmentally sustainable, is resilient to climate change and maximises opportunities to increase biodiversity.

Photo 02. Existing woodland tracks through the tree belts connecting areas.

3.0 Local Points of Interest

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Figure 01. Local points of interest in relation to the site.

- Minor Road
- Main Road
- Trunk Road
- Kentford Village
- Lanwades Hall
- The Bell Inn PH
- Site Boundary
- River Kennett
- Play Equiped Area
- Train Line
- Train Station

4.0 Landscape Character Areas

4.0 Landscape Character Areas

National Landscape Character Assessment Profile

1. The Site is within the 'East Anglian Chalk' national character area (No. 87).
2. NCA 87: East Anglian Chalk is described as 'characterised by the narrow continuation of the chalk ridge that runs south-west–north-east across southern England'. The LCA notes that the majority of this LCA is open countryside, under cereal production. It is an open landscape but trees on hill tops are visually distinct and characteristic. A significant influence around Newmarket has historically been horse-racing and stud farms, which have brought a manicured appearance to the landscape. This is reflected in the local setting.
3. Key characteristics include:
    - The underlying and solid geology is dominated by Upper Cretaceous Chalk. The chalk bedrock has given the NCA its nutrient-poor and shallow soils.
    - Distinctive chalk rivers which flow in gentle river valleys in a diagonally north-west direction across the NCA.
    - The chalk aquifer supports flows of springs and chalk streams; features associated with a history of modification include watercress beds, culverts and habitat enhancements.
    - The rolling downland, mostly in arable production, has sparse tree cover but distinctive beech belts along long, straight roads. Certain high points have small beech copses or 'hanger', which are prominent and characteristic features in the open landscape.
    - Remnant chalk grassland, including road verges, supports chalkland flora and vestigial populations of invertebrates, such as great pignut and the chalkhill blue butterfly.
    - Brick and 'clunch' (building chalk) under thatched roofs were the traditional building materials, with some earlier survival of timber frame. Isolated farmhouses built of grey or yellowish brick.
    - Settlement is focused in small towns and in villages. There are a number of expanding commuter villages located generally within valleys.
    - In and around the wider area of Newmarket, stud farms impose a distinctive geometric, enclosed and manicured pattern to the landscape.
4. The contained character of the site means that there would be little impact on the wider landscape character. The proposed new dwellings and associated development would be screened by existing trees and vegetation. Change would therefore be contained. The main impact is likely to relate to a change in outlook for properties adjacent and this has been taken into account when considering the management of the existing woody vegetation and planting strategy. It is also recommended that steps are taken to minimise and respect the rural location, ensuring that the proposals do not feel 'urban'.
5. It is concluded therefore that the East Anglian Chalk has capacity to absorb the change without significant negative effects and there is scope to improve and strengthen the existing landscape character through planting and management.

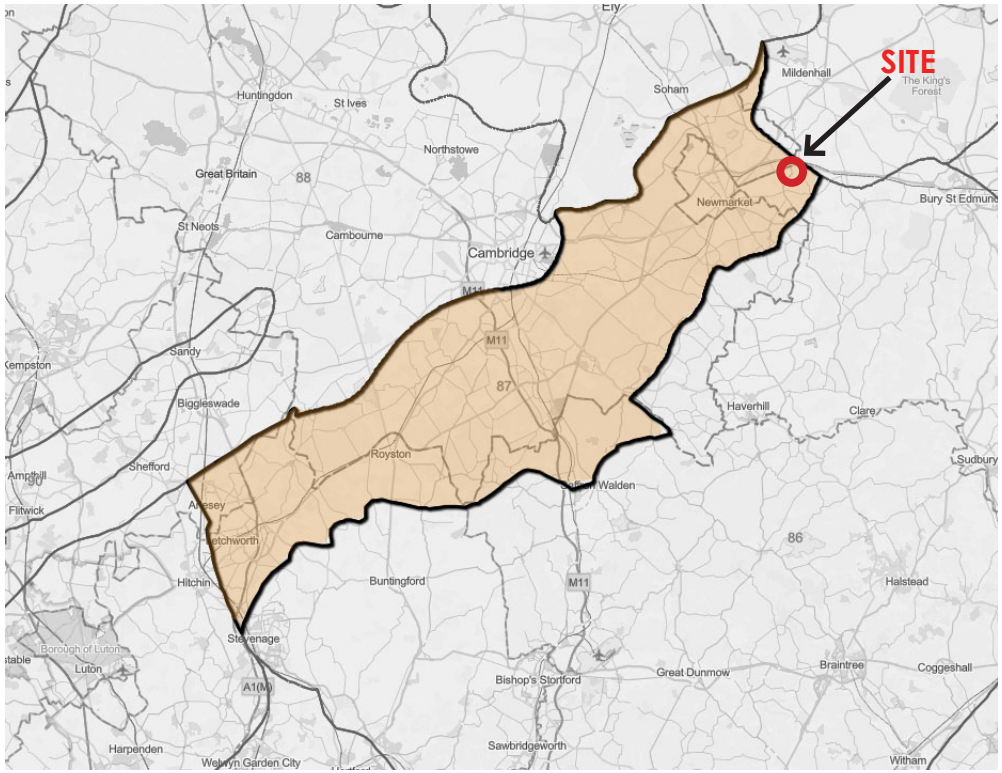


Figure 02. National Landscape Characterisation Map (extract)

4.0 Landscape Character Areas

Suffolk Landscape Assessment

Regional Landscape Character Assessment

6. The Suffolk Landscape Character Assessment (SLCA) identifies thirty distinct Landscape Character Types (LCTs). The Site is located within LCT 13: Rolling Estate Chalklands. The key characteristics of LCT 13 comprise:

- Very gently rolling or flat landscape of chalky free draining loam;
- Dominated by large scale arable production;
- 'Studscape' of small paddocks and shelterbelts;
- Large uniform fields enclosed by low hawthorn hedges;
- Shelter belt planting, often ornamental species;
- A 'well kept' and tidy landscape;
- Open views;
- Clustered villages with flint and thatch vernacular houses; and
- Many new large "prestige" homes in villages

7. The character of this area is dominated by open spaces with long views, this is emphasised by straight roads and regimented patterns of belts and hedges. The 'studscape' is very apparent, with belts of trees and woodland planting confining the views, as is evident on Site. This is reflected by fields of subdivided paddocks and mature tree belts in and around the existing research facility buildings.
8. The condition of the LCT is considered to be largely tidy and well-kept which is reflective of the landscape associated with the horse racing industry.

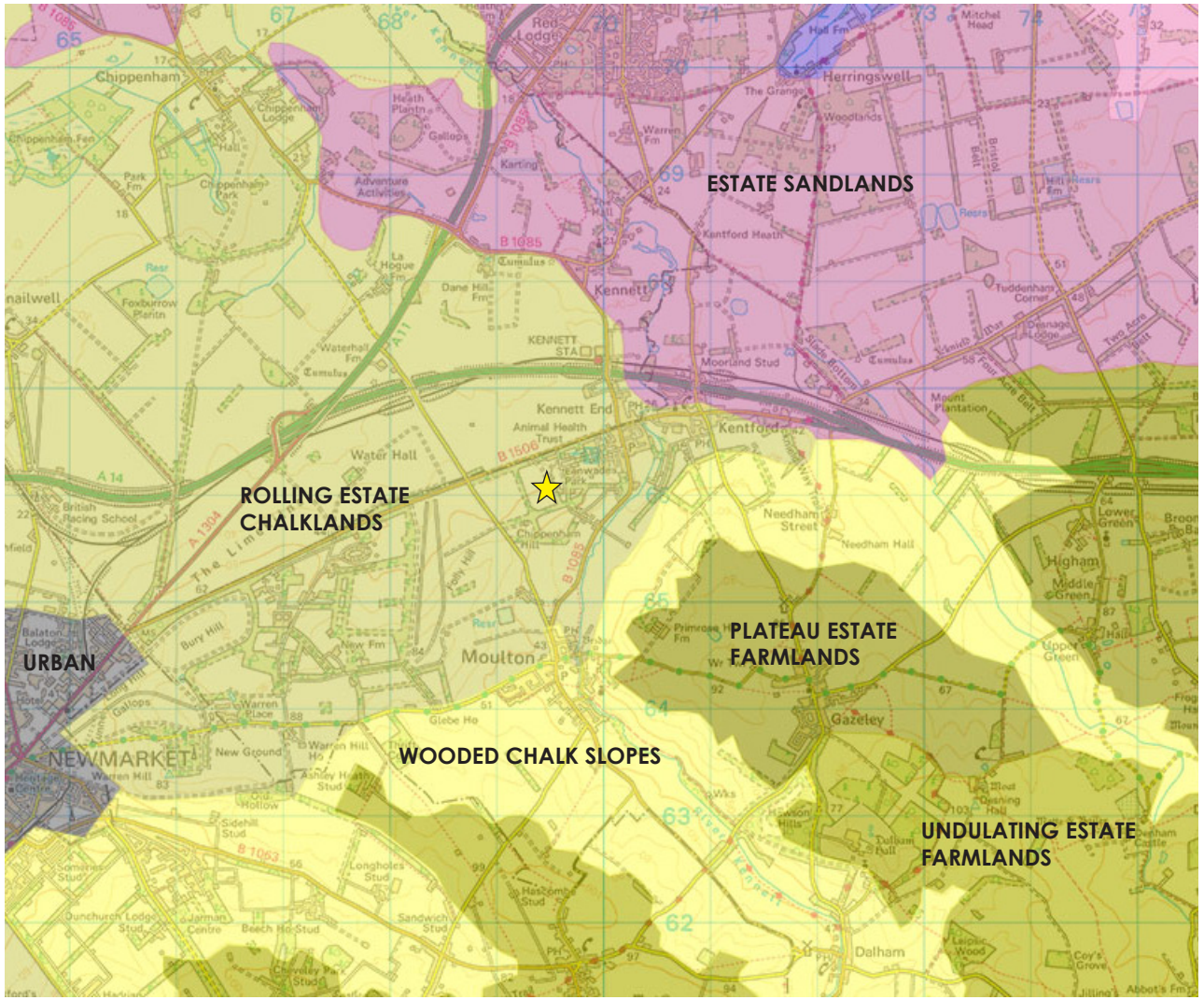


Figure 03. Rolling Estate Chalklands (map extract)

4.0 Landscape Character Areas

District Landscape Character Assessment - West Suffolk

9. Further to the information set out in the LVIA, the West Suffolk Landscape Character Assessment (WSLCA) subdivides the district into Landscape Character Areas (LCA).
10. The Site is located in LCA A5: Kennett Valley. This is a long narrow landscape character area which reflects the alignment of the Kennett river and is described as 'a medium scale arable farmland on valley slopes with tree blocks and small-scale pattern of meadow, carr woodland, tree clumps and hedgerows on the floodplain'.
11. The WSLCA locates the Site in LCA A5, but it is considered that the Western Site shares more of the key characteristics of LCA G1, namely the gently undulating topography, the rectilinear geometry and the straight shelterbelts.

12. **Key relevant characteristics of LCA which will be maintained and retained as part of the proposals include:**

- Post and rail fencing to be used to define the different areas and edges of the periphery tree planting (Photo 03).
- The existing straight shelterbelts within the Site would be retained and managed to ensure that they continue to be a characterising feature of the Site, adding height, spatial definition and shade (Photo 04).
- Existing and proposed mixed native hedges would be cut in a distinctive shape giving rise to perceptions of a well kept and tidy setting, in character with the local area (Photo 05).
- Materials on the proposed new dwellings would reflect those used locally, referencing the built vernacular (Photo 06).

Photo 03. Post and rail fences on the Site edge are characteristic of the area.

Photo 04. Mature tree belts break up the landscape visually and physically.

Photo 05. Wide base hedges are evident on the main roads locally and benefit wildlife.

Photo 06. Brick, flint and clay tiles are common materials in the built character locally.

5.0 Landscape Strategy

5.0 Landscape Strategy

Landscape and Open Space

1. The Landscape and Open Space Parameter Plan provides a series of landscape typologies establishing the overall green infrastructure network for the Site.
2. As part of the design process the different landscape typologies were reviewed to understand where areas could be utilised for green space and improved connections created. The landscape and open space plan illustrates how the different spaces relate.

