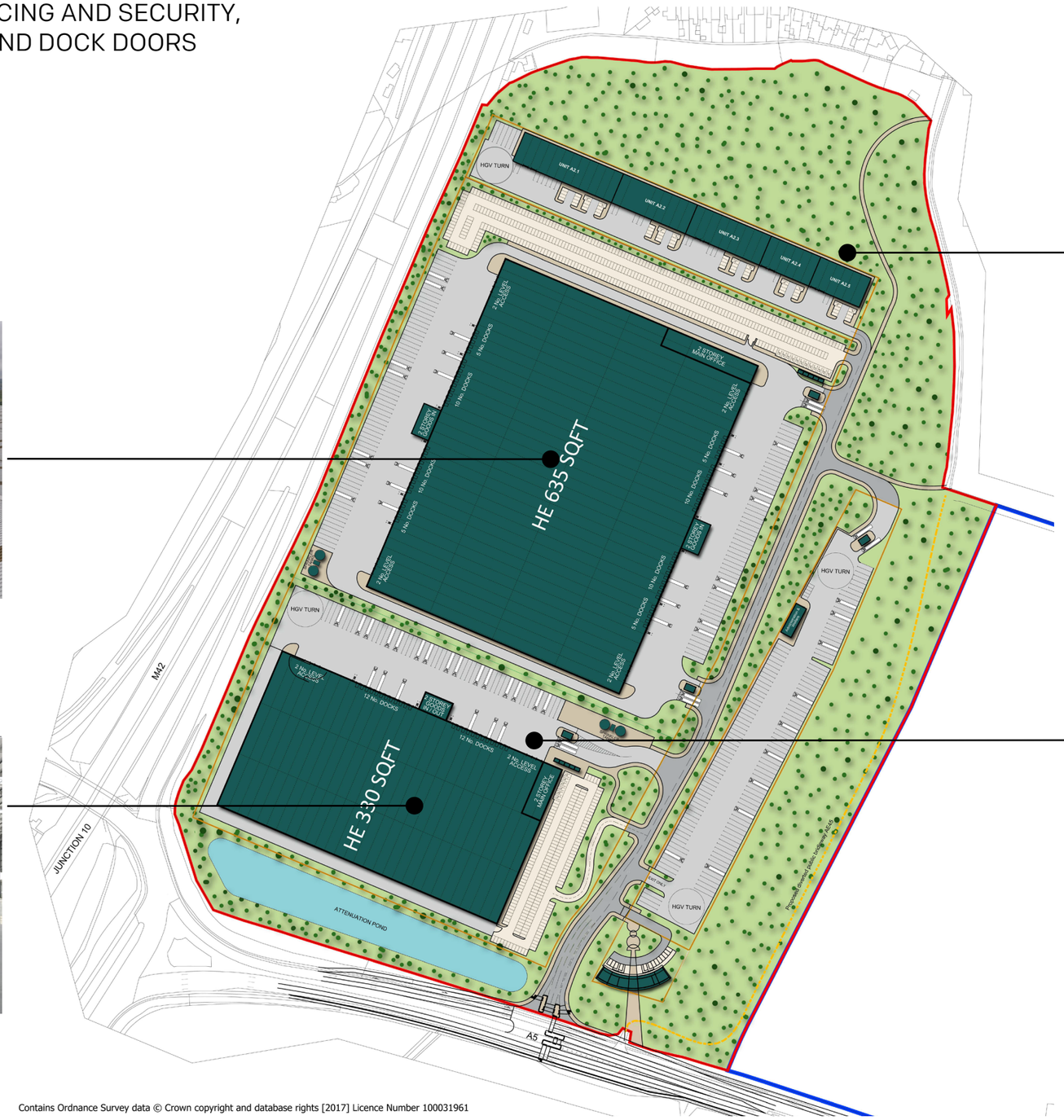
7.0 APPEARANCE & DESIGN

7.11.5 ILLUSTRATIVE ROOF, FENCING AND SECURITY, INTERNAL WAREHOUSE AND DOCK DOORS

Roof

Internal Warehouse



Fencing and Security

Dock Loading Doors

Fig. 66 – Illustrative multiunit scheme

7.0 APPEARANCE & DESIGN

7.12 INFRASTRUCTURE DESIGN

Detailed planning is sought for the Site access road, with all other strategic infrastructure serving this development sought in outline at this stage – this is inclusive of the internal estate road, footways/cycleways, surface and foul water drainage and hard landscaping.

7.12.1 ROADS

The main distributor site road which serves the Site from the newly formed junction on the A5 will be built to adoptable standards. The road will typically be;

- 7.3m carriageway width with segregated turning lanes to suit the development requirements.
- 3.0m footway/cycleways.
- 0.5m grass verge at the back of the footways to facilitate the street lighting.

7.12.2 FOOTPATHS / CYCLEWAYS

There will be provision for pedestrians, cyclists and other non-motorised vehicle users to access the development along the main spine road. The development will also require a diversion of an existing bridleway, currently connecting the A5 to the north of the Site. This will be diverted along an enhanced corridor comprising of bunding and landscaped planting. Where this network of footpaths crosses the vehicle carriageways there should be dropped crossings and tactile paving provided.

All footpath and cycleway construction specifications shall be in accordance with the WCC standard details.

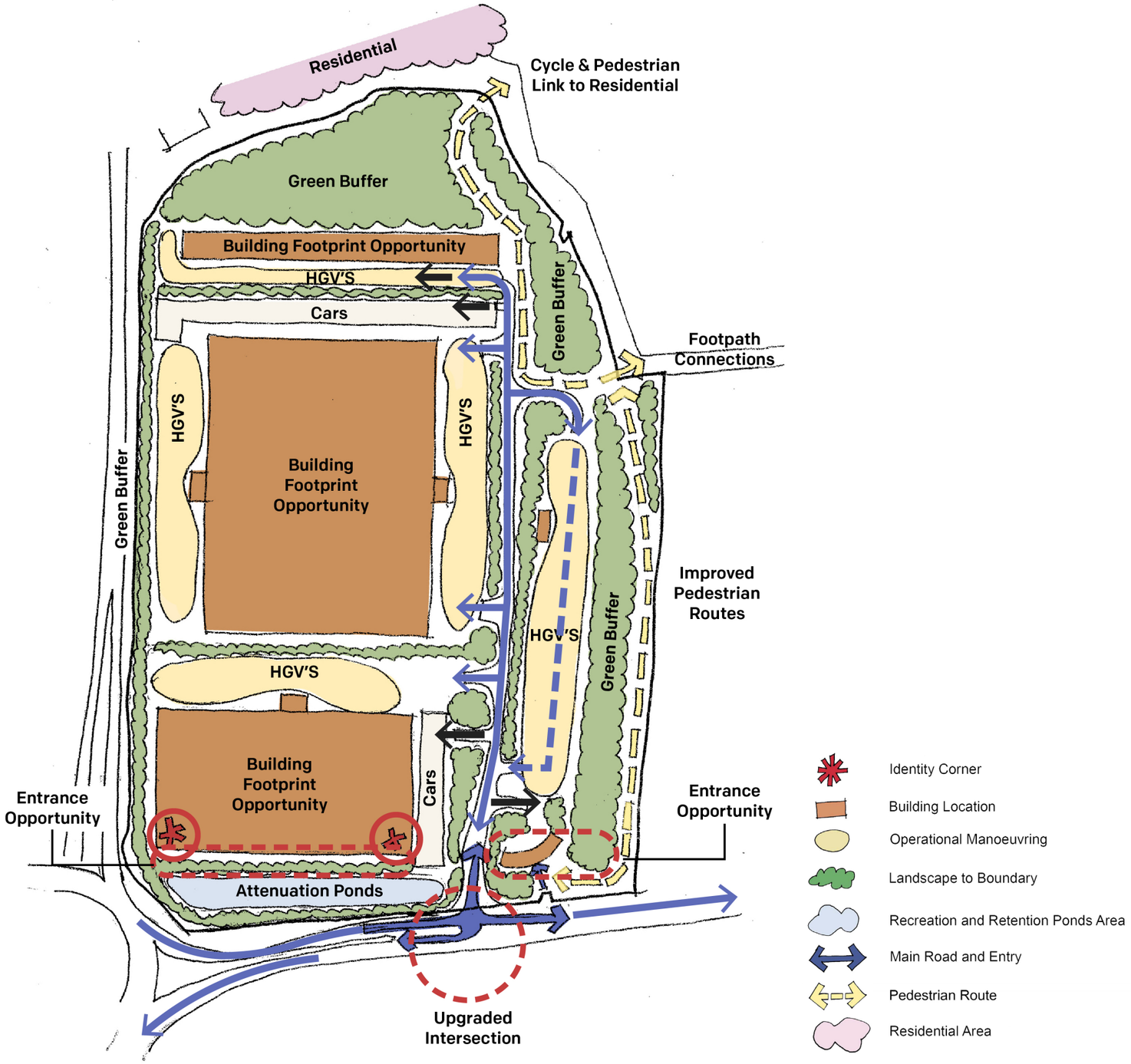


Fig. 67 Movement Pattern Drawing

7.0 APPEARANCE & DESIGN

7.12.3 ACCESSES

The access to the individual plots shall be built in accordance with all relevant local authority and current DMRB guidance. This should include:

- Sufficient spacing between accesses to avoid conflict on the main distributor road.
- Where the width of the crossing is deemed unsafe, a pedestrian refuge shall be provided.
- All accesses, planting and street furniture shall be located outside of the visibility splays from each individual access.

7.12.4 HARD LANDSCAPING

A significant earthworks operation will be required to construct the development platforms, involving initial stripping the topsoil of the Site and placing this in strategic bunds to the north and the east of the Site. These will be formed with soft slopes in order to replicate a natural environment, trees and understory will be planted on the slopes to improve the overall aesthetics, and primarily they will act as buffers to screen the development from the local area.

The remainder of the earthworks will be balanced in order to provide the most sustainable solution, with the no material import and export at this stage. Retaining walls are not envisaged to be required in the most part, however, where unavoidable these will be designed as crib, gabion and / or green walls to integrate the feature within the landscape.

Landscaped retaining feature wall

Retaining wall

Retaining wall

7.13 DRAINAGE INFRASTRUCTURE

7.13.1 SURFACE WATER

All surface water from the Site would mimic the existing flow paths and connect to the existing manhole which forms part of the culverted watercourse in the south west corner of the Site. This ultimately discharges to Kettle Brook to the west of the M42.

A new Sustainable Drainage Strategy will be produced to serve the development. In accordance with best practice guidance, the design will aim to reduce flood risk downstream to the wider catchment and neighbouring properties. In order to do this, the Site would discharge at greenfield runoff (Qbar) for all rainfall events up to and including the 1 in 100 year plus 40% climate change event. This flow rate is sufficiently low as to negate any significant downstream flood risk, and is a significant betterment to the higher existing flows in extreme rainfall events. In line with the drainage hierarchy, due to the Site conditions and constraints, neither infiltration nor discharge to a watercourse are feasible for this development.

The design basis for this development will be to include as many SuDS techniques viable for this type of development in line with the SuDS management train (CIRIA 753). The Site has been designed to include vast landscaped areas which minimise runoff in line with prevention guidelines. Rainwater harvesting will be incorporated into the scheme where possible at detailed design. Surface water will be conveyed from the development plot to attenuation pond(s) in the southern landscape corridor.