Landscape and Open Space Areas

(WSC Policy Requirement -Approximate figures based on 1000 dwellings)

- Natural and Semi-natural Greenspace = 4.25 ha
- Amenity Greenspace = 1.42 ha
- Parks & Gardens = 1.89 ha
- NEAP WITH (MUGA) = 0.71 ha
- LEAP = 0.59 ha
- Pocket Green: 0.59ha

Total POS Provision

Total required: **9.44** ha

Total proposed: **22.44** ha

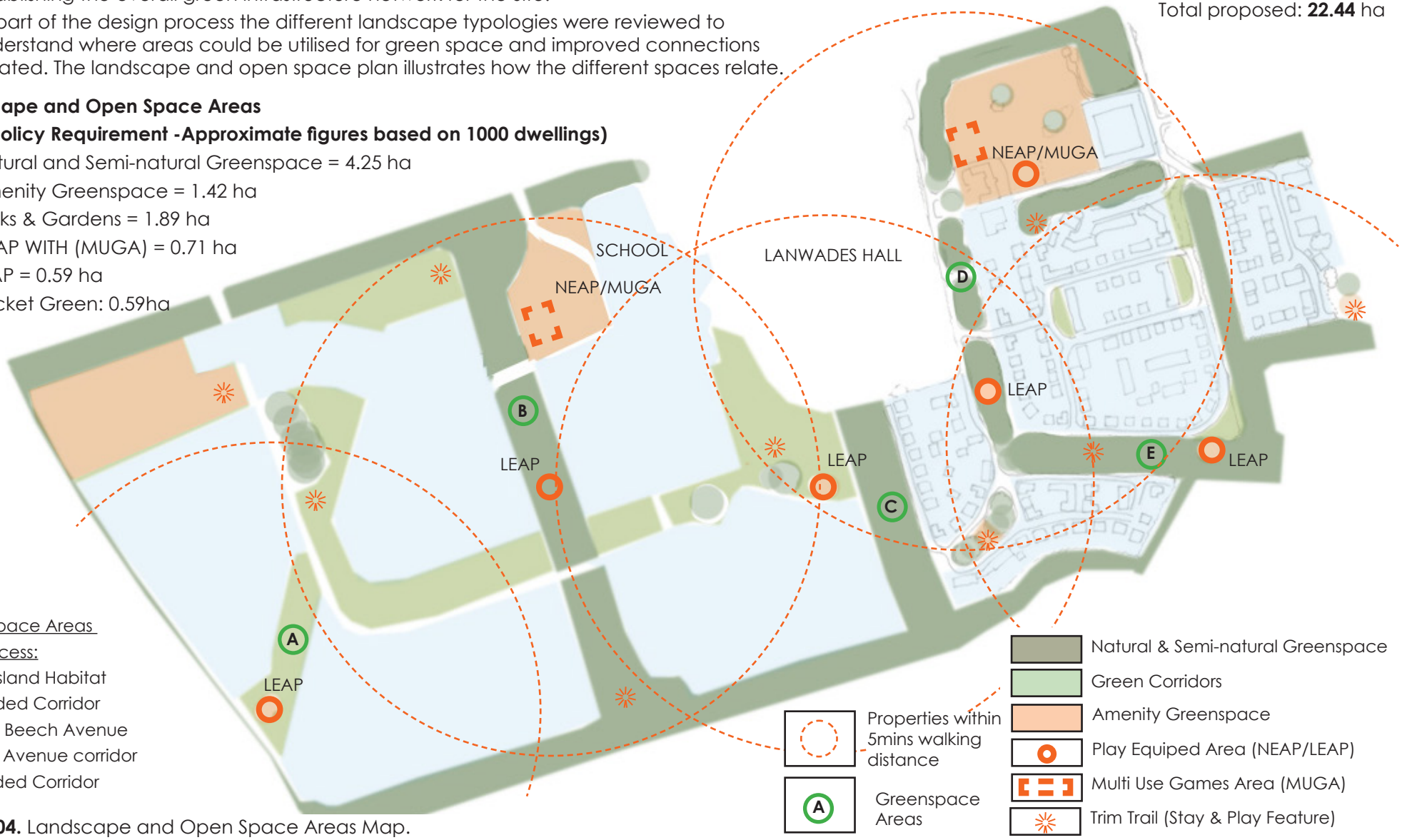
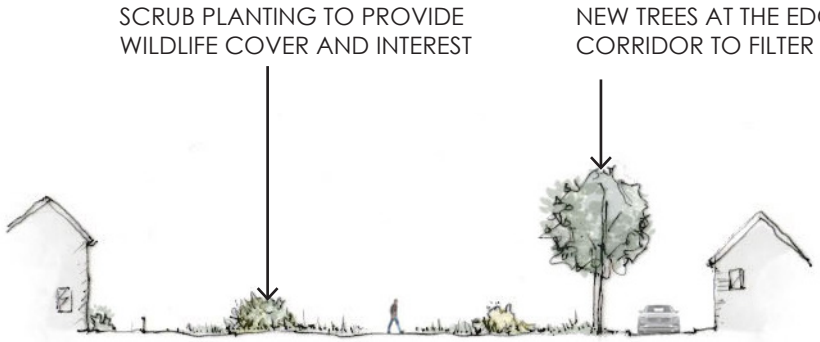
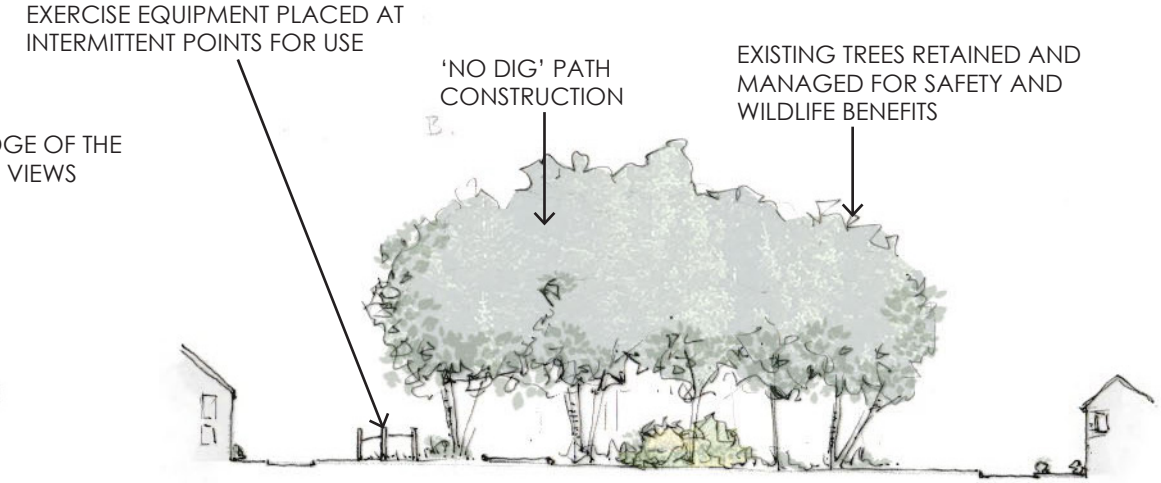


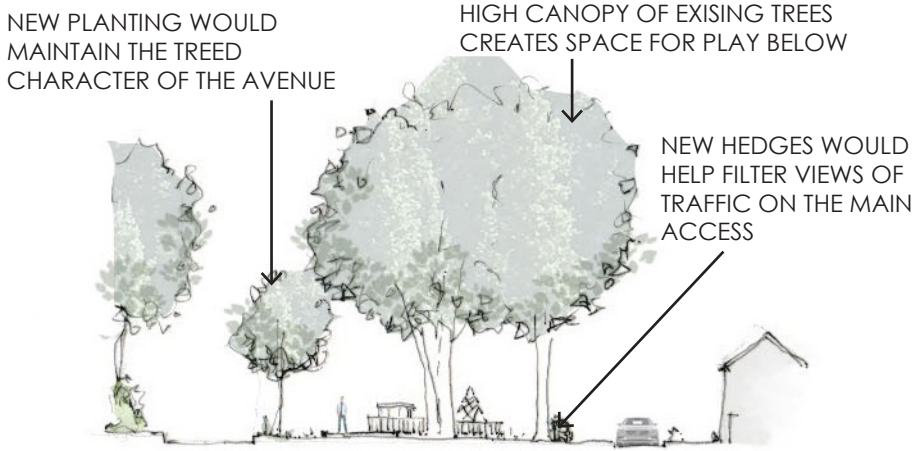
Figure 04. Landscape and Open Space Areas Map.



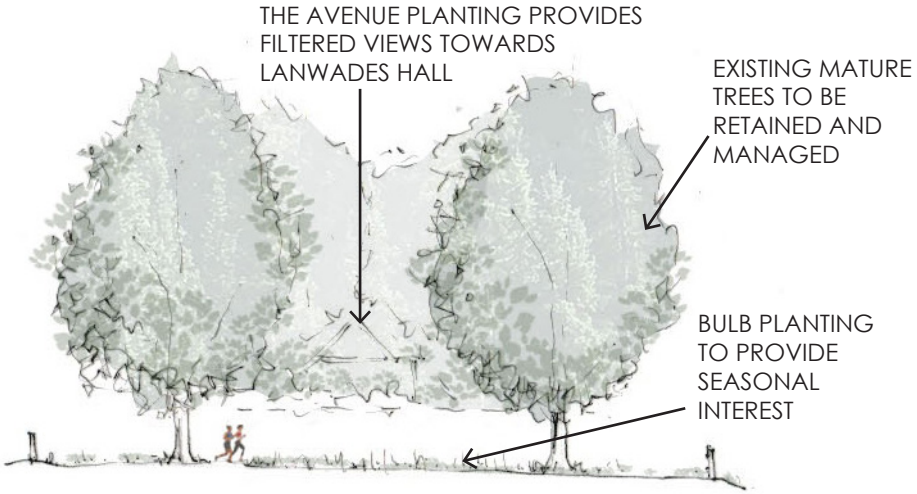
GREENSPACE LOCATION - A: Grassland Habitat (Section i) - The open wild grassland strip which would grow along the line of the water pipe would be more open in character with tree planting on the edges.



GREENSPACE LOCATION - B & E: Wooded Corridor (Section ii) - Indicative of the existing treed corridors, with mixed under-storey planting and occaisonal items of exercise equipment.



GREENSPACE LOCATION - C: Main Beech Avenue (Section iii) - The open character of the trees and high canopy means that views are more open. Existing hard standing would benefit from being removed and ground conditions improved for root growth.



GREENSPACE LOCATION - D: Main Avenue corridor (Section iv) - Views along the established treed corridor offer filtered views towards Lanwades Hall. A fence on the boundary screens views. New bulb planting would extend the period of interest and add colour.

Figure 05. Greenspace Areas with Access (See Figure 04 for locations):

5.0 Landscape Strategy

Environmental Mitigation Measures

Environmental mitigation measures have been incorporated into the design of the proposed development and will feed into a the green infrastructure strategy.

Incorporated Environmental Mitigation Measures

1. Unlit corridors of semi-natural vegetation - existing bands of woodland wood remain unlit for a more natural woody environment.
2. A corridor of semi-natural vegetation following the line of the Kennett to Kirtling Green Pipeline will include new mixed native planting, with wild grassland areas and mown paths.
3. New hedgerows, grassland and scattered trees would be provided to link the green corridors and existing bands of vegetation.
4. Trees with an understorey planting of shrubby scrub would be planted adjacent the south-west of Lanwades Hall to create a buffer of vegetative screening.
5. Existing bands of trees would be retained and enhanced with additional planting to maintain dark corridors around the peripheries of the Site for commuting bats.
6. Built development to avoid conflict with important landscape elements (including future growth of vegetation) to ensure successful retention and growth.
7. Development designed to reflect a semi-rural parkland garden suburb character with tree lined avenues, green verges, divided by strong bands of trees and clumps of existing vegetation.
8. Hibernaculum within the woodland in areas less likely to be trafficked would be formed and periodically added to.

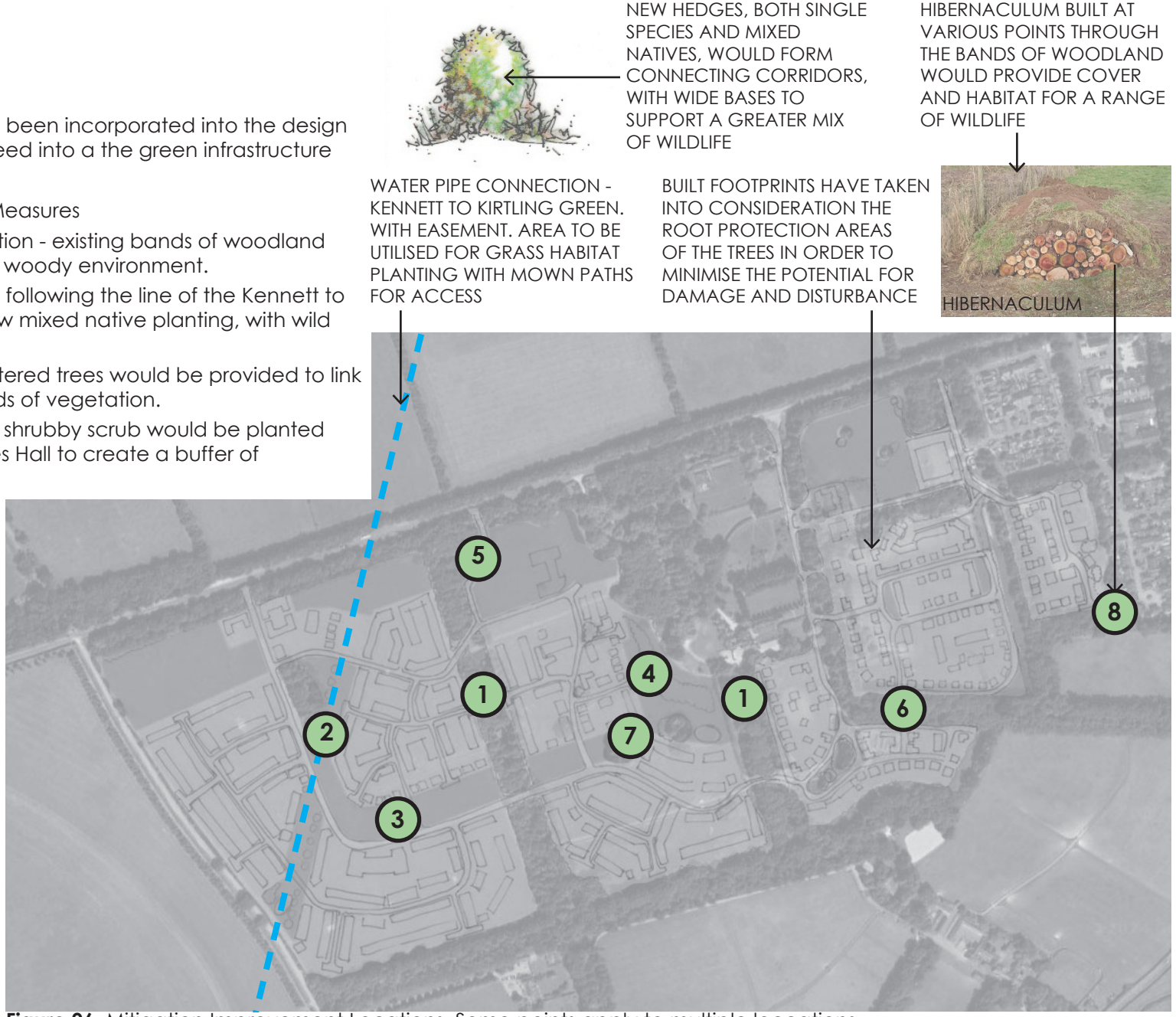


Figure 06. Mitigation Improvement Locations. Some points apply to multiple loccations.

Figure 07. Greenspace Areas and Types

5.0 Landscape Strategy

Green Infrastructure Strategy

1. The approach to Green Infrastructure (GI) builds upon the existing natural features of value within the site (i.e. treed windbreaks, boundary trees and hedgerows) and aims to enhance and strengthen these with additional structural planting within proposed areas green spaces.

Primary Green Infrastructure

2. The Primary GI corridors have been located along the boundaries of the Site, with connecting green corridors linking across the Site. The Primary GI corridors are a combination of green corridors, amenity space and natural/semi-natural green space and SUDS features which aim to:

- Provide structural planting in the form of native hedgerows, trees and woodland copse planting creating a sensitive edges to the development;
- Retain existing landscape features of value;
- Create a variety of different habitats for local wildlife species that are in keeping with those found in the area;
- Create connected movement corridors for local wildlife species;
- Allow for different recreational opportunities and experiences for residents of the development; and
- Incorporate SUDS features (attenuation basins and swales) to reduce surface water run-off within the development;

3. Secondary Green Infrastructure The Secondary GI corridors are located throughout the development in the form of residential trees, hedgerows and ornamental planting to the front of dwellings. These play an important part in the overall connectivity and biodiversity of the development and also provide the garden suburb character of the development.

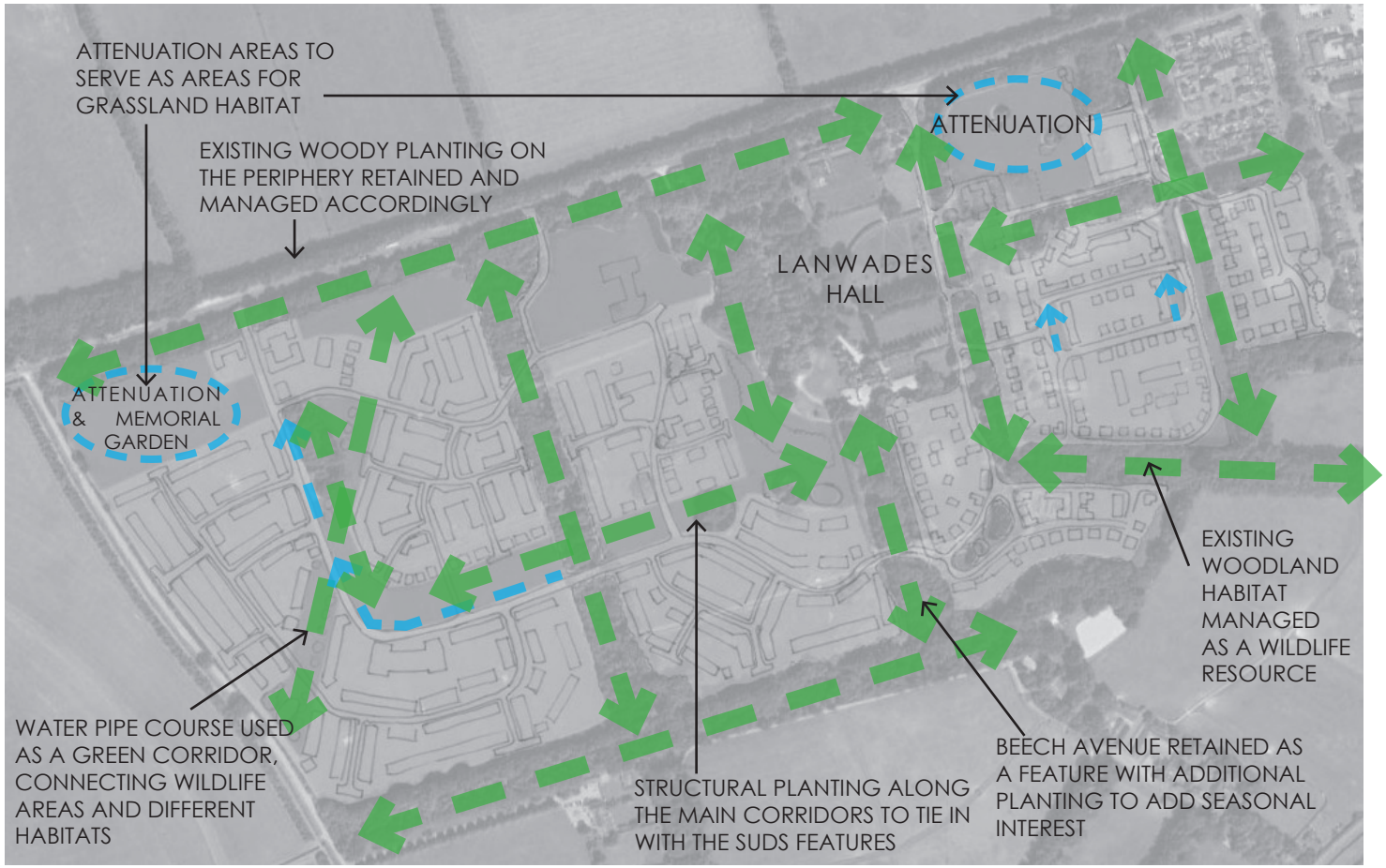


Figure 08. Green Inrastructure Connections Plan.

5.0 Landscape Strategy - SUDS

Blue Infrastructure Strategy

1. The Blue Infrastructure Strategy prioritises the use of surface water movement and detention systems as a means of both directing and treating surface water runoff. These are known as Sustainable Urban Drainage Systems (SUDS). The aim of SUDS is to control water quantity, water quality, amenity and biodiversity by incorporating features into a drainage design. By producing a management train it is possible to achieve enhancements in all areas, with landscape benefits as well.
2. The use of SUDS is proposed within the surface water drainage strategy for the proposed development would work to serve the following functions:

- Control of runoff water rates and volumes, thereby reducing downstream and localised flood risk.
- Reducing pollutant concentrations and acting as a buffer for accidental spills, with improved surface water runoff quality.

Photo 07. SUDS features can be incorporated into landscape features, with planting to help filter and slow down water progress.

3. For further information regarding drainage proposals reference should be made to the Technical Drainage Proposals being collated by Cannon Consulting Engineers which accompany this application. The proposed SUDS are as follows;

- Permeable Paving – are features with an underlying structural storage layer to allow water to infiltrate into the surrounding ground or wrapped in an impermeable membrane and used as temporary storage tanks before a controlled release into the drainage network.
- Swales – are shallow, flat-bottomed, vegetated open channels designed to convey, treat, and often attenuate surface water runoff.
- Detention/Attenuation Basins – are landscaped depressions that are normally dry except during and immediately following storm events. These can be on-line components where surface runoff from regular events is routed through the basin and when the flows rise, because the outlet is restricted, the basin fills and provides storage of runoff and flow attenuation.
- New planting - this would serve to intercept and slow down the passage of water, with trees, shrubs and grassland working with the existing vegetation.