Pollution control to tackle the most common contaminants (i.e., oil/petrol/diesel from vehicles) will be in the form of Bypass Separators for the car park areas, and Full Retention Separators for the HGV Service Yards, which offer a higher level of protection. All separators will be alarmed and remotely monitored at all times to ensure reliability over the development lifespan.

7.13.2 FOUL WATER

Foul flows will be collected by an independent network and discharge to the nearest foul sewer located to the east of the development adjacent to the A5. The dry weather flow has been estimated to be 1.75 l/s based on experience of this type of development. This will be pumped to the outfall via a newly constructed pumping chamber at a rate of at least 5.25 l/s in line with the standards set out in Sewers for Adoption. A Section 106 Agreement will be applied for and agreed with Severn Trent Water at detailed design stage.

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

7.14.1 PLANTING

Trees in soft landscape areas require a minimum of 2.5 metre wide beds, whilst trees within hard standing such as pavements or car parks should be designed using a GreenBlue Urban or similar construction below ground to ensure successful establishment and longevity.

All trees should be positioned to ensure adequate topsoil volumes are provided.

Underground services, street lighting columns and CCTV sight lines should be designed so as not to compromise trees and other planting.

Minimum Specification Requirements: Trees

- 16-18cm (Extra Heavy Standards) 425-625cm or larger.
- Clear stems to 2m close to parking bays or paths.
- Underground guyed in hard paved areas; double staked or underground guyed elsewhere.
- Irrigation pipes and Aeration to be included especially in hard paved areas.
- 75mm depth bark mulch to base in soft landscape beds.
- Species – Refer to section 7.14.3.

Where appropriate, hedge planting adjacent to car parks and site boundaries could be used instead of fences. Where fences are required these could be reinforced with evergreen or deciduous screen hedges. For greater impact where budget allows 'Instant' hedging is to be used in either formal locations or close to building entrances.

Minimum Specification Requirements: Hedge Planting

- Minimum of 10L containerised or instant hedging.
- Double staggered (350mm centres/ 450mm offset).
- 75mm depth bark mulch IV. Long lived species only (E.g. No Lavender, Hebe, etc.).
- Species – Refer to section 7.14.3.

7.14.2 WETLAND PLANTING

Water features with permanent pools of water may be planted with emergent and submerged vegetation on shelves along their shoreline and in shallow, marshy zones. This can enhance treatment processes and biodiversity.

Features, such as meadows or swales, which may occasionally dry out may be better planted as wildflower meadows allowing the variety of species found in the mixes to adapt to the situation.

All water features should be designed to ultimately look natural and visually appealing as far as possible.

Minimum Specification Requirements: Wetland Planting

- Seeding for Wetland areas to be 'Emorsgate EM8, Meadow Mixture for Wetlands Mixture' sown at 4g/ m^2; or as approved by BCC Ecologists.
- Seeding for marginal planting to be 'Emorsgate Seeds EP1 – Pond Edge Mixture' sown at 4g/m^2; or as approved by BCC Ecologists.
- Marginal and aquatic planting to be a minimum 9cm pots (subject to density) and sourced from British suppliers.
- Wetland planting works should be carried out in April/ May to ensure plants are not grazed off by wild fowl.
- Further design guidance should be sought from the SuDS Manual by Ciria.
- Species – Refer to section 7.14.3.

7.14.3 SPECIES LIST

Woodland Plant Suggestions:
Acer campestre - Field Maple
Betula pendula - Silver Birch
Corylus avellana - Common Hazel
Prunus avium - Wild Cherry
Quercus robur - English Oak
Woodland Understorey Suggestions:
Ilex aquifolium - Common Holly
Cornus sanguinea - Common Dogwood
Crataegus monogyna - Common Hawthorn
Prunus spinosa - Blackthorn
Viburnum opulus - Red Guelder Rose

Street Tree Suggestions:
Acer campestre 'Streetwise' - Field Maple 'Streetwise'
Betula pendula 'Jacquemontii' - Silver birch 'Jacquemontii'
Carpinus betulus 'Fastigiata' - Common Hornbeam 'Fastigiata'
Prunus avium - Wild Cherry

Hedgerow Plant Suggestions:
Corylus avellana - Common Hazel
Crataegus monogyna - Common Hawthorn
Ilex aquifolium - Common Holly
Prunus spinosa - Blackthorn
Rosa canina - Dog Rose

Ornamental Shrub Suggestions:
Cornus sanguinea 'Midwinter Fire' - Dogwood 'Midwinter Fire'
Choisya ternata - Mexican Orange Blossom
Euonymus fortunei 'Emerald 'n' Gold' - Spindle 'Emerald 'n' Gold'
Spiraea japonica 'Anthony Waterer' - Japanese spirea 'Anthony Waterer'
Viburnum Davidii - David viburnum

Ornamental Plant Suggestions:
Lavandula anguistifolia 'Hidcote' - English lavender
Stipa tenuissima - Mexican feather grass
Verbena bonariensis - Argentinian vervain
Salvia officinalis - Common sage
Hebe 'Autumn Glory' - Shrubby Veronica

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

LEGEND

- EXISTING HEDGEROW
- EXISTING CONTOURS
- PROPOSED DRAINAGE BASIN
- PROPOSED TREE PLANTING
- PROPOSED ORCHARD TREE PLANTING
- PROPOSED REINFORCEMENT / NEW NATIVE HEDGEROWS
- PROPOSED ORNAMENTAL PLANTING
- PROPOSED SHRUB PLANTING
- PROPOSED WET GRASSLAND AND REED BEDS
- PROPOSED WILDFLOWER MEADOW
- PROPOSED SPECIES-RICH GRASSLANDS
- AGRICULTURAL LAND TO BE RETAINED
- OPEN SPACE TRANSFER DESIGNATION
- PROPOSED WAREHOUSES
- PROPOSED OFFICE HUB
- PROPOSED MAIN ROADS
- PROPOSED MINOR ROADS
- PROPOSED PARKING
- PROPOSED FOOTWAYS/ CYCLEWAYS
- EXISTING/ DIVERTED PUBLIC RIGHTS OF WAY
- PROPOSED OFFLINE FOOTWAY/ CYCLEWAY
- PROPOSED RECREATIONAL ROUTES
- PROPOSED FITNESS TRAIL

Fig. 68 – Illustrative Landscape Plan

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

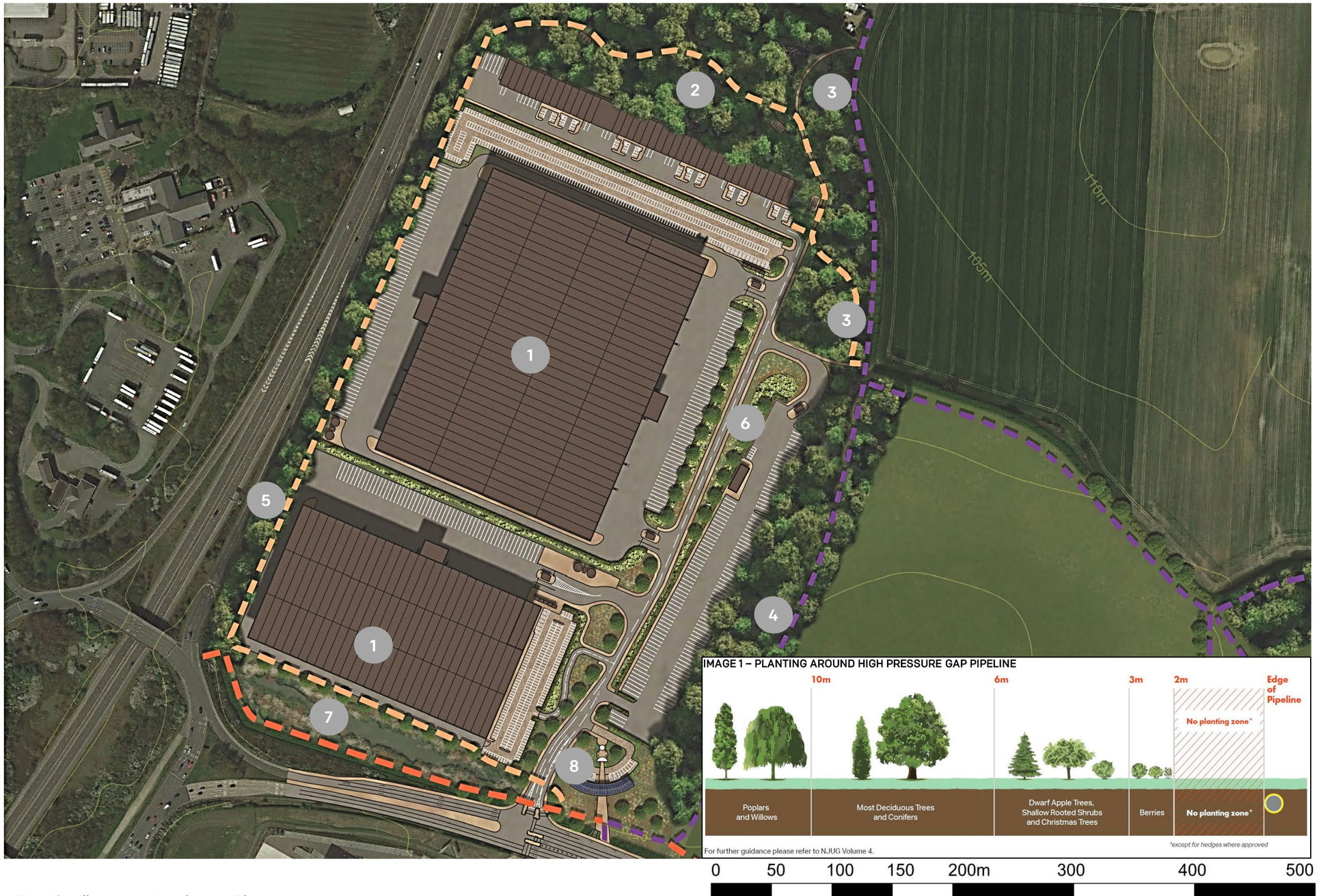


Fig. 69 – Illustrative Landscape Plan

1. The buildings have been located in, and close to, the south-western corner to minimise potential visual effects on residents on the edge of Birchmoor and Dordon, and to maintain a sense of separation between the settlements and the proposed commercial units.
2. Public open space and earth mounds, which would be planted with mixed native trees and understorey, have been located to the north of the proposed commercial units to filter views from the settlement edge of Birchmoor.
3. Recreational routes have been distributed throughout the proposed woodland to encourage exercise and retain connections between Birchmoor and Watling Street.
4. Earth mounds would be created to the east of the proposed commercial units, which would be densely planted with mixed, native trees and understorey to help screen and filter views and to reinforce the sense of openness within the remaining arable landscape to the east. These mounds, along with the woodland planting, would be designed to avoid the high pressure gas pipeline and planting would be in accordance with image 1.
5. Existing native tree and shrub planting along the western boundary of the Site would be reinforced to screen views from the M42 and beyond.
6. Native specimen trees, native hedgerows and ornamental shrub planting would be planted amongst the road network to soften the hard façade and connect the larger habitats to the north and south.
7. Drainage basins, located near to the entrance of the Site, would comprise of wetland meadow and reed planting. this introduces additional habitat and increases biodiversity.
8. Formal planting located at the Site entrance and adjacent to the ancillary Hub Office reflects the character of the planting located within nearby commercial sites.