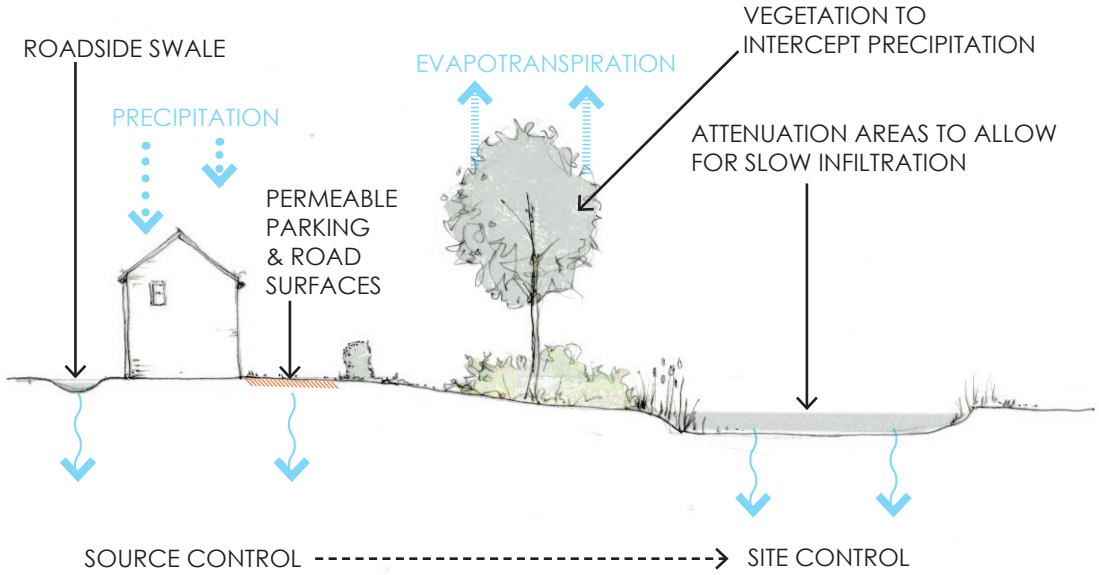
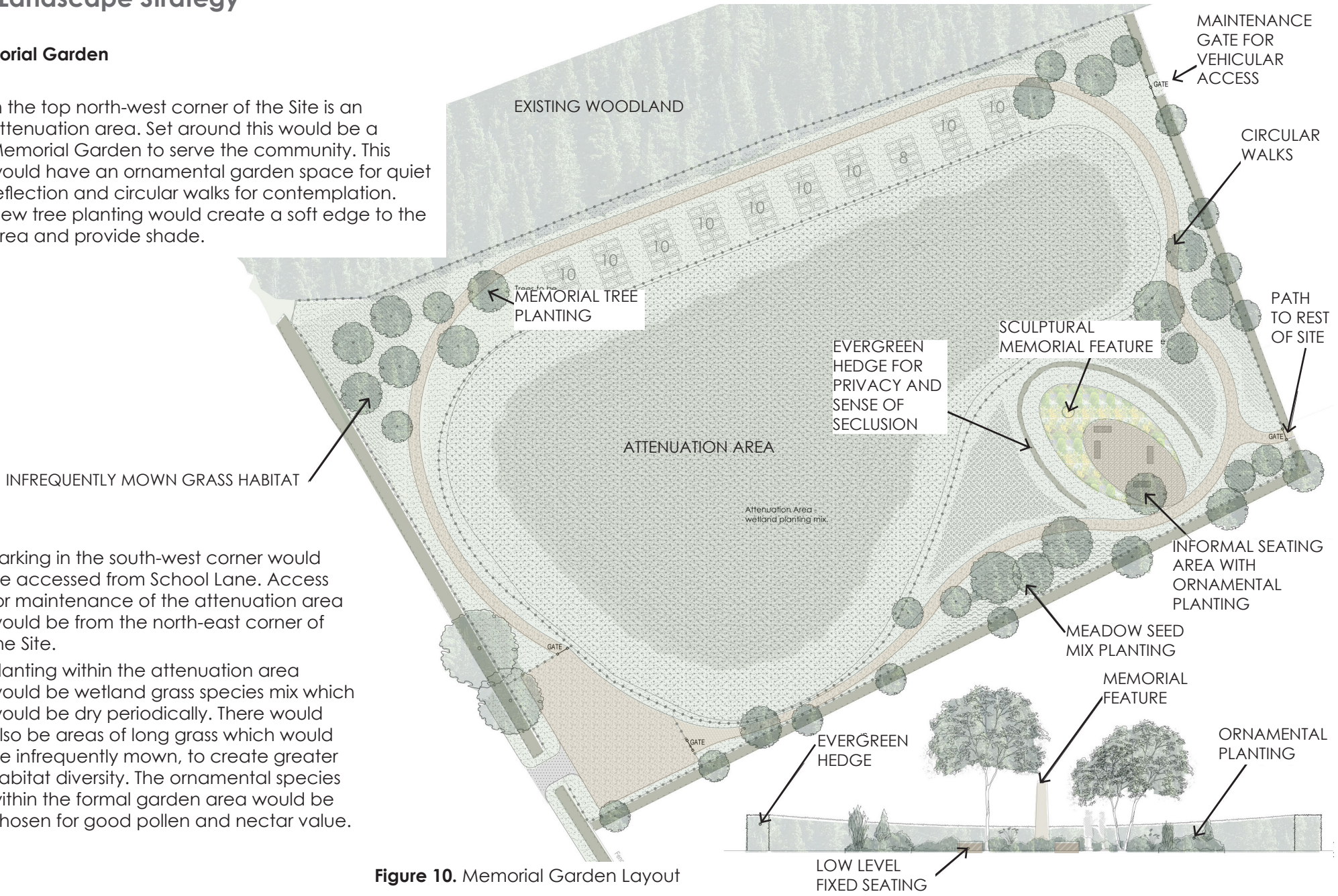


Figure 09. SUDS Indicative Section Diagram

5.0 Landscape Strategy

Memorial Garden

1. In the top north-west corner of the Site is an attenuation area. Set around this would be a Memorial Garden to serve the community. This would have an ornamental garden space for quiet reflection and circular walks for contemplation. New tree planting would create a soft edge to the area and provide shade.



2. Parking in the south-west corner would be accessed from School Lane. Access for maintenance of the attenuation area would be from the north-east corner of the Site.
3. Planting within the attenuation area would be wetland grass species mix which would be dry periodically. There would also be areas of long grass which would be infrequently mown, to create greater habitat diversity. The ornamental species within the formal garden area would be chosen for good pollen and nectar value.

Figure 10. Memorial Garden Layout

6.0 Planning Guidelines

6.0 Planning Guidelines

Planning Policy

National Planning Policy Framework

1. At a national level, the National Planning Policy Framework (NPPF) sets out national planning policies for England and how these are expected to be applied. Paragraph 8 states that there are three dimensions to sustainable development, which are economic, social and environmental. With regard to the environmental role of sustainable development, the NPPF states that the planning system should contribute to protecting and enhancing our natural, built and historic environment; helping to improve biodiversity.
2. Taking into consideration the points raised within the NPPF, in particular Paragraph 103, which notes that access to a network of high quality open spaces and opportunities for sport and physical activity, is important for the health and well-being of communities. In addition to this, it can also deliver wider benefits for nature and support efforts to address climate change.
3. It notes that planning policies should be based on robust and up-to-date assessments of the need for open space, sport and recreation facilities and opportunities for new provision. Information gained from the assessments by the Local Planning Authority, in this case West Suffolk Council, should then seek to accommodate the required provision.

Local Plan - West Suffolk Council

4. An Open Space Assessment Report published by West Suffolk in 2021 recognises that provision should both reflect needs and priorities within a local community. Engaging residents to take up and retain a minimum or better level of physical literacy and activity being a high priority.
5. At national level for natural and semi-natural greenspace. Natural England's Accessible Natural Greenspace Standard (ANGSt) provides a set of benchmarks for ensuring access to places near to where people live. They recommend that people living in towns and cities should have:

- **Parks and Gardens**: within walking distance of 710m (Approx 9mins)
- **Amenity Greenspace**: within walking distance of 480m (Approx 6mins)
- **Natural & Semi-natural Greenspace**: within walking distance of 710m (Approx 9mins)
- **LEAP**: within walking distance of 400m (Approx 5 mins)
- **NEAP**: within walking distance of 1000m (Approx 12.5mins)
- **Other Provision (MUGA)**:within walking distance of 700m (Approx 9mins)

Landscape Policies

6. On this basis, a series of LEAPs and NEAPs are proposed which would meet the distance/time requirements. In addition to this there would be a network of woodland walks through the trees with a series of trim trail facilities to provide 'play on the way' features.

NEAPs (Neighbourhood Equipped Area for Play)

- 15-minute walking distance of a well-used pedestrian route.
- Play equipment targeted mainly at older children but should con tain an area for younger users.
- Minimum of eight play experiences and at least five play items
- A minimum 1000m² area divided into two sections - one for play equipment and an area of 465m² of hard surface (which is a mini mum area for 5-a-side football).
- Space for active play within the boundary.
- A 30-metre buffer between the activity area and the nearest dwelling.
- Fencing is included if the area is near a road.
- Contains seating for parents and carers, plus litter bins and secure bicycle parking.

LEAPs (Local Equipment Area for Play)

- 5-minute walking distance of a well-used pedestrian route.
- Created for children who are beginning to go outside and play independently.
- Minimum of six play experiences and at least three play items.
- Minimum 400m² activity zone.
- Space for active play within the boundary.
- A 10-metre buffer between the area and house boundary, and 20 metres between the area and dwellings.
- Fencing is included if the area is near a road.
- Contains seating for parents and carers, and litter bins.

7.0 Amenity & Open Space

7.0 Amenity and Open Space

Open Spaces

1. The Site benefits from a series of open spaces linked together by bands of treed vegetation, thereby creating wildlife corridors across the site. The Eastern Sector of the Site is where most of the existing buildings are located. There are areas of hard-standing, parking, pens and grazing areas divided by hedges and the trees. The bands of trees are generally between 20-40m deep, with mixed canopy heights. Through these it is possible to walk, and it is proposed to add meandering paths to serve as pleasant walking routes for residents and also a 'trim trail' for exercise and as points to play. The paths would also connect the LEAPs. These would be fenced areas within the woodland, the surrounding woodland effectively extending the area for play and enhancing the user experience. Equipment provided would be visually low-key to ensure it does not jar with the setting.

2. In addition to the accessible woody tree belts across the site and on the boundaries, there are a series of open grassed areas. These would play an important role in open space provision, creating alternative play experiences and opportunities for greater variety of habitat provision. Areas around the proposed school and also the existing visitor centre (proposed community building) have been identified as areas for Neighbourhood Equipped Areas for Play (NEAPs). These would provide a greater range of play equipment and the provision Multi Use Games Areas (MUGAs).

3. The open spaces would also be designed to incorporate the drainage attenuation features and these would be designed as landscape features, with periphery planting and softer shaped lagoons which enhance the areas visually and in terms of wildlife value. A variety of path surface types, planting and sculpted landforms would work together to create an accessible and inviting series of spaces.

4. Accessibility for all is an important feature of the proposals and the network of paths across the Site would provide safe walking routes, linking the different areas and forming connections to Kentford, which would also benefit from the facilities proposed.

Amenity and Open Space

5. Residential amenity space requirements are a product of the expected population and dwelling mix. In line with West Suffolk Open Space Assessment Report (2021), the amenity and open space provision has been designed to provide the following outdoor amenity space (based on figures of 1000 units):

- Natural and Semi-natural Greenspace = 4.25 ha (10.0 ha provided)
- Amenity Greenspace = 1.42 ha (4.0 ha provided)
- Parks & Gardens = 1.89 ha (5.0 ha provided)
- NEAP WITH (MUGA) = 0.71 ha (1.0 ha provided)
- LEAP = 0.59 ha (1.0 ha provided)
- Pocket Green: 0.59ha (1.44 ha provided)
- Total Public Open Space Provision of 22.44 ha to be provided.

Quality and distribution of open space

6. The quality of the proposed built environment would see an improvement to the setting, with the removal of most of the existing buildings, stable yards and hard standing associated with the research facilities. The creation of tree-lined streets and green corridors with amenity parkland and planted swales, means that the new neighbourhood will retain a green environment. Retention of the mature trees which define the character of the Site would ensure that the quality of the setting is retained. The greenspace is distributed across the Site, ensuring that the amenity is easily accessible to all.

Playspaces

7. A key feature of the public open space is the provision of play spaces for children and 'young adults'. The standards set out in the Fields in Trust Guidance for Outdoor Sport and Play along with the Council's own guidance have informed the design of the play provision and their location.

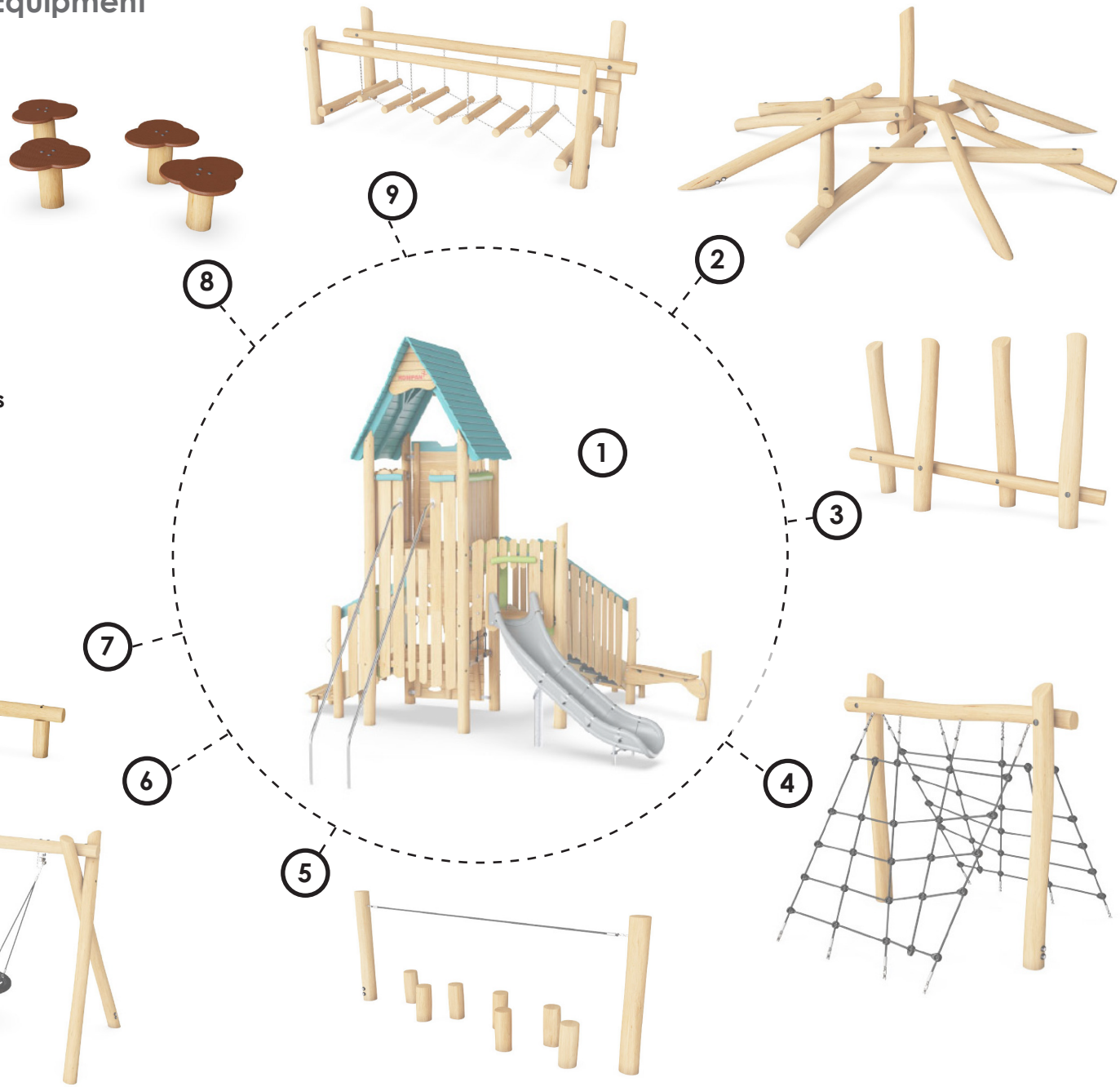
8. The development will include 2no. NEAP and 5no. LEAP. This has been worked out on the basis of the information provided with the provision for open space calculated in relation to distance from dwellings to NEAPs/LEAPs. In addition to this there are a series of woodland areas with defined walks and trim trail equipment. Benches would also form an important part of the strategy, providing rest points which encourage those less mobile to access the setting.

7.0 Amenity and Open Space - Play Equipment

General

1. The play equipment illustrated is from a selection available from Kompan and meet industry standards in terms of health and safety. The numbers shown related to numbers on the landscape proposal drawings. Play areas would be fenced with timber picket fences with single access points. Seating and bins would also be located in the play areas. Surfaces under the equipment would consist of playgrade woodchip and poured rubber.

Play Equipment	Approx. No. of Play Experiences
PE/1. Multi-deck Tower	**16**
PE/2. Crawling Pyramid:	**6**
PE/3 .Balance Plus	**2**
PE/4. Double Web Climber	**6**
PE/5. Balance Posts with Rope	**3**
PE/6. Swing Combination	**4**
PE/7. Balance Bar	**2**
PE/8. Balance Posts	**4**
PE/9. Wobble Bridge	**3**

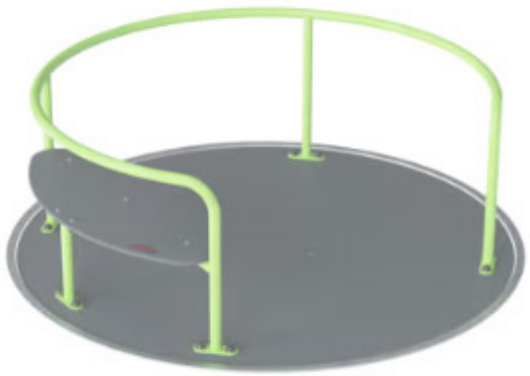


7.0 Amenity and Open Space - Inclusive Play Equipment

General

1. The play equipment illustrated is from a selection available from Kompan and meet industry standards in terms of health and safety. The numbers shown related to numbers on the landscape proposal drawings. Play areas would be fenced with timber picket fences with single access points.
2. Inclusive equipment would be placed in each of the play areas. At least one of the swing attachments in each area should also be inclusive design. A number of designs of panel are available for the sensory wall and these should be varied for each area.

Play Equipment	**Approx. No. of Play Experiences**
IE/15. Wheelchair carousel:	**8**
IE/16. Tipi Carousel with top brace:	**8**
IE/17 Sensory Wall	**10**

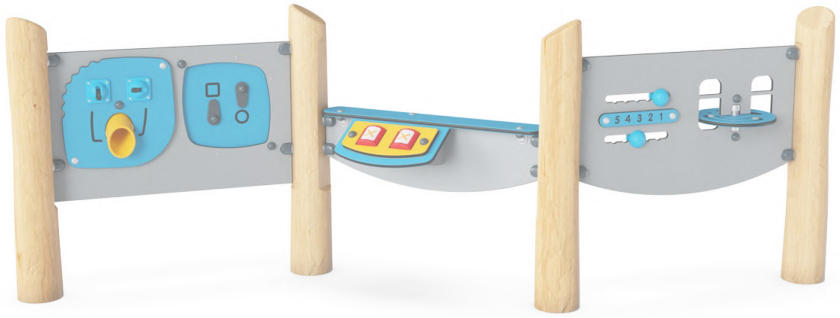


IE/15. Wheelchair Carousel

Inclusive Play Equipment Items

IE/16. Tipi Carousel

IE/17. Sensory Wall



8.0 Play Sports & Fitness

8.0 Play Sports and Fitness - Equipment

General - Trim Trail

1. The trim trail equipment illustrated is from a selection available from Kompan and meet industry standards.
2. Across the Site there will be a series on interlinking paths through the woodland which will provide access for exercise and play. Encouraging access to the woodland will enrich the living experience, with wildlife and woodland providing shaded space.
3. The numbers shown relate to numbers on the landscape proposal drawings. Surfaces under the equipment would consist of playgrade woodchip.

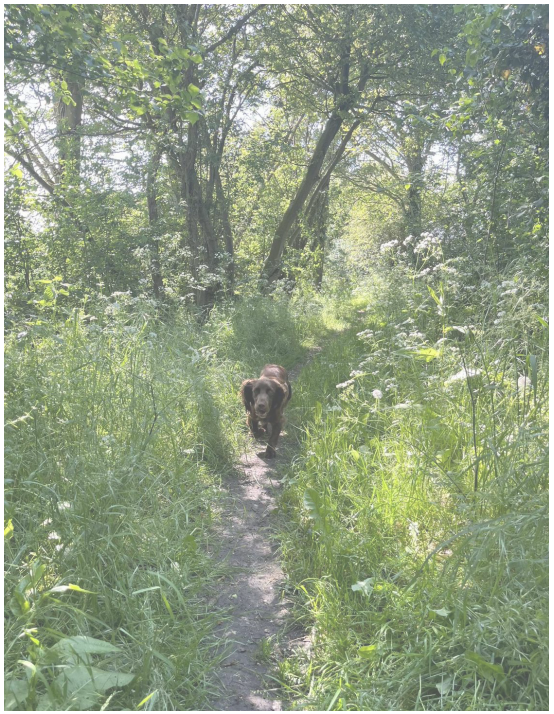
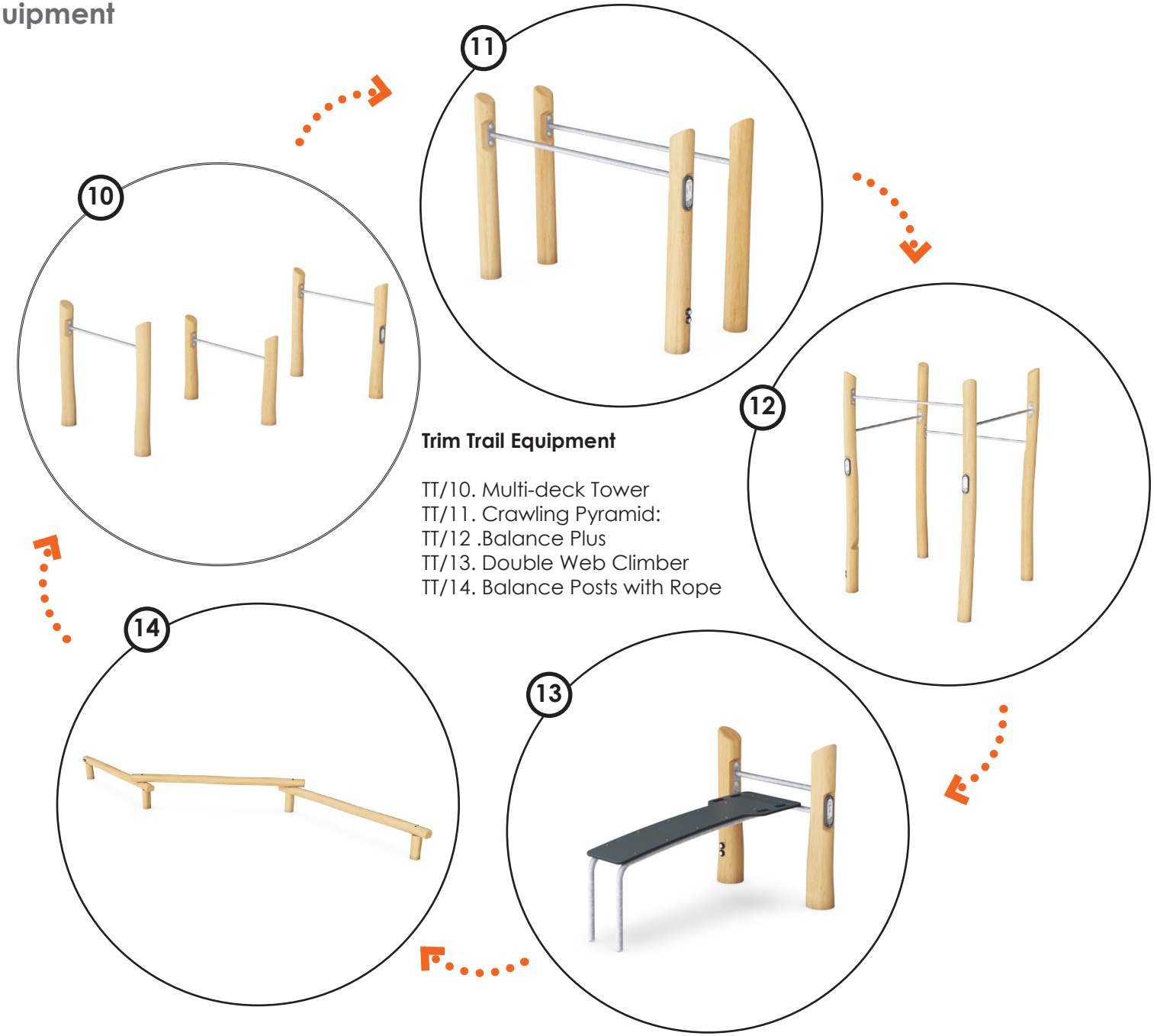


Photo 08. Woodland walks.



Trim Trail Equipment

TT/10. Multi-deck Tower
TT/11. Crawling Pyramid:
TT/12 .Balance Plus
TT/13. Double Web Climber
TT/14. Balance Posts with Rope

9.0 Amenity Facilities

9.0 Amenity Facilities

The John MacDougall Visitor Centre is a Grade II listed building to the east of Sir Graham Kirkham Avenue and was originally used as a stable block for Lanwades Hall. It was subsequently converted from a stable block into a lecture theatre and conference centre.

Benefiting from the established and readily usable facility, the building is located in an easily accessible location adjacent to the main avenue access. This is a versatile building with a range of spaces within it and an outdoor courtyard, which will be positioned on the edge of one of the main public open spaces. It is proposed that the building will become a community hub and workshop facility for existing and new community.

Figure 11. Community Building for arts and cultural use.

9.0 Amenity Facilities - Bridlepath Connections

1. Further to consultation with representatives of the British Horse Society (BHS) the aim is to open up and improve connections within the Site for equine use.

2. There are a number of bridle paths and other Non-Motorised Users (NMU) in the local area and the aim is to improve the connections to make for safer access. These improved connections will not only make the proposed development an attractive place to live, but also encourage people to be more active.

Note: For further information on circularion please refer to Woods Hardwick: Parameter Plan - Open Space Strategy.

B1506

SCHOOL ROAD

Key:

Equestrian Route & Pedestrian Leisure Route

Pedestrian Cycle Routes

Photo 10. New routes forming connections to wider area.

Figure 12. Proposed new path routes for horses and NMU

10.0 Tree Planting Strategy

10.0 Tree Planting Strategy

Retained trees

1. The site layout has been governed by the location of existing trees and the desire to retain as many trees as possible. Part of the strategic layout has included the retention of mature boundary planting as shown on the layout proposals. Trees growing within the site as individual specimens have been retained where possible and incorporated into the proposed areas of open space. The woody bands of trees would largely be retained in their entirety as they have grown as a group and therefore behave and respond to environmental conditions as a group. Changes to the integrity of the bands of woodland planting are likely to compromise their long-term viability.