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

1. Historic field boundaries would be re-instated to the east of the proposed development, as shown, with mixed, native hedgerow and tree planting to re-inforce the rural character of the landscape.
2. An area of publicly accessible landscape would be provided along the western edge of Dordon to screen existing housing, present along the ridgeline, and to create a soft green edge to the settlement. It is proposed that this area should include orchard planting and would provide a connection from the existing public right of way network to the proposed area of replacement green space identified within the Local Plan and allow the provision of circular walking routes.
3. Copses of mixed native trees would be provided, where appropriate, at the corners of existing fields to reinforce the local character and help to filter views of the proposal from the settlement edge and public rights of way.
4. Proposed area of open space transfer identified within the Local Plan (Site OS1), including reprovision of Birch Coppice Allotments and Birch Coppice Social Welfare Centre and playing fields.
5. Existing pheripheral vegetation, including mature and veteran trees and hedgerows to be protected and reinforced with native species and planting.
6. New and enhanced treelined / hedgerow-lined public rights of way through the Strategic Gap for pedestrians, cyclists and riders on horseback. Footpaths to be Equalities Act 2010 compliant so suitable for all.

Fig. 70– Illustrative Landscape Plan

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

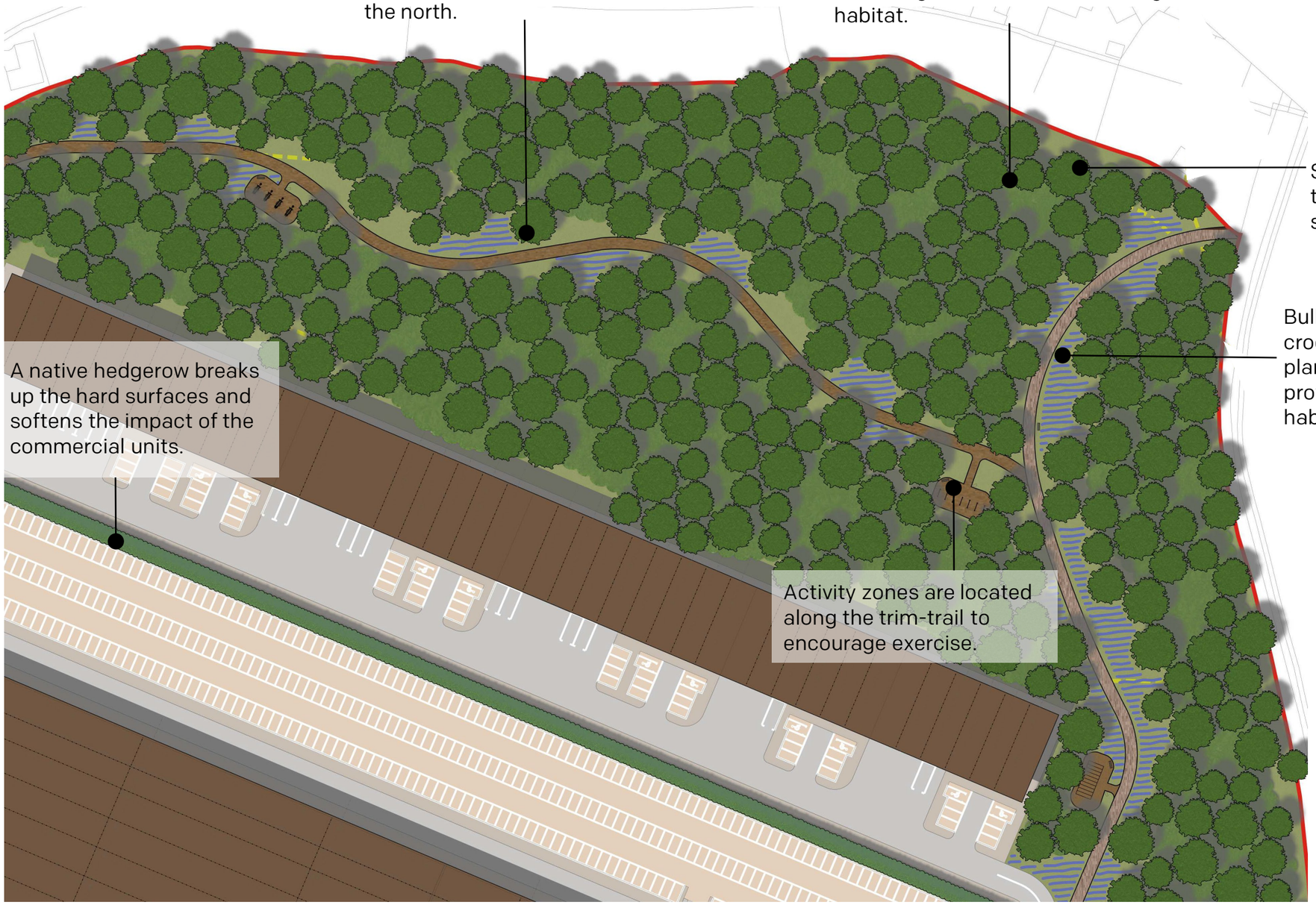


Fig. 71 – Illustrative Landscape Plan

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

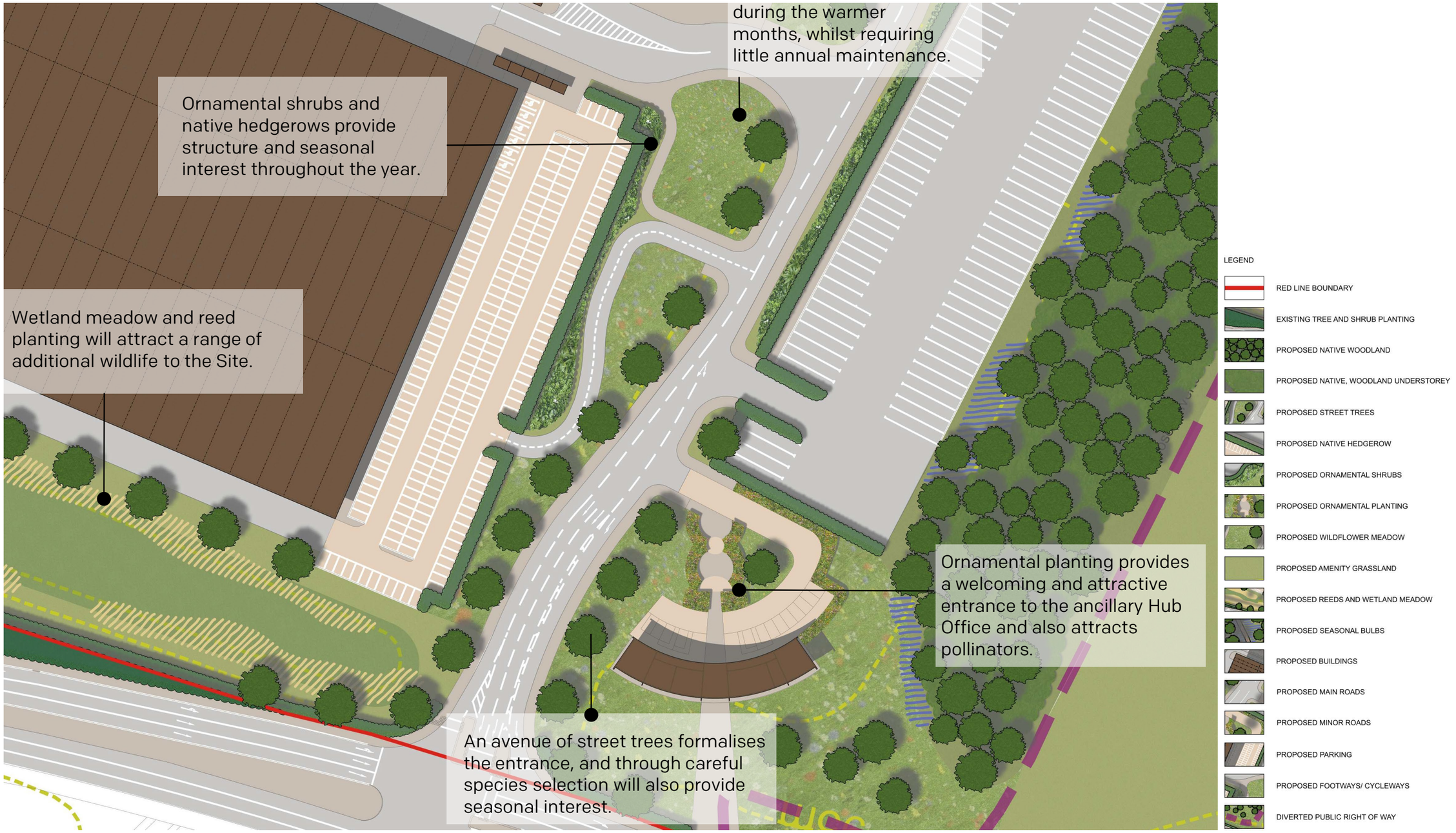


Fig. 72– Illustrative Landscape Plan

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

7.14.4 SECTIONS

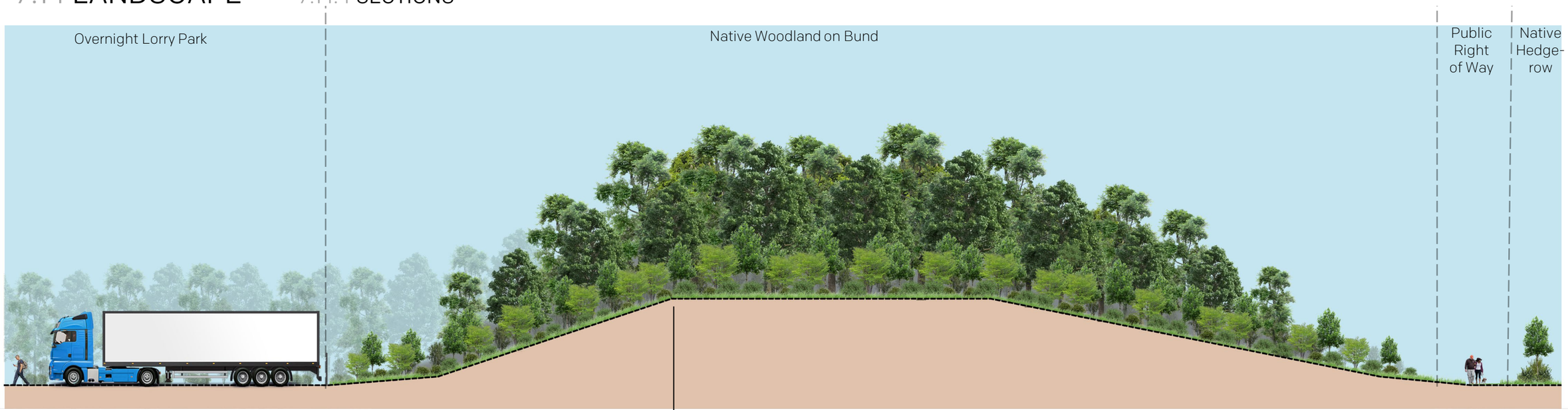


Fig. 73 – Illustrative Section Through Eastern Landscape Zone

The combination of the native woodland and bund landform helps to screen views of the development from the east.