2. The proposed development will comprise of a variety of housing types and the arrangement allows for many of existing mature trees to be retained. By maintaining many of the mature trees, it is then possible to design wildlife corridors across the site, creating new links and connections with the wider environment.

Trees Proposed for Removal

3. Several trees are proposed for removal. These are generally trees which sit within or impact the safe use of the access roadways or trees growing within the footprint of proposed houses and driveways. The Tree Survey Constraints Plan has been overlaid with the proposals plan, and this has been an invaluable tool in identifying the best quality vegetation for retention and areas which require future management and maintenance.

TREES WITH DAMAGE IN PUBLIC AREAS WHICH ARE AT RISK OF FAILURE WILL BE MANAGED ACCORDINGLY.

Photo 09. Existing tree groups and periphery planting within the Site add structure and spatial definition.

Photo 10. Tree condition varies with some dead and dying material identified for removal.

Photo 11. Damaged trees will need careful management and monitoring due to decay.

10.0 Tree Planting Strategy

Tree planting principles (species to include)

Existing

- Retained Tree Species
  - *Fagus sylvatica* (Beech)
  - *Betula pendula* (Birch)
  - *Chamaecyparis lawsoniana* (Lawson Cyprus)
  - *Ilex aquifolium* (Holly)
  - *Acer pseudoplatanus* (Sycamore)
  - *Acer platanoides* (Norway Maple)
  - *Picea abies* (Norway Spruce)
  - *Betula pendula* (Silver Birch)
  - *Pinus nigra* (Corsican Pine)
  - *Aesculus hippocastenum* (Horse Chestnut)

Proposed

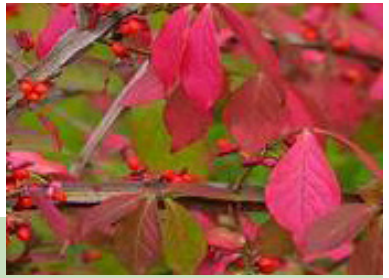
- Structural Tree Planting
  - Prunus avium 'Plena'(Wild Cherry)
  - Acer campestre (Field Maple)
  - Fagus sylvatica (Beech)
  - Juglans regia (Walnut)

- Ornamental Species
  - *Amelanchier* 'Robin Hill'
  - *Gleditsia triacanthos* 'Sunburst'
  - *Ilex* x *altaclerensis* 'Golden King'
  - *Catalpa bignonioides* (Indian Bean Tree)
  - *Cercis canadensis* 'Forest Pansy'
  - *Cornus kousa var.* chinensis
  - *Robinia pseudoacacia* 'Frisia'

- Riparian Waterside Species
  - *Alnus incana* (Alder)
  - *Salix alba* (White Willow)
  - *Salix caprea* (Goat Willow)

Proposed Trees

4. Extensive new tree planting across the site is proposed. Most of the proposed trees are native species and include Field maple, Lime, Alder, Birch, Apple and Beech. Trees have been planted where space allows and where gaps in the existing planting have become apparent, with the open space containing the attenuation areas, these would also be softened with appropriate species planting. Occasional ornamental varieties would be used in feature planting and in reference to the historical parkland setting.



- Orchard Trees
  - Malus 'Lord Burghley'
  - Malus 'Bramley'
  - Prunus 'Victoria Plum'
  - Prunus 'Cambridge Gage'

- Woodland Planting
  - *Pinus sylvestris* (Scots Pine)
  - *Malus floribunda* (Crab Apple)
  - *Tilia cordata* (Small Leaf Lime)
  - *Fagus sylvatica* (Beech)
  - *Carpinus betulus* (Hornbeam)
  - *Crataegus monogyna* (Hawthorn)
  - *Corylus avellana* (Hazel)
  - *Ilex aquifolium* (Holly)

- Informal Parkland Trees
  - Liquidambar styraciflua *(Sweet Gum)*
  - Quercus robur *(Oak)*
  - Tilia cordata *(Small Leaf Lime)*
  - Liriodendron tulipifera *(Tulip Tree)*

- Street Trees
  - Prunus avium 'Plena'
  - Sorbus aria 'Lutescens'
  - Sorbus aucuparia 'Cardinal Royal'
  - Prunus sargentii
  - Pyrus calleryana 'Chanticleer'
  - Tilia cordata 'Green Spire'

11.0 Soft Landscape Strategy

11.0 Soft Landscape Strategy

Ornamental Planting

1. Ornamental planting in and around the domestic settings of the houses will be a mixture of shrubs, grasses and herbaceous plant species. These have been chosen for their aesthetic value and also year round interest. In addition to this, species which have good pollen and nectar have also been proposed.
2. Planting which is relatively robust and does not require heavy maintenance is a consideration and most of the species chosen will only require an annual cutback once a year once established.
3. A good layer of mulch once the planting is in place will help ensure that weeds are kept down and moisture is retained.

Typical species to include:

Shrubs

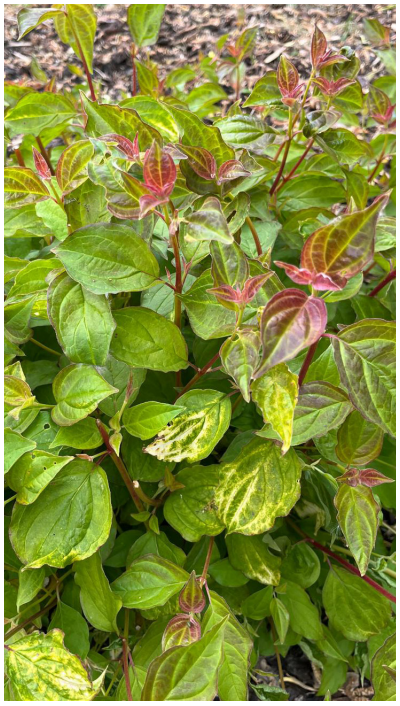
Berberis thunbergii 'atropurpurea'
Ceanothus 'Blue Mound'
Choisya ternata 'Aztec Pearl'
Cornus alba 'Elegantissima'
Cornus sanguinia 'Midwinter Fire'
Euonymus europaeus
Euonymus 'Silver Queen'
Lavendula 'Hidcote'
Hebe 'Red Edge'
Nandina domestica 'Obsessed'
Pittosporum 'Golf Ball'
Pittosporum 'Tom Thumb'
Skimmia 'Kew Green'
Skimmia 'Nymans'
Spiraea japonica 'Goldflame'
Viburnum x juddii
Viburnum lanatum
Viburnum opulus
Viburnum tinus 'Eve Price'

Herbacaeous

Achillea millefolium
Artemisia 'Powis Castle'
Astrantia major 'Large White'
Libertia grandiflora
Geranium 'Rozanne'
Geranium sanguineum 'Album'
Santolina chamaecyparissus
Sedum spectabile
Verbena bonariensis
Verbascum 'Gainsborough'

Grasses

Miscanthus 'Kleine Silberspinne'
Pennisetum 'Hameln'
Stipa gigantea
Stipa tenuifolia



10.0 Soft Landscape Strategy

Wildflower Meadow Mixes

1. Wildflower meadow mixes are proposed across the site and vary depending on the growing conditions and anticpated use. These vary from pond edge mixes on the edges of the attenuation areas, to wetland mixes in the base of the lagoons. Areas general purpose meadow mix are also proposed for more open areas and these will be managed accordingly with suppliers recommendations. Seed mixes listed are from Emorsgate Seeds (Norfolk) www.wildseed.co.uk

Pond Edge Mix (EP1)

Wild Flowers 20%

1.00% Angelica sylvestris – Wild Angelica
2.40% Centurea nigra – Common Knapweed
0.60% Dipsacus fullonum – Wild teasel
0.20% Eupatorium cannabinum – Hemp Agrimony
2.00% Filipendula ulmaria – Meadowsweet
1.00% Galium album – Hedge Bedstraw
0.60% Geum rivale – Water Avens
4.40% Iris pseudacorus – Yellow Iris
0.80% Lathyrus pratensis – Meadow Vetchling
0.30% Lythrum salicaria – Purple Loosestrife
0.10% Lycopus europaeus – Gypsywort
0.20% Oenanthe pimpinelloides – Corky-fruited Water-dropwort
0.60% Plantago lanceolata – Ribwort Plantain
0.80% Prunella vulgaris – Selfheal
1.00% Ranunculus acris – Meadow Buttercup
2.80% Silene dioica – Red Campion
1.20% Silene flos-cuculi – Ragged Robin

Grasses 80%

8.00% Agrostis capillaris – Common Bent (w)
0.80% Anthoxanthum odoratum – Sweet Vernal-grass (w)
30.40% Cynosurus cristatus – Crested Dogstail
17.60% Festuca rubra – Red Fescue
6.40% Poa pratensis – Smooth-stalked Meadow-grass
8.00% Carex echinata – Star Sedge (w)
8.00% Phleum bertolonii – Smaller Cat's-tail (w)
0.80% Hordeum secalinum – Meadow Barley (w)

General Purpose Meadow Mix (EM1)

Wild flowers 10%

1.50% Centaurea nigra – Common Knapweed
1.00% Daucus carota – Wild Carrot
0.30% Galium verum – Lady's Bedstraw
1.00% Leucanthemum vulgare – Oxeye Daisy
0.60% Malva moschata – Musk Mallow
1.60% Plantago lanceolata – Ribwort Plantain
1.50% Poterium sanguisorba ssp sanguisorba – Salad Burnet
1.00% Prunella vulgaris – Selfheal
1.00% Ranunculus acris – Meadow Buttercup
0.50% Silene dioica – Red Campion

Grasses 90%

9.00% Agrostis capillaris – Common Bent
31.50% Cynosurus cristatus – Crested Dogstail
27.00% Festuca rubra – Red Fescue
4.50% Phleum bertolonii – Smaller Cat's-tail
18.00% Poa pratensis – Smooth-stalked Meadow-grass

Wetland Meadow Mix (EM8)

Wild Flowers 20%

0.70% Achillea Millefolium – Yarrow
0.60% Agrimonia eupatoria – Agrimony
0.10% Angelica sylvestris – Wild Angelica
0.20% Betonica officinalis – Betony
3.20% Centaurea nigra – Common Knapweed
1.40% Filipendula ularia – Meadowsweet
0.40% Galium album – Hedge Bedstraw
2.00% Galium verum – Lady's Bedstraw
0.80% Lathyrus pratensis – Meadow Vetchling
0.60% Leontodon hispidus – Rough Hawkbit
1.20% Leucanthemum vulgare – Oxeye Daisy (Moon Daisy)
0.60% Lotus corniculatus – Birdsfoot Trefoil
0.10% Lotus pedunculatus – Greater Birdsfoot Trefoil
1.00% Medicago lupulina – Black Medick
2.00% Plantago lancelata – Ribwort Plantain
0.40% Primula veris – Cowslip
0.80% Prunella vulgaris – Selfheal
1.20% Ranunculus acris – Meadow Buttercup
0.80% Rhinanthus minor – Yellow Rattle
0.60% Rumex acetosa – Common Sorrel
0.30% Sanguisorba officinalis – Great Burnet
0.50% Silene flos-cuculi – Ragged Robin
0.20% Taraxacum officinale – Dandelion
0.30% Vicia cracca – Tufted Vetch

Grasses 80%

4.00% Agrostis capillaris – Common Bent (w)
4.00% Anthoxanthum odoratum – Sweet Vernal-grass (w)
0.80% Carex divulsa subsp. divulsa – Grey Sedge (w)
33.60% Cynosurus cristatus – Crested Dogstail
1.60% Deschampsia cespitosa – Tufted Hair-grass (w)
20.00% Festuca rubra – Red Fescue
3.20% Hordeum secalinum – Meadow Barley (w)
5.60% Phleum bertolonii – Smaller Cat's-tail (w)
5.60% Poa trivialis – Rough-stalked Meadow-grass
1.60% Schedonorus arundinaceus – Tall Fescue

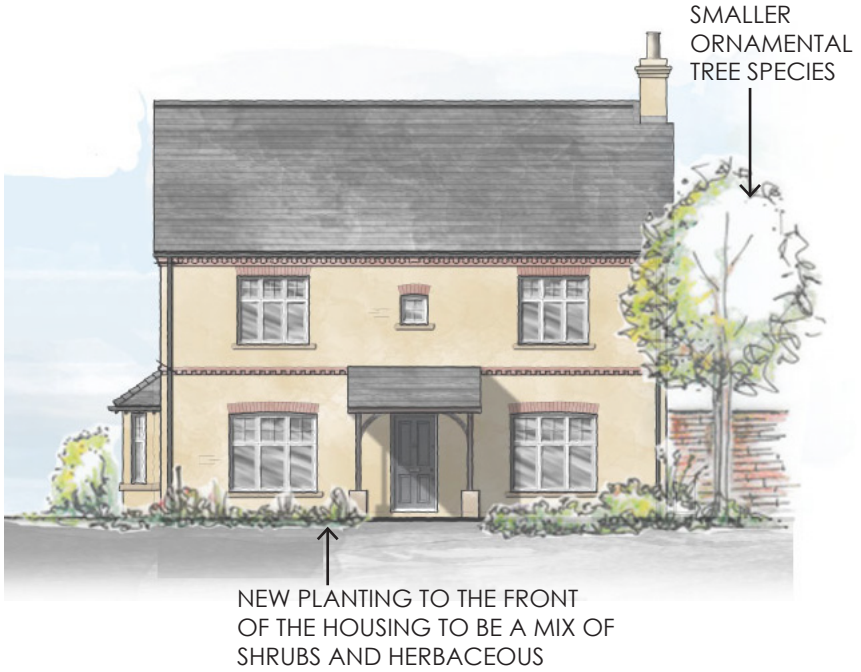
11.0 Soft Landscape Strategy

Front of dwelling planting

1. Planting to the front of the house will be a mixture of shrubs, grasses and herbaceous planting to provide structure and seasonal interest. This will be more ornamental and slightly softer visually than the planting in the shared spaces.