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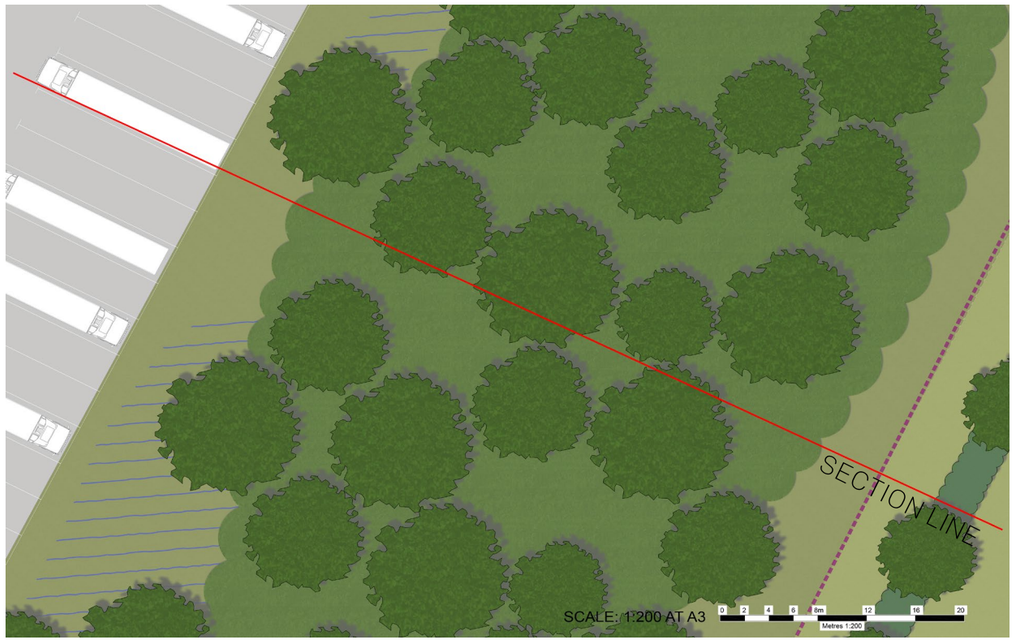


Fig. 74 – Illustrative Site Extract- Section Through Eastern Landscape Zone

Fig. 75 – Illustrative Site Extract- Key Plan

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

7.14.4 SECTIONS

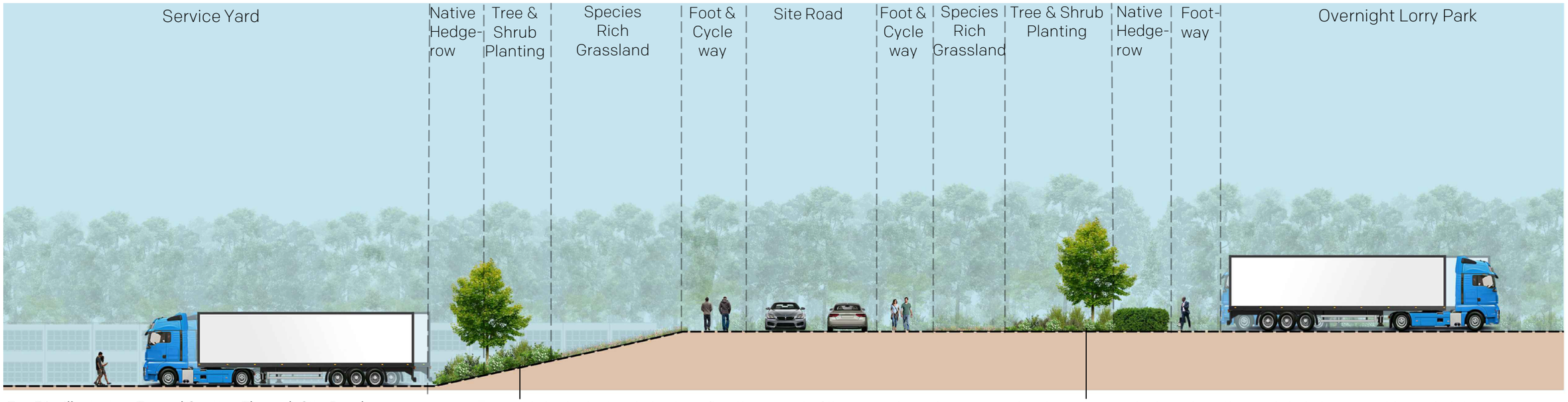


Fig. 76– Illustrative Typical Section Through Site Road

Tree and shrub planting helps to soften the impact of the car parks and commercial units

Linear planting along the roads help to connect larger habitats

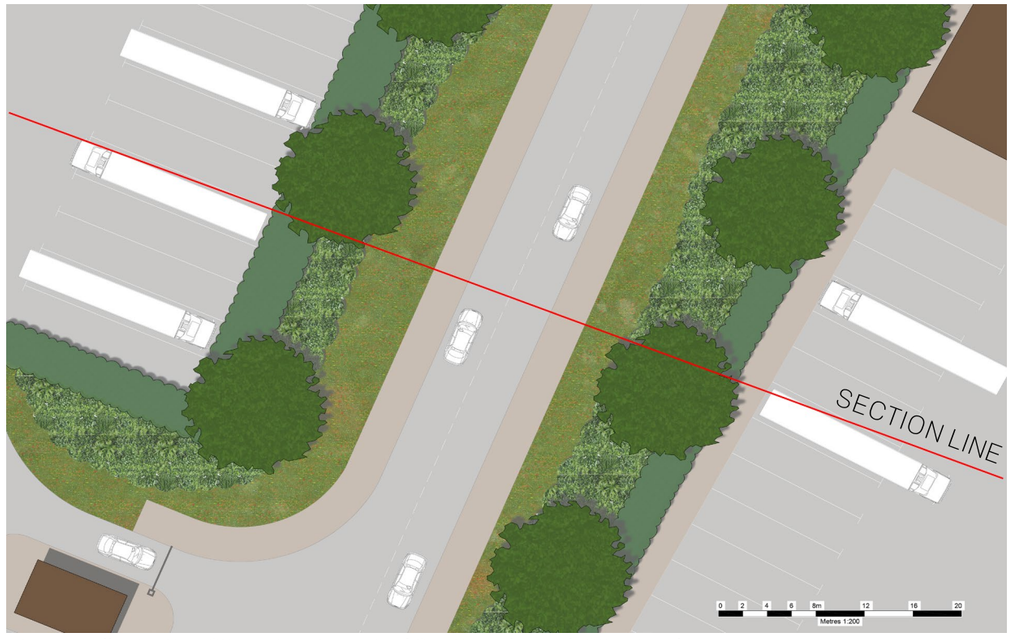


Fig. 77 – Illustrative Site Extract- Typical Section Through Site Road

Fig. 78 – Illustrative Site Extract- Key Plan

7.0 APPEARANCE & DESIGN

7.14 LANDSCAPE

7.14.4 OFFSITE LANDSCAPE CONCEPT PLAN

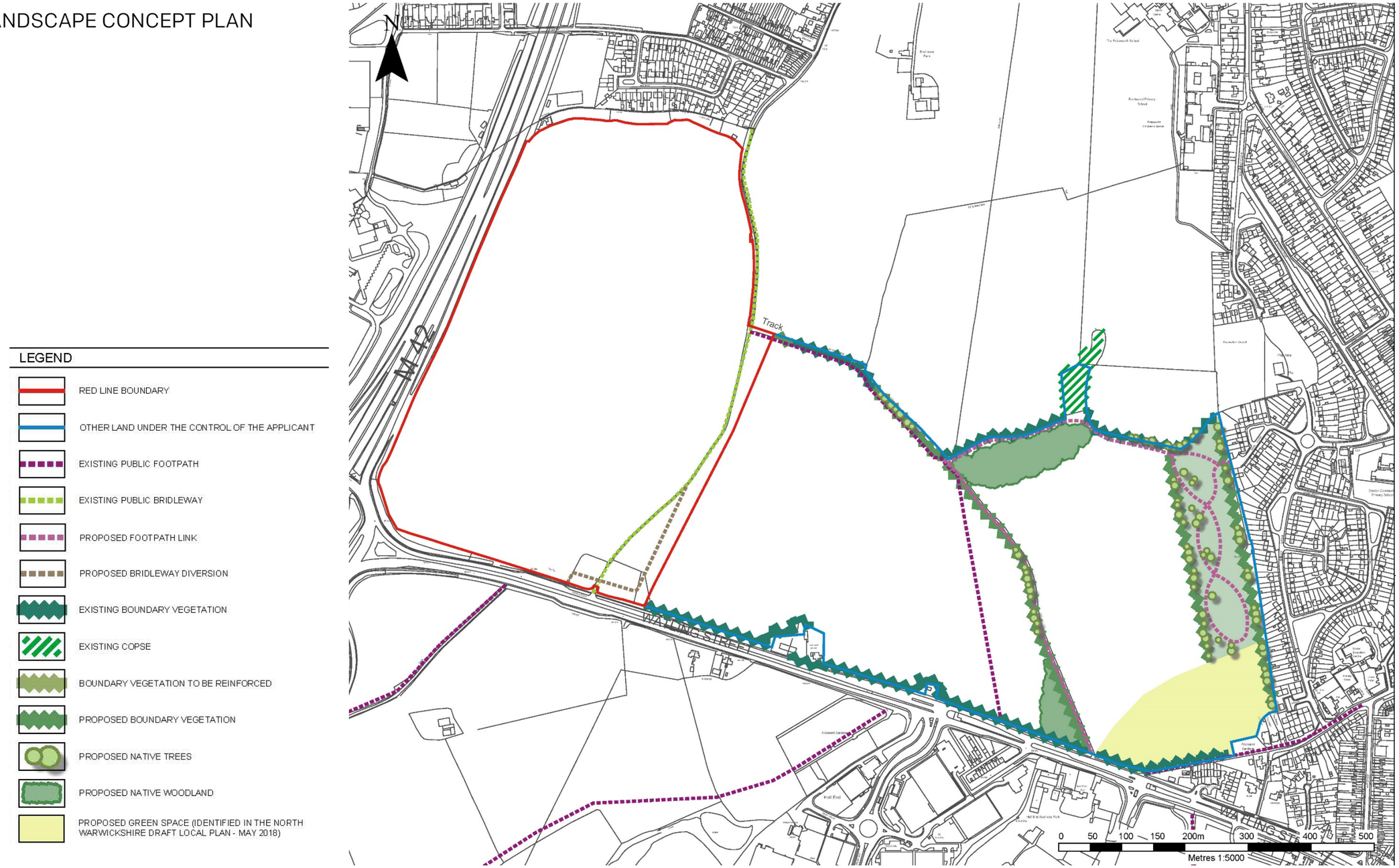


Fig. 79 – Offsite Landscape Concept Plan

7.0 APPEARANCE & DESIGN

7.15 ECOLOGY AND NATURE CONSERVATION

7.15.1 BACKGROUND

The Site has been subject to a range of ecological survey work during 2020 and 2021, in order to identify the broad habitats present and inform initial consideration of likely constraints and considerations associated with the proposed development. In addition, specific surveys in regard to common reptile species and wintering birds has been undertaken. Pre-application advice was obtained from Warwickshire County Council in order to inform the scope of ecological survey and assessment work undertaken.

Based on the available information reviewed, there are no identified statutory or non-statutory ecological designations within or adjacent to the Site, whilst all such designations are sufficiently separated from the Site that they are unlikely to provide a significant constraint on the development.

The habitats forming the internal areas of the Site are formed almost entirely of intensively managed arable land. Internal boundary features are limited to a small number of grassland corridors/paths, which support common species typical of arable boundaries, without mature structural or woody vegetation and do not pose a constraint on the proposed development. Mature boundary hedgerows and planting are present at the Site boundaries, including a small number of trees, whilst the proposals incorporate substantial buffers of vegetation to the Site boundaries, minimising any potential long term effects of the proposals on associated receptors and providing the opportunity for substantial new habitats and enhancements to be provided.