Shared Amenity Planting

2. Planting within the general public areas will be a mixture of robust shrub species which provide structure and interest throughout the year. Evergreen planting with a mixture of leaf and shape colours will ensure that the planting provides an attractive staging for the public open spaces.



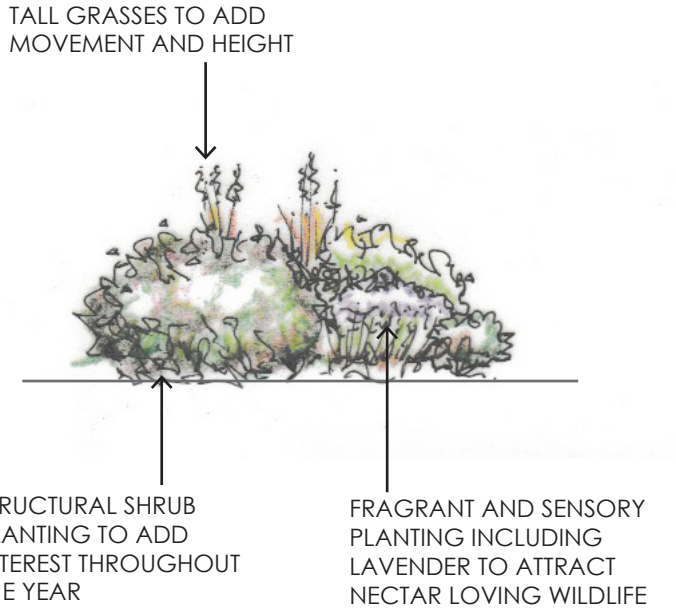


Figure 13. Soft Landscape Proposals - indicative planting proposals.

11.0 Soft Landscape Strategy

Woodland Planting

1. The woodland bands across the Site vary in condition and age. The trees will be managed and additional planting will help ensure that they continue to contribute to the character of the Site. An understorey planting of mixed natives will help improve the wildlife value of the planting and increase species diversity. This would include species such as:

    - *Viburnum lanata* (Wayfaring Tree)
    - *Corylus avellana* (Hazel)
    - *Ligustrum vulgare* (Privet)
    - *Ruscus aculeatus* (Butchers Broom)
    - *Buxus sempervirens* (Box)
    - *Viburnum opulus* (Guelder Rose)

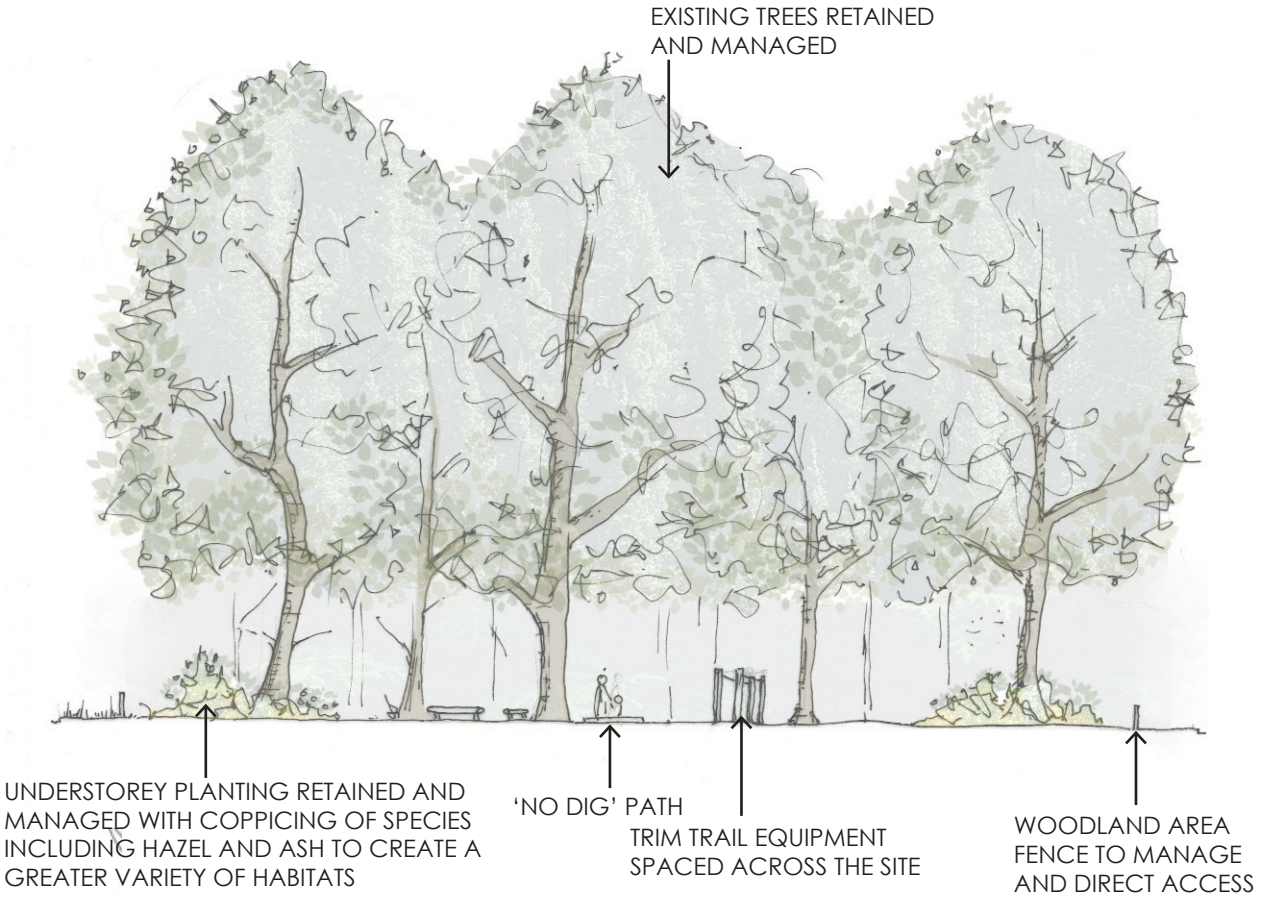


Figure 15: Indicative woodland Section

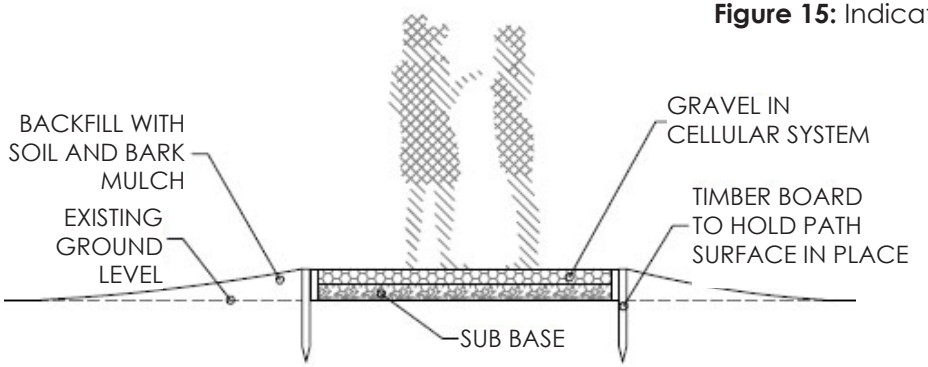


Figure 14: 'No Dig' path construction

Tree Planting

2. The tree planting will be a mixture of natives and ornamental species. Species are chosen for their suitability to location and are also reflective of those growing locally. Species diversity is encouraged in order to support biodiversity. Please refer to the Tree Planting Strategy for further information on species selection.

11.0 Soft Landscape Strategy

Periphery Planting

3. Planting around the outer edges of the site will focus on ensuring that the woody character is maintained. This will include the use of mixed native species which will form part of a long term legacy planting for the future.

Hedges

4. There will be a mixture of hedge types, with both mixed natives and single species hedges.

5. Mixed native hedges to include species such as:
   - *Cornus sanguinea* (Dogwood)
   - *Crataegus monogyna* (Hawthorn)
   - *Corylus avellana* (Hazel)
   - *Ilex aquifolium* (Holly)
   - *Euonymus europaeus* (Spindle)
   - *Viburnum opulus* (Guelder Rose)

6. Single species would be within the built up areas and used for spatial definition. Species include:
   - *Taxus baccata* (Yew)
   - *Fagus sylvatica* (Beech)
   - *Euonymus* 'Jean Hughes'
   - Viburnum tinus 'Eve Price'

IN LINE WITH THE CHARACTER OF HEDGES IN THE AREA, NEW MIXED NATIVE HEDGES WOULD BE MANAGED WITH A WIDE BASE AND NARROWER TOP

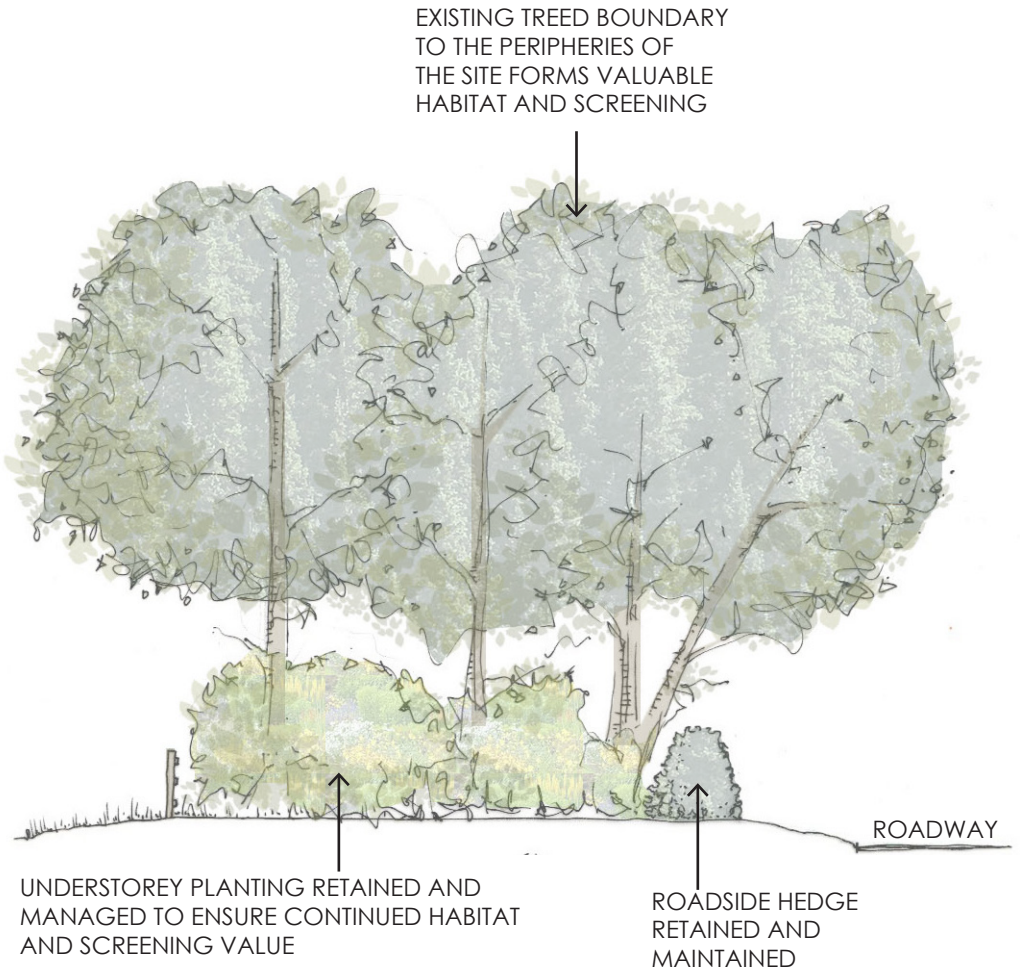
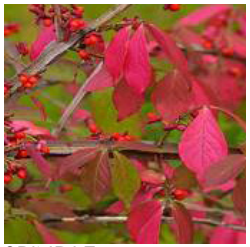