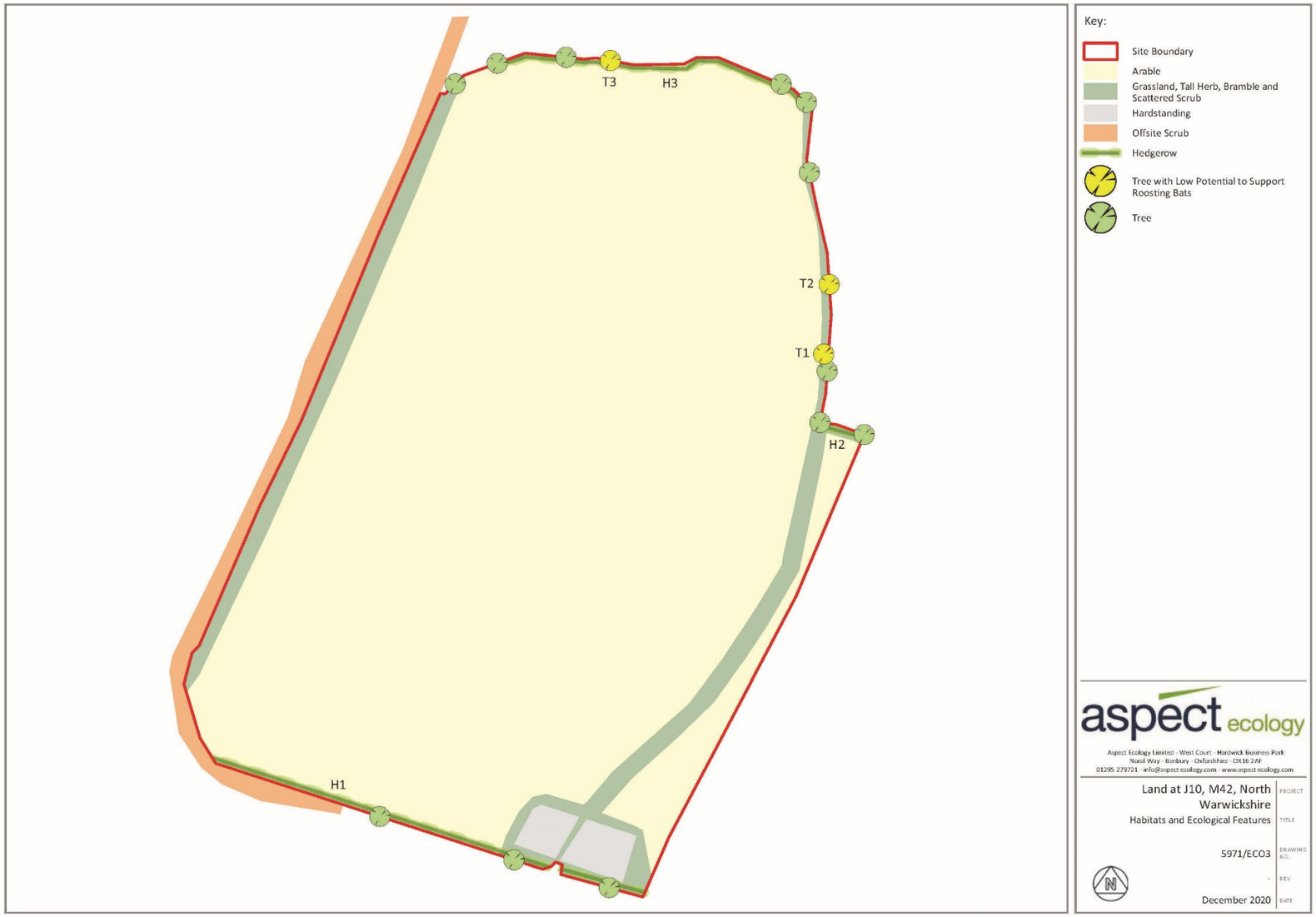


Fig. 80 - Habitats and Ecological Features

7.0 APPEARANCE & DESIGN

7.15 ECOLOGY AND NATURE CONSERVATION

New habitats will be created using native species common to the local area and designed to maximise biodiversity value. Further, the proposals have been assessed using the WCC biodiversity offsetting metric calculator tool, based on the Parameters Plans and associated assumptions and considerations, which shows an overall significant net gain in 'biodiversity value' to be achievable at the Site in respect of habitats (+30% against an existing policy requirement of 10%) and linear features (+158%).

In terms of fauna, similarly the majority of the Site is unlikely to provide particular potential for protected faunal species due to the intensively managed arable nature. A number of precautionary mitigation measures have been identified where appropriate in order to ensure that faunal species are fully safeguarded.

Accordingly, with the exception of ongoing implementation of the identified precautionary mitigation measures, potential current ecological constraints and considerations in relation to the Site are likely to be extremely limited. Where appropriate, the proposed layout has been designed to take into account key ecological features, constraints and concerns. Indeed, the proposals will incorporate substantial new wildlife habitats and enhancements which (subject to appropriate safeguards and implementation during the construction period) will provide substantial benefits for wildlife at the Site in the long term.

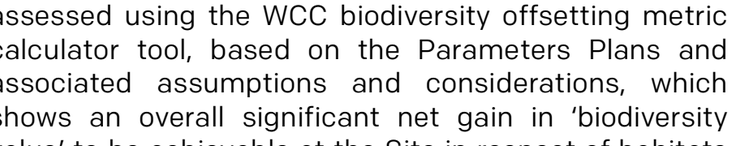


Fig. 81- Ecological Constraints and Opportunities

Hedgerows

SuDs

7.0 APPEARANCE & DESIGN

7.15 ECOLOGY AND NATURE CONSERVATION

7.15.2 OVERALL BIA CONSIDERATION

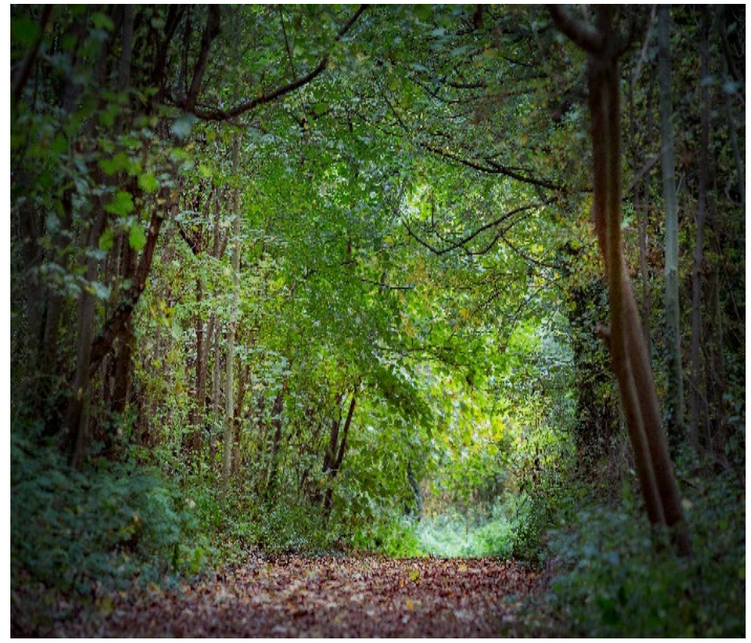
Overall, on the basis of the WCC offsetting metric, including local guidance, it can be concluded that, subject to appropriate detailed landscape design and planting information, along with the provision of the measures set out (including offsite enhancement measures, as detailed at the proposed illustrative landscape design plan), a substantial calculated increase in in biodiversity units within the Site would be achievable under the proposed parameters, with an indicative 'score' of approximately +19.26 'habitat biodiversity units' (representing an identified gain of approximately 30.3%) and +9.66 'linear biodiversity units' (representing an identified gain of approximately 158%) identified based on the information and assumptions set out.

The vast majority of habitats at the Site that are to be affected are of extremely low quality (intensive arable land), the loss of which to the proposals (as previously set out) would be of no wider ecological significance. Indeed, the detailed design of the substantial landscaped areas in accordance with the proposed Design Guide, along with the proposed additional enhancement measures within the adjacent offsite land would result in significant environmental enhancement, including specific benefits for a range of faunal species and benefits to wildlife in the long term.

In addition, in line with the information set out elsewhere, a number of faunal enhancements are proposed under the scheme, including provision of bird and bat boxes, insect hotels, and refugia/hibernacula, along with wildlife interpretation boards, which together are anticipated to provide further gains in biodiversity at the Site. It is not possible to quantify faunal enhancement measures within the WCC calculator and accordingly these are therefore considered additional to the calculated Net Gain figures using the tool.

On this basis (and subject to detailed design, including the final detailed landscape planting information at the appropriate stage and implementation of the permitted scheme, including long-term management), there would appear to be no requirement for further measures or biodiversity offsetting in regard to the proposals. Through the provision of over 15.5 hectares of landscaping both on and off site, comprising over 9 hectares of new habitats on site and over 6.5 hectares of habitats off site, the proposals have the potential to deliver a substantial biodiversity net gain on site, in excess of the 10% requirement, and therefore fully accords with Policy LP16 of the North Warwickshire Local Plan.

Significant biodiversity net gains of +30% for habitat biodiversity and +158% for linear biodiversity.



Native Woodland

Wetland features

Wildflower meadow

7.0 APPEARANCE & DESIGN

7.16 TRAFFIC GENERATION

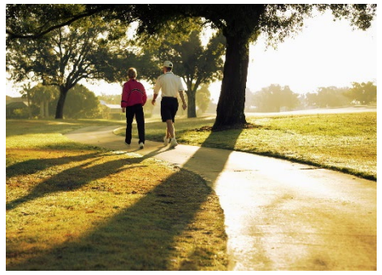
As set out in the Transport Assessment (Appendix 6.1 of ES Volume 3), the proposed development would be served by a new signal controlled all-movements access junction at the A5. The proposed access layout has been designed in accordance with published guidance from National Highways (NH), acting as the Highway Authority responsible for the A5 carriageway.

Details of the proposed development peak hour traffic generation have been agreed with officers at both Warwickshire County Council (WCC) and NH and the resulting movements assigned to the surrounding highway network using the strategic traffic model that formed the basis of the Local Plan assessment.

The Site is currently served by a reasonable level of infrastructure to accommodate predicted journeys by walking, cycling and public transport modes. However, the Applicant is committed to delivering enhancements and, as such, the proposed development would deliver a range of substantial accessibility improvements, particularly for walking and cycling journeys, that would benefit all site users as well as nearby business parks and residents more broadly.

These improvements include upgraded bus stops for routes along the A5 and at Birchmoor, provision of signal controlled pedestrian/cycle crossing facilities within the Site access, upgrading of existing footpaths within the Site and adjacent land to provide much improved pedestrian and cyclist links that avoid J10 M42 and A5 corridor, an offline footway/cycleway linking J10 M42 and Dordon, and delivery of a continuous shared footway/cycleway link that extends throughout the scheme connecting the A5 to Birchmoor. Access by public transport is also achievable via linked trips through the two rail stations at Polesworth and Wilnecote.

Further details are set out in Section 8 of this DAS.



7.17 AIR QUALITY

The Site is not located within an Air Quality Management Area.

A baseline modelling exercise has been carried out for the proposed development, accounting for the identified sensitive receptor locations included in the operational phase assessment. The baseline modelling exercise was informed by local authority monitoring data, including diffusion tubes along the A5, a review of local emissions sources, a review of DEFRA background pollutant concentrations and identification of nearby ecological conservation sites and designated habitats.

Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of earthworks, construction and trackout activities on vehicles visiting the Site.

Based on the current local air quality in the area, the proximity of sensitive receptors to the roads likely to be used by construction vehicles and the likely numbers of construction vehicles and requirements for Non-Road Mobile Machinery (NRMM) that will be employed across the proposed development site, the impacts are considered to be negligible and thus not significant.

Dispersion modelling was undertaken in order to predict pollutant concentrations at sensitive locations as a result of emissions from the local highway network both with and without the proposed development in place.

Review of the dispersion modelling results indicated that predicted air quality impacts as a result of traffic generated by the proposed development were not significant at any sensitive location (e.g. residential dwellings) in the vicinity of the application site.

The residual impacts of the proposed development on local air quality will be of negligible significance which is adjudged to be not significant.

It is considered that the use of good practice control measures, secured by a Construction Environmental Management Plan (CEMP), would provide suitable mitigation for the proposed development to ensure that the potential construction phase impacts remain at an acceptable level. The CEMP can be secured by pre-commencement planning condition by NWBC.

7.0 APPEARANCE & DESIGN

The changes in pollutant concentrations attributable to traffic emissions associated with the operational phase of the proposed development (i.e., impacts on local air quality) are predicted to be of negligible significance and adjudged to be not significant. Future users of the proposed development will not be exposed to concentrations that exceed any of the relevant air quality objectives. However, the below measures (which form part of the proposals) will facilitate local air quality enhancement:

- A sustainable FTP aiming to encourage occupants to adopt travel behaviour in favour of sustainable travel modes such as public transport, which would be of benefit to local air quality.
- The provision of electric vehicle and bike charging stations, with optional extra future charging points available.

7.18 NOISE

The development parameters ensure significant 'no development' buffers will be enforced.

The distance between the settlement boundary / nearest residential dwellings to the Site in Birchmoor and the maximum extent of the developable area is between 145m and 85m. The development parameters ensure significant separation between the developable areas of the Site and the surrounding residential areas to ensure an acceptable level of residential amenity is maintained.

The methodology for assessing the effects of noise and vibration was agreed with NWBC's Pollution Control Officer. The assessment comprised an assessment of construction noise and vibration and development generated noise and road traffic noise during operation.

Operational noise break-out from the proposed development has been assessed for service yard/haulage operations and car park use.

Baseline noise level surveys were undertaken to establish the prevailing levels and noise environment at the following locations, which were selected as representative of the closest existing noise-sensitive receptors:

- Birchmoor Village
- Dwellings on A5 Watling Street
- Dwellings of Birchmoor Road

Having modelled anticipated noise impacts during construction and operational phases of the development against the recorded baseline noise levels, the construction and operational phase impacts are considered to be not significant at the closest existing noise-sensitive receptors.

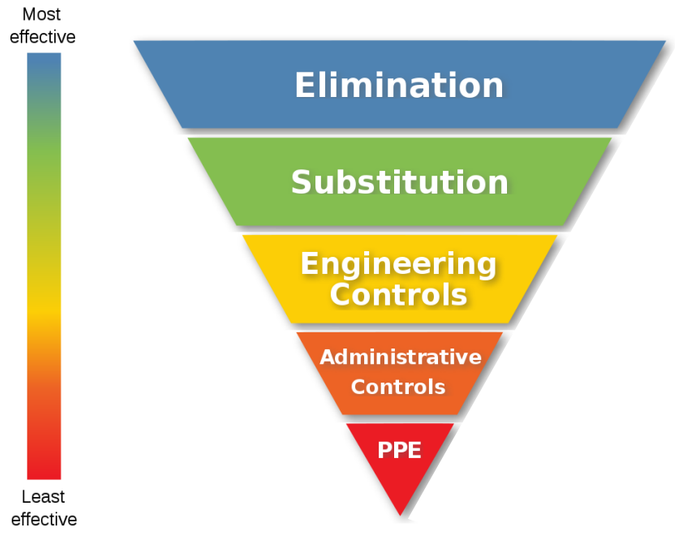


Fig. 82 – Hierarchy of Noise Controls

As no significant effects are currently identified, mitigation measures are not considered warranted for the reasons outlined above. Additionally, a robust design capacity of 25% has been assumed for both daytime and night-time periods; should a lower intensity of use be exercised at night-time then noise levels could be reduced from those presented in this assessment and the need for mitigation unwarranted.

Once a detailed masterplan(s) is put forward in subsequent reserved matters applications, then such matters may be investigated further.

7.19 FLOOD RISK

The Environment Agency Flood Zone mapping (Fig. 83) shows the Site located entirely within Flood Zone 1 and therefore the area is considered not to be at risk of flooding.

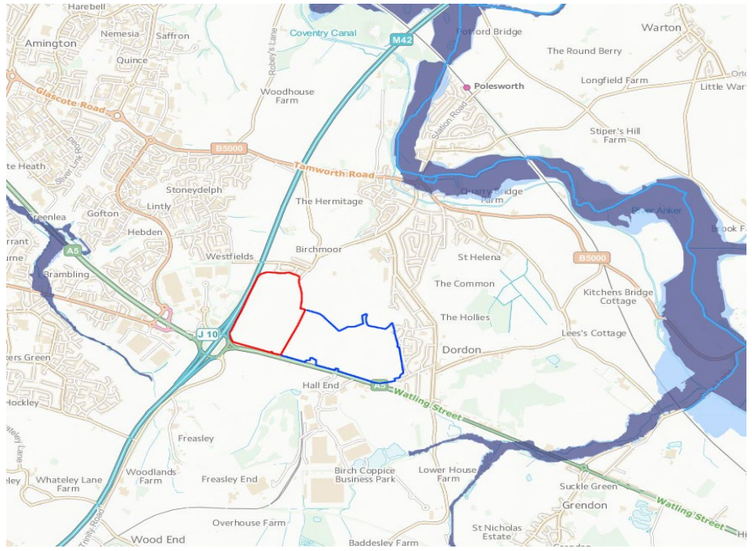


Fig. 83 – Flood risk map

7.0 APPEARANCE & DESIGN

7.20 GEO-ENVIRONMENTAL

Phase 1 and 2 Site Investigations have been undertaken, with reports (refs: 70530-1 and 70530-2 Rev 2) submitted as part of the planning application documents.

Following the recommendations of the desk-based assessment (Phase 1), intrusive investigations (Phase 2) were carried out (including window trial pits and cable percussive boreholes) to develop a ground model that summarises the ground investigation data, and highlight any uncertainties, and provide a geo-environmental appraisal for the Site and the proposals. A series of recommendations are set out in the Site Investigation reports.

In summary, the ground conditions are well suited to the type of development proposed which has several advantages:

- The Site is characterised as characteristic situation 1, meaning no ground gas protection measures are considered necessary;
- The underlying Halesowen Formation would be a suitable bearing stratum for shallow foundations, which are far less intrusive and energy intensive than other forms of foundations;
- The Site has a concrete classification of Design Sulphate Class DS-1 and an Aggressive Chemical Environment for Concrete as AC-1, meaning no special precautions are necessary.

7.21 EMPLOYMENT

As the detailed layout and configuration of the buildings will be confirmed at reserved matters stage, the precise number of employees to be recruited to the Site is not yet known. However it is anticipated that the proposed development could create between between 776 to 1,295 full time equivalent (FTE) net additional jobs at the local level with an additional 471 to 786 FTE jobs at the regional level (based offsite). Taken together, the proposed development could support up to 2,081 FTE permanent jobs throughout the region.

It is normal for such employment to take place over two or three shifts throughout a 24-hour period and will call for a range of skills including managerial, office, technical, semi-skilled and unskilled positions. Further information can be find within the Socio-Economic Chapter of the ES.

Window sampling

The proposed development will create new additional jobs at the local level

8.0 ACCESS FOR ALL

8.0 ACCESS FOR ALL

8.1 INTRODUCTION

The following access statement sets out the proposed strategy to create an inclusive environment for all users of the proposed development. The statement covers both the access strategy for the Site and the accessibility details for any new buildings within the development.

8.2 APPROACH TO INCLUSIVE DESIGN

It is self-evident that all buildings should be designed so that all members of society can use them. Consequently, the development proposals will be designed to accommodate the needs of all of its users, irrespective of age, gender or disability.

All new and existing public footpaths, public bridleways, footpath / cycleway and pavements to be designed to be the Equalities Act 2010 compliant, to provide access to all (e.g., mobility impaired, mothers with prams, etc) (subject to the agreement of WCC Rights of Way Team).

8.3 KEY ACCESS CONSIDERATIONS AND THE IMPLEMENTATION OF INCLUSIVE DESIGN

Key access considerations for the Site include:

- vehicular and pedestrian approaches to the Site;
- circulation routes around and links through the Site;
- the provision of adequate and well-located disabled parking;
- the provision of adequate and well-located cycle parking;
- appropriate and current design relating to the entering and exiting of the buildings;
- the provision of adequate facilities within the development.

The implementation of inclusive design within the scheme is carried out through considered responses to these access issues.

To ensure that inclusive design remains a strong feature of the scheme, the considerations outlined above will form an integral part of the design process once the masterplan enters the detailed design stage.

Accessible parking

Public transport

Cycle paths

8.0 ACCESS FOR ALL

8.4 SITE ACCESS

The proposed development site will be accessed from the new service road off A5 Watling Street. In terms of the accessibility of the Site and existing pedestrian, cycle and public transport facilities, the Site is located within a reasonable walking distance of nearby bus stops, allowing employees access to regular bus services. This includes the 766, which serves a number of the surrounding towns and villages and stops both at the Dordon Island and also within the adjacent Birch Coppice Business Park. The proposals include for upgrades to the existing bus stops on the A5 to the south and at Birchmoor, to encourage travel to work via bus.

Access to the respective buildings for HGVs would be via dedicated lorry access slip roads from the internal site distributor road, with queuing space provided on approach and individual plot gatehouses. Gatehouses with barrier-controlled entry and exists would be provided to all but the smallest SME units. Ducting would be provided to 25% of lorry parking space for fully electric and hybrid electric vehicles, to future proof the development.

The overnight lorry parking facility would have a barrier-controlled access and egress located along a circulatory one-way system with entry likely to be in the north and the exit in the south of the Site.

Access into the respective buildings for would be via the dedicated car park access slip roads from the internal site distributor road, with spaces for parking disabled users provided adjacent to office entrances. Electric vehicle (EV) charging points and rapid charging points would be installed to 10% of car parking spaces, with ducting provided to a further 15% to future proof the development – 25% in total.

Dedicated motorcycle shelters would be provided to accommodate motorcycles.

Fig. 84 – Site access

8.0 ACCESS FOR ALL

8.5 PEDESTRIANS AND CYCLISTS

The buildings and their immediate surroundings, including external works to and from the proposed car park areas and building approaches, will be designed to be accessible by all staff and visitors.

Best practice design ensures that access is available to all regardless of any special mobility problems or restrictions. Level thresholds, gentle slopes or ramps and ambulant disabled stairs will therefore be designed in as standard.

On site facilities for cyclists will be provided with sheltered secure storage facilities, conveniently located adjacent to the unit entrances. Bicycle parking would be provided in excess of the North Warwickshire Borough standard.

The design will ensure safe access for wheelchair users to all appropriate areas of the buildings.

Fig. 85– Pedestrian Access

8.0 ACCESS FOR ALL

8.6 CAR PARKING

Car parking will be provided at ground level for the whole development as shown on Illustrative Site Layout(s). The number of spaces serving each building/unit have been provided to meet North Warwickshire Borough Council's parking standards, ensuring that peak demand is accommodated without any overspill.