Figure 16: Indicative woodland Section

NATIVE HEDGE SPECIES


BEECH


SPINDLE


DOGWOOD


HOLLY

12.0 Hard Landscape

12.0 Hard Landscape Strategy

Roadways

Roadways are to be black asphalt, permeable block paving and cellular gravel filled systems. This will tie in with the existing roads and define the hierarchy of the different areas. In each case the surfaces will provide level and accessible access. The main asphalt roadways will be a traditional black, with grey block paving to connecting smaller access roads. Brick borders around the edge of the block paving would be used around the outer edge to define the edge. Side roads serving smaller groups of housing will be gravel set into cellular systems to contain the loose material and distribute the weight evenly. The use of good quality materials will ensure that the roads are safe and look good for longer.

Paths

The paths around the Site will be either asphalt, slabs or block paving. These will vary in colour and texture, depending on location and will provide a contrast to the roadway surfaces and clear routes. The paths to the houses will be either a neutral paving slab or a silver, grey block, laid in a running course pattern. The main footpaths around the Site will either be asphalt, concrete paving slab or gravel filled crete system. Gravel in a cellular system with 'No Dig' construction will be used for the paths through the woodlands.

Car parking

Residents will park on private driveways and for most houses, there will be two car parking spaces per property and, either a single or double garage. Visitors will park in one of the many visitor parking spaces located in and around the Site.

Depending on their location, car parking spaces will be constructed using an appropriate means to limit any harm to underlying tree roots. In some cases, it will be necessary to engage 'no dig' methodology and permeable surfacing. Design and location of the parking spaces has been devised having taken into consideration the existing treed character of the Site and planning guidelines.

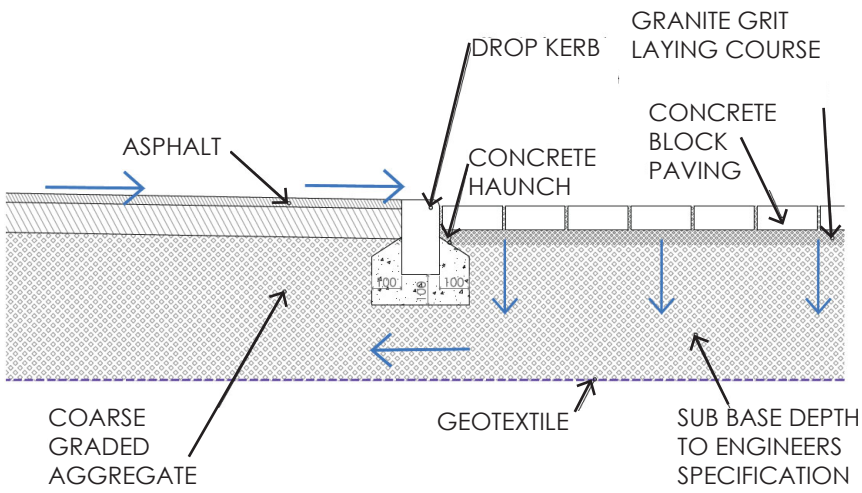


Figure 17: Permeable Block Pave Surface - typical construction

<u>Materials Palette</u>

Kerbs:

Charcon CSK Eco Kerb (Black Fleck)

Roadway:

Block Paving - Charcon Woburn Infilta (Graphite)

Asphalt (black top to engineers specification)

Parking:

Charcon Woburn Infilta (Brindle)

Gravel Bonded Surface (Golden Gravel)

House Paths and Footpaths:

Footpath - Asphalt (black top to engineers specification)

Footpath - Self-binding gravel paths

House Path - Charcon Moordale Textured Slab, 450 x 450mm (Natural)

House Path - Charcon Piccolo Setts, 200 x 50mm (Smoke)

13.0 Street Furniture Strategy

13.0 Street Furniture Strategy

Street Furniture

1. The new areas of public open space will benefit from a robust set of street furniture that will be in keeping with the style and character of the development. Primarily timber products will be used to that are more sensitive to the character of the area.

2. Items that will be included are:

- Benches positioned at regular intervals.
- Litter bins (dog and litter) positioned at practical locations for users of the park and maintenance operatives.
- Timber wayfinding signage posts.
- Timber bollards.

Photo 12. Simple bench design for LEAP/NEAP and built up areas.

Benches

3. Benches across the Site will vary depending on location. Within LEAP/NEAPs and in built areas, a timber bench with back (as shown above) would be used. Within the woodland would be of simplified design with solid design and no back.

Bins

4. Bins would be placed adjacent to benches at other key points as shown on the landscape proposals plan. Dog waste bins would be located at a number of key points next to walking routes.

Photo 13. Bins will be of simple low-key designs and placed at strategic points.

Photo 15. Solid bench design for woodland areas to be of simple form and fixed on the edges of paths at main cross over points.

Photo 14. Bollards will be used to prevent vehicular access to woodland areas.

Boundary Treatments

5. Boundary treatments are shown on the External Works Layout and boundary Treatments drawings. Within the public open space, natural timber post and rail fencing is the predominant treatment to provide separation from private residential areas. Within the residential area, brick garden walls have been used where possible supplemented by timber fencing. Hedgerows and ornamental planting within front gardens offer a soft treatment defining public and private areas.

14.0 Ecology & Biodiversity

14.0 Ecology and Biodiversity

Ecology

1. The landscape proposals will seek to work in line with biodiversity enhancement recommendations and proposals that will be idenified as part of BNG calculations.

Existing woodland

2. The existing bands of woodland which divide the site will be retained and managed. Larger and more significant specimens growing to the outer edge of this woodland, mainly Oak, Beech and Sycamore have been surveyed as individual trees with the majority assessed in accordance with BS 5837:2012 as A and B Category. The trees growing within the woody bands have been surveyed as a woodland and groups containing Oak, Sycamore, Beech and Horse Chestnut. The woodland has been planted fairly randomly, and the average tree trunk diameters range from 300-500mm. Many of the tree crowns contain dead wood which adds a positive contribution to the woodland ecosystem, as do the standing dead trees within the woodland area.

3. A post and rail fence will be constructed along the outer edges of the woodland. The fence will allow for wildlife such as small mammals to pass seamlessly into and out of the woodland whilst providing identity to the woodland as an ecological area. In addition to this the fence will define the edges of the areas of accessible activity where users can safely walk around the site and different areas.

4. Access to the woodland is an important part of the scheme and integral to its managed retention and long-term value. There will be clear views through the post and rail fence and in design terms, the woodland will seamlessly link to the other areas of green open space. Managing the woodland to ensure safe access, will also benefit wildlife with a greater range of canopy levels, planting densities and species diversity. Opening up the woody areas will ensure that they become a healthy part of proposals rather than an inaccessible area which may attract unsociable behaviour and dumping of garden waste amongst other things.

Photo 16. Trees with cavities and damage provide valuable habitat.

Existing trees

5. The trees included for retention are a mixture of native trees such as Lime and Beech and more ornamental trees such as Corsican Pine and Norway Maple. They are generally mature and are likely to provide opportunities for bird nesting and roosting, invertebrates and small mammals.

Proposed Vegetation

6. It is proposed to plant mixed native hedgerows to the edges of the open spaces situated across the site. These native hedgerows will be planted with: Field maple, Hazel, Hawthorn, Holly and Dogwood.

7. Planting in and around the road frontage of the properties will be more ornamental hedgerows, shrubs and herbaceous plants. Plant species have been chosen their wildlife value and landscape value.

14.0 Ecology and Biodiversity

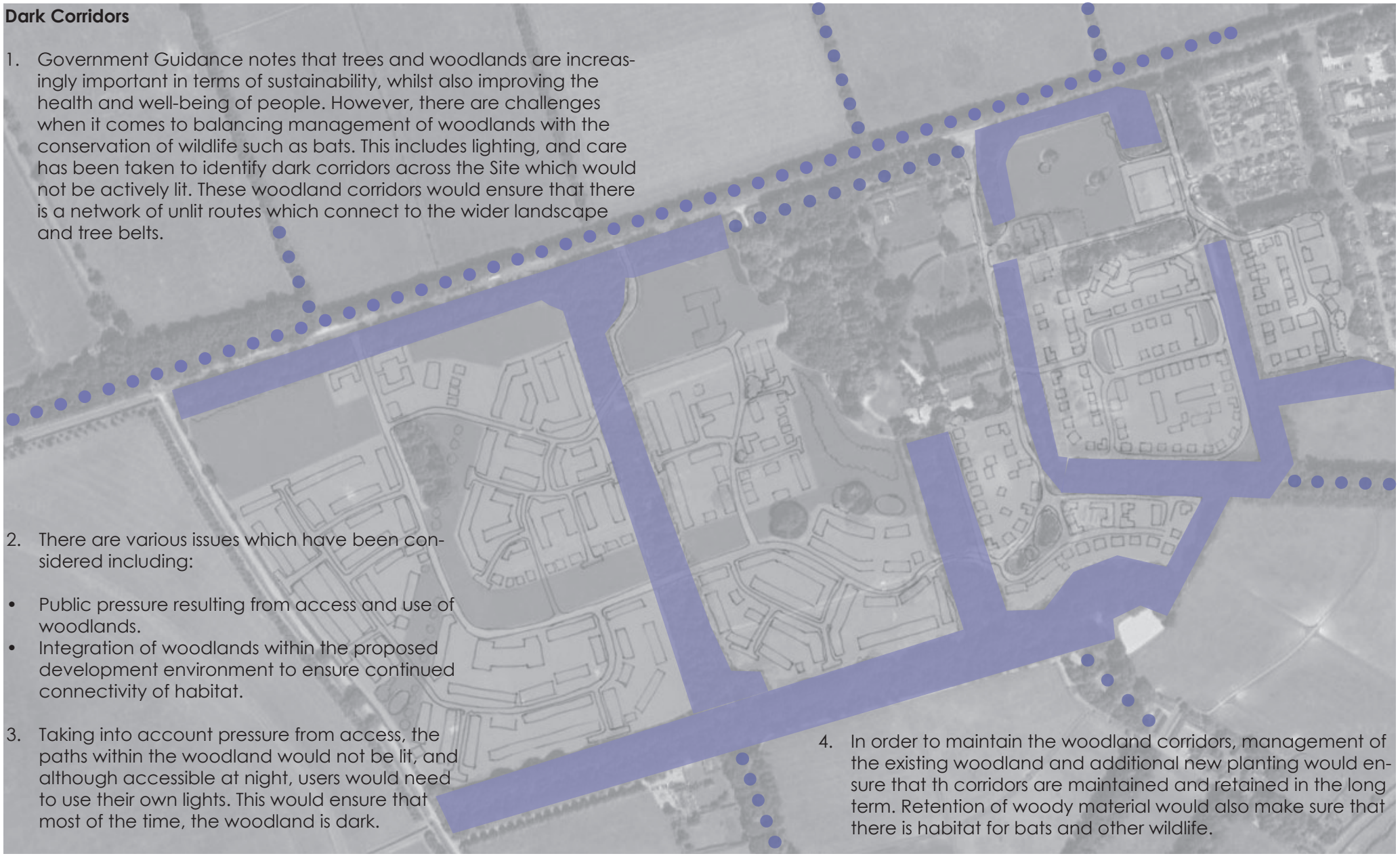


Figure 18. Dark corridors (soild purple) and connecting corridors (dotted lines).