The submitted Transport Assessment identifies minimum cycle parking requirements for each unit, which would be in excess of the North Warwickshire Borough standard. Cycle parking would comprise a range of parking facilities, including indoor / outdoor parking, secure parking, covered parking and e-bike charge points, located at or close to pedestrian entrances.

Fig. 86 – Carparks location

9.0 SUSTAINABILITY

9.0 SUSTAINABILITY

9.1 SUSTAINABILITY

In order to meet the stated ambition for the Site to ultimately deliver "The Greenest Business Park in the West Midlands", all buildings are to be designed and constructed in accordance with the highest standards of sustainability, codes of practice, legislation, statute, planning policy and guidance. In order to deliver on this ambition, a series of HQDPs and Design Parameters have been prepared, which would form the basis of future developments and ensure that scheme benefits are delivered in practice. Details of these HQDPs and Design Parameters are set out in the submitted Design Guide, which can be conditioned to any future planning application.

9.2 BUILDING PERFORMANCE

All buildings to be designed to achieve a BREEAM rating of 'Excellent' and Energy Performance Certificate 'A' Rating. All speculative buildings to be designed to UK Green Building Council's Net Zero Carbon Ready standard.

BREEAM®

9.3 CARBON FOOTPRINT REDUCTION MEASURES

The following features may assist in the reduction of the carbon footprint of the buildings:

- Triple skinned factory assembled rooflights to the warehouse/optimised natural light
- Rainwater Harvesting for use in toilet flushing and other non-potable applications
- Excellent air tightness
- Regionally sourced planting
- Energy efficient lighting
- Rockfon ceiling tiles, organic paints, carpets with 80% recyclable yarns
- Low flush volume WC's and low water use spray taps
- Responsibly sourced timber
- Dyson Airblade/ high efficiency hand driers
- Building Management System.

INTERNATIONAL WELL BUILDING INSTITUTE™

9.4 SUSTAINABILITY MEASURES

Detailed below are example Sustainability Measures that could be incorporated into the development base build, an optional list also details further enhancements that incoming tenants could consider.

9.4.1 BASE BUILD

Ultra high efficiency Internal LED Lighting with PIR/Dimming controls

The office lighting shall be ultra high efficiency LED with in excess of 100 lumens/circuit watt. This is combined with presence detection and daylight linking controls (for two rows near windows). The life expectancy of the LED fittings is in excess of 50,000 hours.

Ultra high efficiency External LED Lighting

The external lighting shall be ultra high efficiency LED with in excess of 110 lumens/circuit watt. The fittings shall be fixed to the building and on Lighting columns (8/10mm AFFL.). Each fitting shall be fixed in horizontal plane with max 5 degree tilt with upward spill in compliance with ILE Dark Skies policy. Each LED fitting will have a life expectancy of over 50,000 hours.

Main Office Rain Water Harvesting Systems

External below ground rainwater harvesting systems shall be provided to the main office. The water will be utilised for urinal and WC flushing greatly reducing tenants' water usage on these items by approximately 30-40%.

Sensor Taps/Low Flush WCs

Sensor taps shall be provided to the office toilet facilities for further water savings. Low flush WCs (4/6 Litres) shall also be provided which when combined with rain water harvesting systems will mean lower water usage.

Major water leak detection

Each incoming water position to the building shall be monitored with alarm links to the BEMS, picking up any out of range readings/leaks. This is an early warning system prior to visual leak detection.

Air source heat pump for heating/cooling

The Main Office and Transport Hub office's heating and cooling shall be provided by Air Source Reverse cycle heat pump VRV/VRF High Efficiency heat recovery systems.

The Air Source heat pumps shall as a minimum have the following excellent efficiencies:

- Heating SCOP 4.5
- Cooling SEER 5.5

9.0 SUSTAINABILITY

Variable speed drives on Pumps/fans

Variable speed drives will be installed on pumps and fans to match the fan/pump flow rates with the actual requirements. This saves on electricity usage and CO_2 emissions.

Heat Recovery Air Handling Units

Heat recovery air handling units will be installed for all fresh air ventilation requirements in the occupied spaces with a minimum 73% heat recovery efficiency, and provide 12 litres/sec/ person of air which is better than Building Regulations requirements. The Specific Fan Power shall be in accordance with Part L2 of the Building Regulations and The Non-Domestic Building Services Compliance Guide 2013 of 1.9 watts/l/s, all air handling units and fans to be ErP 2018 compliant.

Excellent airtightness of building - in excess of Building Regulations requirements

The building shall obtain an excellent air tightness which greatly exceeds 5 m3/(m2·h) @50 Pa requirement of building regulations. This will reduce the warehouse heating costs and thus gas usage and CO_2 emissions.

15% Roof lights

The warehouse will be provided with 15% GRP rooflights which will be evenly distributed on the north/south facing roof slopes.

This will provide an excellent daylight factor of approx. 3% which when combined with daylight controls reduces the, electricity usage and CO_2 emissions of the warehouse lighting installation. In addition to the rooflight, translucent panels will be provided above the dock doors to further enhance the natural light available.

High efficiency hand driers

The male/female and ambulant toilets shall be fitted with high efficiency hand driers (e.g., Dyson Airblade V hand driers) which are 80% more energy efficient than standard driers. They are also 35% quieter and dry the hands in 12 seconds.

Electric car chargers

At least 10% of car parking spaces will be provided with Electric car charging stations in the main car parks. Duct/Power infrastructure shall be installed to a further 15% of spaces facilitate extension by the Tenant to meet the projected increase in Electric vehicles on the road forecast in the next 20 years.

Insulated level access/dock loading doors

Insulated roller shutter level access and dock loading doors with dock shelters to improve both energy efficiency and working conditions by sealing off the vehicle during loading/unloading.

Recyclable structure and cladding system

Use of recyclable structure (e.g., steel portal frame) and cladding system (e.g., aluminium 'built up' cladding system), allow building to be easily recycled when it comes to the end of its operational life cycle.

Low environmental impact / bio-based materials

Use of low environmental impact and bio-based materials that also provide good insulation (e.g., woollen insulation or hempcrete blockwork) can significantly reduce inherent carbon associated with buildings.

9.4.2 FUTURE TENANT ENHANCEMENTS

Ultra high efficiency warehouse lighting with Daylight/presence detection

The warehouse lighting will be LED with efficiencies in excess of 150 lumens per circuit watt. The warehouse lighting will benefit from daylight control and presence detection to greater enhance the energy savings and reduce building CO_2 emissions. The LED fittings will have a life expectancy of over 50,000 Hours.

9.4.3 OPTIONS FOR FURTHER CONSIDERATION

Large scale roof mounted Photo Voltaic system

The roof structure will be enhanced to facilitate the fitting of a large scale roof mounted photovoltaic system. The PV system would be sized to match the Tenants Electricity usage profile for maximum efficiency. There are funded and non-funded options up for consideration.

This would significantly reduce the extent of the building electricity usage and provide a large CO_2 saving.

9.0 SUSTAINABILITY

Battery storage linked to Photo Voltaic system

As a boost to the Photo Voltaic system a Tesla (or equal approved) large scale battery storage system could be provided. The Tenant would enter into a paid frequency balance agreement with National Grid.

The batteries would be charged by the PV installation and would discharge at the optimum times to realise monies from National Grid. They can also be discharged for TRIAD avoidance to save additional charges on electricity suppliers bill.

CO_2 sensors for meeting rooms

Installing CO_2 sensors for large meeting rooms and training facilities would mean that the air required would match the actual occupancy of the room. The greater the CO_2 the larger the air volume. Additional motorised dampers would need to be fitted to each room which would be controlled via the readings from the CO_2 sensors.

Office's Built environment analytics (BEA)

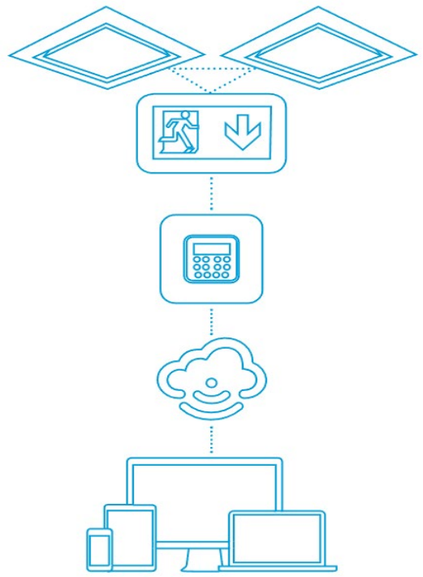
A Thorlux "SmartScan" lighting system or equal with wireless sensors could be installed, this system is inclusive of sensors that enable heat mapping of main office areas and monitoring of office temperature/humidity and CO_2 levels via sensor fitted to emergency exit signs.

Additional analytics that could be measured:

- External air quality sensors – Monitoring air quality and particulates in line with WELL standards
- Noise sensor
- Dock door

Large scale battery storage system

CO2 sensors for large meeting rooms



"SmartScan" wireless lighting control system

BEA objectives

The objective of the BEA is

- to provide real time and historical data for the end user and Landlord to monitor and improve the operations/environment within the building with the following functionality;
- An intuitive user interface that can be operated by a wide range of users even without specific training.
- An analytics engine that allows for simple ratios, regression analysis, benchmarking across large portfolios (a key benefit for clients with a large number of sites).
- Tracking of energy efficiency projects and their impact in terms of consumption, cost and carbon emissions.
- Unlimited users per account, with the ability to restrict access and interaction on a per user basis using predefined roles.
- An alerts functionality that allows users to set upper and lower consumption limits to trigger email alerts to advise when triggered.
- Simple, online setup with no requirement for desktop software installation

External Lighting Control air lux

The external lighting installation is generally controlled via timeclock and photocell. This is fairly basic and does not give the Tenant much flexibility or the opportunity for further energy savings.

The Control air lux is a Mesh based system where each individual fitting is controllable from a Tablet/Phone. The Tenant can then set the required Lux levels to match shift patterns whilst enabling much greater control (individual luminaires/groups). The Mesh system also provides performance data for each fitting/hours run etc.

Greater electricity savings can be realised by dimming individual fittings.

9.0 SUSTAINABILITY

9.5 WASTE STRATEGY

A Site Materials Management Plan (SMMP) will be prepared to minimise construction waste from the earthworks, in addition to a commitment to topsoil and subsoil cut and fill balance across site to avoid the need for these materials to be disposed of or removed from / imported to the Site.

In addition, a Site Waste Management Plan (SWMP) will be prepared to minimise construction and operational waste from site. This document will provide a framework for the creation of individual Waste Management Plans bespoke to each building, as and when future reserved matters applications are submitted. There are ambitious targets for the reduction of waste during the construction period which would be facilitated by the use of responsible methods of construction.

Construction and demolition waste are expected to be managed through a private waste contractor(s). In the design stages, measures will be implemented to reduce of waste wherever possible considering modular design, materials procurement and offsite fabrication.

On-site, at construction stage, plans will be implemented to reduce impacts of waste through mitigation measures such as on-site segregation, staff training and overall materials management on-site.

The detailed SMMP and SWMP will be prepared at future design stages which will provide a comprehensive approach to how mitigation measures will be implemented, as well as potential waste savings at each stage. Compliance with the SMMP and SWMP(s) could be secured through planning condition(s) and requirements passed onto the main contractors within the contract for the works.

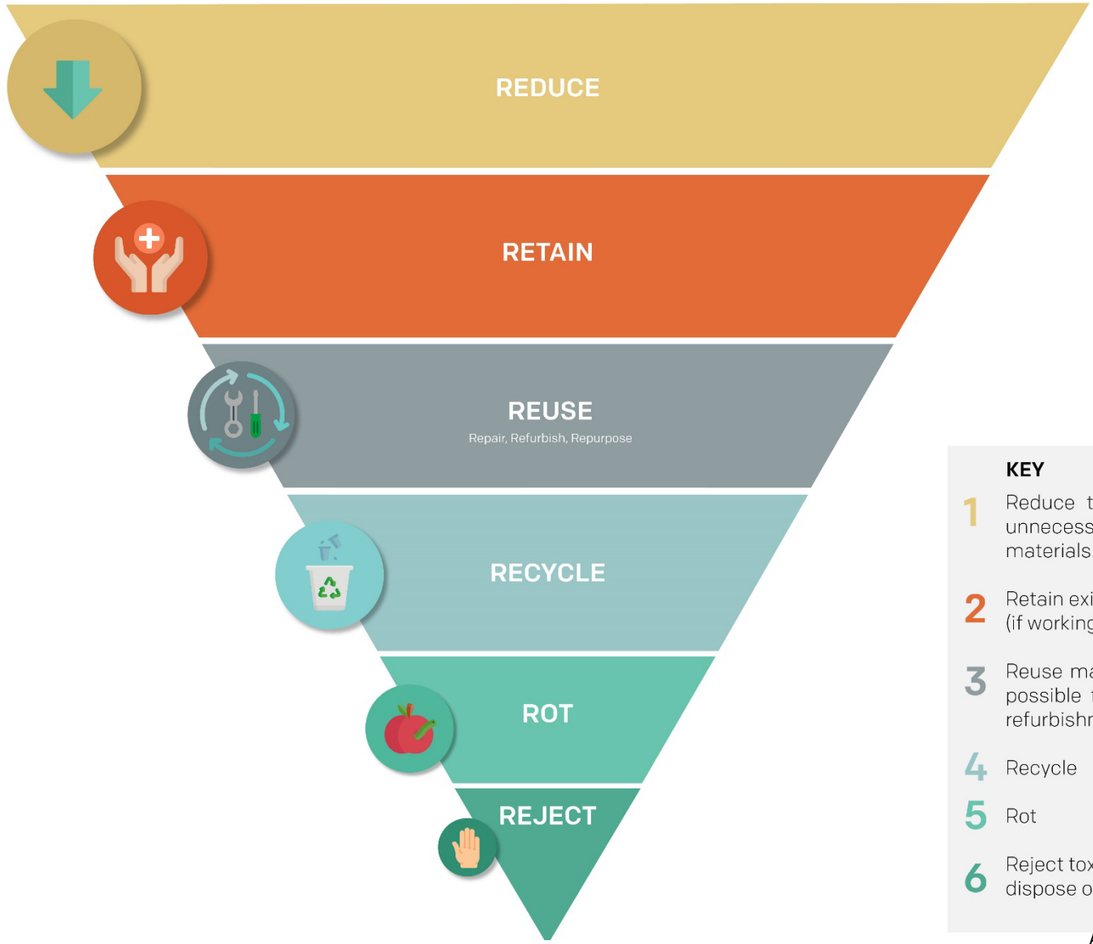


Fig. 87 – Zero Waste Hierarchy

Construction and demolition waste from the Site to be minimised

10.0 SUMMARY

10

10.0 SUMMARY

This Design & Access Statement supports an outline planning application submitted on behalf of Hodgetts Estates to support the creation of *"The Greenest Business Park in the West Midlands".* As stated at the outset, this aspiration is derived from the Applicant's commitment to achieving a very high bar in terms of sustainability and mitigating climate change impacts.

In response to the identified critical undersupply of available employment land, Hodgetts Estates is now bringing forward proposals to deliver a highly sustainable business park that would seek to combine 'Best in Class' logistics and industrial buildings and smaller SME buildings with significant amenities and social value benefits to local residents and communities.

Accordingly, this planning application seeks outline planning permission (including approval of access with all other matters reserved) for the following development:

'Outline planning permission for development of land within Use Class B2 (general industry), Use Class B8 (storage and distribution) and Use Class E(g)(iii) (light industrial), and ancillary infrastructure and associated works, development of overnight lorry parking facility and ancillary infrastructure and associated works. Details of access submitted for approval in full, all other matters reserved'.

Parameters-based approach

The approval of the development parameters in outline would allow for the scheme to be developed in a number of ways, within established parameters, through the reserved matters process.

A Design Guide has been prepared to provide an overarching framework for future applications to follow to ensure high quality, highly sustainable and appropriately designed development comes forward at the Site. The seven High Quality Design Principles (HQDP) and implementation of the Design Parameters within the Design Guide, would ensure that all potential future developments at the Site follow a prescribed set of design guidance and parameters to ensure compliance with all relevant planning policy and guidance, including the Dordon Design Guidance and Code.

This Design & Access Statement includes a number of illustrative masterplans (not for approval) which are included to demonstrate that the maximum 100,000sqm of floorspace, overnight HGV parking facility and ancillary development sought can be adequately accommodated within the maximum developable area and parameters. It should be noted that the illustrative masterplans only show how the scheme could potentially be laid out and demonstrate its flexibility in the type and size of units, with the final layout (either in entirety or in part) to be fixed as part of future reserved matters applications. This approach will enable the Site to be marketed with flexibility to appeal to a broad spectrum of national or internationally renowned operators, whilst also ensuring control over the design of future development(s).

Biodiversity enhancements - wildflower meadows, ornamental planting, etc

Landscape-led design and biodiversity enhancements

The development parameters have been conceived to preserve and reinforce the separate identities of Polesworth, Dordon, Birchmoor and Tamworth. To ensure this, future development would be set within its own comprehensively landscaped surroundings, strengthening the natural perimeters, and enhancing substantially the existing biodiversity value of the Site.

The biodiversity strategy is driven by an aspiration to delivery significant biodiversity net gains, including the creation of over 9 hectares of on site and additional offsite habitats, including native woodlands, native shrublands, mixed hedgerows, wildflower meadows, wetland wildflower meadows, ornamental planting and species rich amenity grassland, within wider green infrastructure.

To the north and east of the development site, naturalistic earth mounds are proposed to be planted with native woodland species and interspersed with publicly accessible open parkland. These measures would both screen the existing developments currently visible along the A5 corridor as well as the new buildings that are being proposed.

Significant offsite landscape mitigation and enhancements are also proposed. In total, some 6.51 hectares (16 acres) of offsite landscape mitigation measures and enhancements are proposed through native woodland planting, community orchard planting, reinstatement of historic field boundaries and footpath enhancements, providing access to members of the public. The offsite measures would also prevent further expansion of development in those parts of the Strategic Gap.

10.0 SUMMARY

The comprehensive landscape design strategy would ensure that the buildings and associated lorry parking are largely screened from view and as the native woodland planting and screening matures, the whole of the Site would eventually be almost entirely screened from sensitive locations at Birchmoor, Polesworth with Dordon and the public right of way network locally.

Highly sustainable design

All future potential development options at the Site would respect the surrounding area and adjacent settlements and deliver a safe, inclusive and high-quality development.

Driven by the accompanying Design Guide, in all aspects relevant to sustainability and design (including energy efficiency, renewable energy generation and biodiversity net gains), future development proposals would either meet or exceed the standards currently required by legislation, policy and/or guidance.

Key sustainability benefits include:

- Targeting a BREEAM 'Excellent' rating for all buildings.
- Energy Performance Certificate 'A' rating for all buildings.
- Speculative buildings to be built to UK Green Building Council's 'Net Zero Carbon Ready' standard for construction.
- At least 10% of energy generated from on-site renewable or low carbon sources and ensuring all buildings can be adapted to accommodate existing and future renewable or low carbon technologies.
- Electric vehicle charging points and 'rapid' charging points, with ducting provided to future proof the development.
- Communal and staff cycle parking, showers and changing facilities to encourage walking and cycling to work.
- Electricity to site wide infrastructure and ancillary Hub Office to be 100% renewably generated.

Connectivity and access benefits

Driven by the Applicant's sustainable transport strategy, the approach taken to the development is to ensure that easy, safe and inclusive access for staff, visitors and the local communities for pedestrians and cyclists is achieved, as well as harnessing other sustainable modes of transport, which also links with and enhances the connectivity with and between the local adjacent areas.

The proposed development would be served by a new signal controlled all-movements access junction at the A5. The proposed access layout has been designed in accordance with published guidance from National Highways, acting as the Highway Authority responsible for the A5 carriageway.

Whilst the Site is currently served by a reasonable level of infrastructure to accommodate predicted journeys by walking, cycling and public transport modes, the Applicant is committed to delivering enhancements and, as such, the proposed development would deliver a range of substantial accessibility improvements, particularly for walking and cycling journeys, that would benefit site users as well as surrounding employment developments and residents more broadly.

Key transport and access benefits include:

- Over 3.5km of new and enhanced public footpaths, bridleways and footway/cycleway routes, linking the Site with Birchmoor to the north and Dordon to the east, and opening up foot and bicycle commuting opportunities from settlements further afield including Polesworth and Tamworth.
- Enhancements to nearby public transport infrastructure, in the form of new and enhanced bus stops within and adjacent to the Site.
- Cycle parking provided to all units in excess of NWBC design standards as well as showers and changing facilities provided to all units and communal cycle parking, showers and changing facilities available for public use in the Hub Office.
- Electric vehicle charging points and rapid charging points installed to 10% of car parking spaces, with ducting provided to a further 15% to future proof the development – 25% in total.
- Ducting provided to 25% of lorry parking space for fully electric and hybrid electric vehicles, to future proof the development.

10.0 SUMMARY

Conclusion

As a result of the underlying aspiration to create *"The Greenest Business Park in the West Midlands"*, this Design & Access Statement has demonstrated the architectural vision, inspiration and overarching design principles for the scheme that would achieve this bold aspiration.

The accompanying Design Guide, which can be secured by planning condition, would deliver this vision and act as a development framework for creating beautiful, healthy, greener, enduring, distinctive and successful places with a consistent and high-quality standard of design.

All told, with the adoption of the development parameters and overarching design strategies set out, the proposed development would deliver a strategic-scale employment development in a highly sustainable location whilst ensuring it is appropriately and sustainably designed for its location and context. In doing so, future development would facilitate delivery of the substantial scheme benefits associated with high-quality, inclusive and cohesive design.

Fig. 88–Illustrative CGI

11.0 APPENDICES

11

11.0 APPENDICES

0m 20m 40m 60m 80m

North

- Development Site Boundary (79.97 acres / 32.36 Ha)
- Plot A1 - up to 117.8m AOD
- Plot A2 - up to 113m AOD
- Plot B1 - up to 111m AOD
- Plot B2 - up to 102m AOD
- Zone for green infrastructure to include open space, planting, landscaping, site road & SuDS
- Land required for access
- Public bridleway (to be diverted where necessary)
- Gas pipeline with 3m easement zone o both side

4263-CA-00-00-DR-A-00075 - PARAMETERS PLAN-P16

11.0 APPENDICES

North

- Development Site Boundary (79.97 acres / 32.36 Ha)
- Parameter Boundary
- Unit Demise Boundary
- Public bridleway (to be diverted where necessary)

4263-CA-00-00-DR-A-00078 - INDICATIVE MASTERPLAN - MULTI UNIT OPTION - P10